

University of Michigan Sustainable Food Program

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Program
Handbook

2013

Fostering collaborative leadership that empowers students to create a sustainable food system at the University of Michigan while becoming change agents for a vibrant planet





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Grow Blue!

2012-2013 SNRE Masters Project Team

Liz Dengate, Allyson Green, Lindsey MacDonald, Jerry Tyrrell

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Executive Summary

Formed in 2012, the mission of the UM Sustainable Food Program (UMSFP), a program at the University of Michigan, is to foster collaborative leadership that empowers students to create a sustainable food system at the University of Michigan while becoming change agents for a vibrant planet. Our work is focused around three central themes: 1) Developing responsible citizens and leaders by facilitating formal and informal education on sustainable food topics, 2) Strengthening communities through collaborative programming and outreach, and 3) Growing sustainable food that supports the well-being of people and the environment at the University of Michigan and beyond.

The UM Sustainable Food Program builds on a long history of interest in and work on food sustainability issues on campus. Faculty members and student groups were working on food issues for nearly a decade before the foundation of UMSFP. This Program, however, fills various needs that existed in 2011, including a lack of central organization for this work and the lack of a campus farm to serve as a space for experiential education, hands-on community building experiences, and on-campus food production.

Program development over the first year included a wide range of initiatives, such as leading volunteer workdays at the farm and greenhouse, visiting classes to speak on behalf of UMSFP, developing a course on Sustainable Food System Design, planning and attending community events, growing and donating produce, and working to become certified in Good Agriculture and Handling Practices.

UMSFP is organized into several collaborative groups. The heart of UMSFP is the member groups (the number of member groups doubled to ten in the first year, each of them working on different issues and projects around campus), which are each represented in the *Member Group Council*. The UMSFP *Leadership Team* manages and organizes the Program, as well as oversees the *Campus Farm*. Advice and historical perspective are provided by the *Advisory Board*, consisting of faculty, staff, students, and community members.

We have received three grants that have supported program development. In the future, the Campus Farm will be able to provide revenue for the program, through produce sales, a CSA model, and events admission.

In just one short year, the program has grown beyond the current leadership team's wildest dreams. There is currently more demand than can be met through student leadership alone. The UMSFP and Campus Farm have great potential to grow and realize this unmet demand, if the program is institutionalized through the hiring of a full-time program coordinator.

Introduction and Purpose

Seeds are planted every day at the University of Michigan. There are seeds of language, of history, of scientific knowledge; seeds of friendship; seeds of trust and respect. Like all seeds, once planted, they take off on their own, sending roots down and shoots up to the sun; and like all seedlings, these do best when they are nurtured, protected, and given the resources they need.

In 2011, with fertile ground that was ready for new growth, a seed was planted that would grow up to become the UM Sustainable Food Program and Campus Farm. This handbook is a resource for all of those who will take on the task of nurturing and managing this very important growth.

Though the way for future success was being developed long before 2012 (with the full story of these student and university champions told in the history section of this handbook), the idea of a UM Sustainable Food Program and Campus Farm became the specific goals of a formalized SNRE masters project in February 2012. Over the next fourteen months, those goals would become reality, as the University of Michigan moved from laggards in the field of sustainable food to being well on our way to becoming true victors in the realms of sustainability, health, and education. This handbook describes the pre-history, purpose, establishment, projects, leadership and management, finance, evaluation methods, and future outlook for these entities, and serves to provide illumination and guidance for current and future leaders within the program, other members of the UM community, and others seeking to establish similar programs within their own institutions or communities.

The handbook is divided into several sections. The first, "History," explains the events and groups that came before the formal establishment of a farm or UMSFP in order to set the stage for the rest of our work. The second, "Purpose and Projects," begins by noting problems at the university and the need for a sustainable food program and moves on to describe how, through our mission statement and three project areas, UMSFP and the campus farm improve education, build community, and produce food for campus. The third, "Organization and Leadership," is a more logistical look at how UMSFP is run and managed, with descriptions of the different leadership bodies and their roles and responsibilities. The fourth, "Finance," takes an in-depth look at the budget, business plan, future financial goals, and paid staff options. The fifth, "Evaluating Success," discusses metrics for programmatic evaluation. The sixth, "Web and Communications," describes our online organization and community, and explains how we communicate within ourselves and with others. The numerous appendices include countless valuable resources for those looking for more detailed information; including sets of standard operating procedures, full job descriptions, faculty letters of support, curricula, charters, and many other documents.

Supporting sustainable food and agriculture means supporting health, communities, and our environments. It means creating vibrant, experiential education opportunities at schools. It means diverse groups of people working side by side in diverse gardens of native species. These are seeds which should be planted in all universities and all communities, and we hope that this handbook can not only benefit the future here at the University of Michigan, but also food futures for people everywhere.

Thank you for being part of the sustainable food movement. Grow Blue!

History

Long before the existence of the UMSFP, there was a vision to integrate sustainable food systems curriculum and to develop and implement a campus farm. The idea was not that these changes would create a plethora of University of Michigan farmers, but that they would foster conscious consumers, community gardeners, and sustainable food advocates in leadership roles around the world.

Professors Catherine Badgley and Ivette Perfecto were early advocates for sustainable food systems education at the University. They have been incorporating sustainable food into their courses since 1999, when they started a course called *Food, Land, and Society*. This class, along with others, has inspired engagement outside of the classroom for many years. Students have taken these food systems courses and gone on to lead food justice non-profits, campus farms, and more.

Cultivating Community was initiated in 2004 as an outgrowth of student energy and community engagement. A group of inspired students, faculty, staff, and community members created this group to promote food-system awareness.¹ Originally, there was a strong focus on vermicomposting and large-scale production. The focus has changed slightly to emphasize education on organic food production and community gardening as a student organization. The group now has an on-campus garden at the Ginsberg Center. The Andrah Foundation, and particularly Ruth Knoll, are credited with being key stakeholders in initiation of this group that has become an institution at the University.

In 2007, Shannon Brines, researcher at the School of Natural Resources and Environment and local farmer, put together a report: “Sustainable Agriculture and Food Systems: Research, Teaching, and Outreach Potential at the University of Michigan.” Here, Brines, highlights the importance of funding for research and field of study development. He presents much of the same justifications for why food is a cross-boundary topic as the UMSFP (See Appendix 1 for a copy of the report).

Starting in 2009, an Integrated Assessment was performed to assess sustainability at the University of Michigan. This assessment used student research teams to vet recommendations for the University, including a team focused on food. The final report highlights a campus farm as a high level priority because we are behind our peer institutions and because students listed their desire for a campus farm above anything else on feedback forms. In fact, this goal was even referred to as something that could be implemented in a short timeframe and that it was quite achievable.² When administrators were asked why this recommendation was not moving forward, the response was that there was no one to spearhead the project, so they let it fall in priority. This was an unacceptable rationale for students, so, with fire in their steps, a group of students stepped up to take action.

¹ <http://www.lsa.umich.edu/mbg/learn/cc/history.asp>

² <http://www.graham.umich.edu/pdf/CampusIA-FinalReport.pdf>

In the fall of 2010, students in the Sustainable Agriculture Working Group, now known as the Consortium on Agriculture, Food and the Environment (CAFE), performed a series of interviews with faculty around the University (including Ray De Young, Ivette Perfecto, MaryCarol Hunter, Rachel Kaplan, and Mike Shriberg). The students were interested in determining the perceived value of a campus farm and in learning which faculty members would be interested in utilizing a campus farm for academic purposes if one were in place. These students determined that it was not just students interested in seeing this farm move forward; many faculty members were also eager to see a farm-space on campus that would be available for students, classes, and research projects.

In the spring of 2011, a plan was fleshed out by a small group of interested students. If the students wanted the administration to listen, they knew they needed to be organized, communicate effectively, and do the right homework. Initial research was composed to gauge student interest in implementing a campus farm. First, the group attended as many meetings of groups related to food as possible (including Environmental Action (EnAct), Michigan Sustainable Foods Initiative (MSFI), Student Sustainability Initiative (SSI), Cultivating Community, and CAFE), listening to what each group was working on, and then suggesting the idea of a campus farm as a collaborative project. Second, as it was clear that the food-focused groups needed to more visibly share their good work, the idea of a food-focused monthly newsletter arose. In order to communicate groups' successes, a listserv for representatives of groups was created, and regular meetings were scheduled. This group made sure to connect with SSI so that SSI was hearing about and advocating for food initiatives regularly. Other research included meetings with administrative stakeholders around the University (including Sue Gott in the Planning Office and Andy Berki at the Office of Campus Sustainability).

Beyond every group being incredibly excited about this farm idea, another trend arose. Many of the student groups were simultaneously working on the same projects. The core group working to mobilize food realized that perhaps the first thing to do should be to institutionalize a way of organizing around sustainable food topics. On a whole, students were not satisfied with the action of the University, so they knew that they would have to get the work started themselves. But, to do this, they needed to work together, not in disparate groups. An isolated group could only be as loud as their few members, but organizing around an idea could make loud and lasting change.

In the fall of 2011, as these sentiments were being fleshed out, a group of undergraduate students was working to frame out the possibilities for a campus farm as part of a class project in the course *Sustainability in the Campus*, taught by Dr. Mike Shriberg and sponsored by Andy Berki. The students prioritized sites by comparing benefits within three different theme areas, including education, community building, and production. These themes would later be shared by the UMSFP. In addition to site evaluation, the students surveyed a random sample of University students. Through this survey, the students demonstrated a huge interest (83% are at least somewhat interested) in having a campus farm at UM (see Appendix 1 for the student report and survey results).

After the fall 2011 semester was over, Lauren Beriont and Lindsey MacDonald took these visions one step closer to implementation by applying for and acquiring a Planet Blue Student Innovation Fund (PBSIF) grant in January of 2012. This grant was originally written to cover farm start-up costs for a farm at the Matthaei Botanical Gardens. Access to the grant money was

contingent upon securing funding for a full-time farm manager. The definition of farm-manager and the rationale was later clarified. The most important component for accessing the funds for this grant was to demonstrate that this campus farm project would continue beyond the graduation of the applicants. There is a general consensus, based on Advisory Board establishment, the founding of the Friends of the Campus Farm student group, student engagement, and organization of the leadership team, that this project will continue on, so funders have gotten more lenient with their funding allocation (see Appendix 6 for original and revised PBSIF proposals).

Lindsey MacDonald worked with Bob Grese, the Director of the Matthaei Botanical Gardens and Nichols Arboretum, to propose a potential Masters Project within the School of Natural Resources and Environment for February of 2012 – April of 2013. After the proposal was submitted as an option, a team of students interested in this topic was built. This team consists of four masters level students in the School of Natural Resources and Environment (including: Liz Dengate, Allyson Green, Lindsey MacDonald, and Jerry Tyrrell). Bob Grese has served as project sponsor and academic advisor for this project. Our story continues from here.

See Appendix 1:

1.a. Sustainable Agriculture and Food Systems: Research, Teaching, and Outreach Potential at the University of Michigan (2007) – ed. Brines

1.b. Environ 391 Campus Farm Proposal (2011) – Beriont et. al.

1.c. Creation and Development of the University of Michigan

Sustainable Food Program and Campus Farm (2012-2013 Masters Project Prospectus) – Dengate et. al.

Purpose and Projects

Problem Identification

What was the need for the UMSFP?

1. While student interest in sustainable food continued to grow, UM had an inability to adequately train and educate students to grow, eat, sell, and buy sustainable food. This is imperative for preparing graduates to solve hunger and food problems in their communities
2. UM lacked a central hub to connect all food sustainability work on campus and in the community, and this disorganization made those working on these problems less effective
3. There was great, unmet, potential for students to work with faculty and staff at UM to do research and experimentation to creatively address food sustainability challenges that face society broadly

Mission Statement

The UM Sustainable Food Program will address these problems by focusing on the following mission: **Fostering collaborative leadership that empowers students to create a sustainable food system at the University of Michigan while becoming change agents for a vibrant planet.** To further this mission, the UMSFP will focus effort in three specific theme areas:

1. **Developing responsible citizens and leaders** by facilitating formal and informal education on sustainable food topics
2. **Strengthening communities** through collaborative programming and outreach
3. **Growing sustainable food** that supports the well-being of people and the environment at the University of Michigan and beyond

During the earliest meetings of the UMSFP, the masters project team held several individual and team visioning sessions in order to distill the core purposes and focus of the UMSFP. It was these three words - education, community, and food - which came up over and over again from each individual member. This trifecta soon became our 'elevator speech,' part of our rallying cry, and how we organized and thought about our current and future project areas.

In the remainder of this section, we will explore our specific areas of work, current projects, and goals for future endeavors in each of our three theme areas. More resources can be found in the appendices, as noted.

I. Education: Developing responsible citizens and leaders by facilitating formal and informal education on sustainable food topics

The University of Michigan is world-renowned for the quality of its graduates, its excellence in research, and the vast impact of its alumni. Educational approaches that are hands-on, experiential, and environmental are important pieces of that academic legacy, and areas in which the UMSFP contributes.

Ecologist David W. Orr makes the case for agriculture's role in liberal arts colleges in his 2004 book *Earth in Mind*.³ He writes:

...I think the inclusion of agriculture would have helped liberal arts colleges avoid the debilitating separation of abstract intellect and practical intelligence. Instead, we have developed a version of the liberal arts in which it is assumed, without anyone ever saying quite as much, that learning is an indoor sport taking place exclusively in classrooms, libraries, laboratories, and computer labs and that practical competence is to be avoided at all cost.

This leads me to propose that agriculture should be included as part of a complete liberal arts education, first because it offers an important kind of experience no longer available to many young people from predominantly urban areas...

Orr goes on to list six more benefits of including sustainable agriculture and farming in the college experience. This includes teaching the values of discipline, self-reliance, hard work, and cooperation; using college farms as interdisciplinary laboratories; college farms as catalysts to revitalize surrounding rural areas; preserving biodiversity; reducing global carbon emissions by promoting localization; and finally, teaching students that our problems are not beyond intelligent solution; that solutions are close by; and "that institutions that often seem to be inflexible, unimaginative, and remote from the effort to build a sustainable society can be otherwise."³

These arguments are perfectly relevant at the University of Michigan, and we have seen other non-agriculture-based, higher-education institutions around the country and the globe take this advice and integrate sustainable food and agriculture components within their curricula. (As seen in Appendix 4, our early research showed us that campus farms and smaller-scale school gardens are already present and thriving at many of our peer institutions around the country and the globe).

Across the University--within the School of Literature, Science, and the Arts (LSA); the Ross School of Business; the School of Dentistry; or any of the university's other eminent divisions--the UMSFP has relevance and purpose, and the potential to provide formal and experiential education. The UMSFP oversees multiple educational projects, as well as the management of the campus farm as a learning tool and living laboratory. Our educational initiatives are listed below. These projects are all either completed or ongoing, and while the main topics are listed in no particular order, the projects under each heading are listed from top to bottom in order of priority.

1. *Building living laboratories on campus that create diverse, interdisciplinary opportunities for faculty to engage students on sustainable food topics by:*

³ Orr, David W. *Earth in Mind: On Education, Environment, and the Human Prospect*. Washington, DC: Island, 1994. Print.

- Establishing and managing the **Campus Farm** at Matthaei Botanical Gardens as a year-round indoor/outdoor classroom for formal course-based education, research and custom experiences,
 - Encouraging smaller **satellite gardens** in different locations on campus that promote walk-by, on-the-spot, informal education (including the Cultivating Community garden and the *Outdoor Adventures* garden), and supporting member groups working to add to or integrate this collection of satellite gardens (including the Permaculture Design Team and the Student Advocates for Nutrition),
 - Creating and fostering relationships and contacts with **local farmers and sustainable food advocates in the Ann Arbor area** (through events such as presenting at the Local Food Summit, supporting the CAFÉ Food Symposium, hosting the Harvest Festival, and other forms of media outreach) in order to connect students with volunteer, internship, and educational opportunities at *off-campus* living laboratories, and
 - Cultivating relationships within University Unions, Dining Services, and Plant Operations, and assisting students in their pursuits to explore **components of industrial scale food systems** (from production to distribution to food preparation).
2. *Encouraging the addition of sustainable food and agriculture material to the wealth of formal educational options available to University of Michigan students by:*
- Promoting **food as a theme** for professors and students to focus on for projects in existing classes (through constant contact with faculty members and visits to speak at or hold panel discussions in classes in many different departments and schools (we have 14 class collaborations to date))
 - **Establishing new courses** that focus on designing solutions to existing real world problems (with a goal to create interdisciplinary courses in multiple departments and schools on campus; in Fall 2012, we worked with Professor Joe Trumpey in the school of Art and Design to create a successful and very well-attended course on Sustainable Food System Design (46 students)),
 - Compiling a **resource list for students** of faculty members that support the UMSFP mission, and courses offered each term that discuss food, sustainable agriculture, and/or localization,
 - Staying closely involved with the current **faculty cluster** at Michigan in sustainable food systems (this involved attending job talks, providing feedback to reflect the goals of the UMSFP, and being in communication with Lesli Hoey (the first cluster hire on campus)),
 - Working with faculty members to create a food-centric **certificate or minor program** (this work is currently being spearheaded by a faculty team led by Catherine Badgley, Ivette Perfecto, and Lesli Hoey), and
 - Encouraging new **research** projects initiated by students and faculty (2 students have approached the UMSFP about using farm space for thesis work).

3. *Providing **experiential education and service-learning opportunities** that promote teamwork, commitment, accountability, and a sense of pride in hard work, and a realization of one's own leadership potential by:*
 - Holding weekly volunteer **workdays at the campus farm, greenhouse, and satellite gardens** where any student can learn hands-on skills such as planting, weeding, pest control, and harvesting,
 - Providing student groups with a **web presence** to build support for their initiatives,
 - Offering free **office space** to facilitate cross-disciplinary learning among students working on food systems projects or initiatives, and
 - Maintaining contacts with new and emerging **food entrepreneurs** so that students can learn about creative alternative food system options.
4. *Mentoring volunteers and interns to promote personal and professional growth and provide realization of one's own **leadership potential** by:*
 - Fostering student leadership by supporting and coordinating with our **member groups**; working with potential and current student leaders to develop their ideas and improve their leadership skills (some of this is done through explicit teaching, and some done through role modeling),
 - **Making food systems student groups more robust** by helping them develop leaders and strategies for transferring leadership from year to year,
 - Creating **paid student internship positions** to enable students to devote more time to the program and gain more experience in leadership roles, and
 - **Encouraging student leaders** to lead discussion panels, farm tours and workshops, and a variety of educational, marketing, and publicity events for the UMSFP.

Future Goals

As UMSFP continues to grow and establish itself on campus, we have a myriad of goals for increasing educational opportunities. As time goes on, we hope that the UMSFP will be able to support our other two goals (community building and food production) through a thriving set of year-round, formal and informal educational programs on and off campus.

A 2013-2014 SNRE masters project is invested in exploring educational opportunities linked with the UM campus farm and developing curricula to be used therein. Future ideas for this group of new UMSFP leaders and others include creating educational programs for local public school students; collaborating with local community organizations; hosting short-and long-term research studies at the farm site; continuing to foster semester-long university courses based on food and agriculture issues; and creating a Sustainable Food certificate or minor program at the university (see Appendix 2 for their prospectus).

Extant UM Class Collaborations

Class	Professor	Term(s)	Collaboration Type and Details
ENVIRON391: Sustainability and the Campus	Mike Shriberg	Fall 2011; Fall 2012; Winter 2013 (17 students)	In Fall 2011, students completed evaluated the potential for a campus farm and did a site evaluation; Fall 2012 students focused on the potential for permaculture at UM— the Permaculture Design Team (PDT, now a UMSFP member group) was borne from recommendations of this project; The Winter 2013 team followed up on curricular potential for permaculture (Lindsey MacDonald was GSI)
ENVIRON 211 - Social Sciences and Environmental Problems	Michaela Zint	Winter 2012 (4 students)	Student project on improving volunteerism out at the Campus Farm (Lindsey MacDonald as GSI)
UP505: Fundamentals of Planning Practice	Gavin Shatkin	Winter 2012 (4 students)	A team of students presented a case study on campus farm feasibility at UM, including background research on peer institutions, recommendations for siting a farm, and recommendations for organizational structure and funding
ARTDES 398/500: Sustainable Food System Design	Joe Trumpey	Fall 2012 (46 students)	Course was created by the UM leadership team and Joe Trumpey; undergraduate and graduate students learned about the UMSFP and farm, took field trips to visit the farm site and other local farms, and were encouraged to focus semester projects on UM campus farm-related topics.
ENVIRON 201: Ecological Issues	Shelie Miller; Paul Webb	Winter 2012; Fall 2012; Winter 2013 (over 450 total students)	Students were encouraged to complete their group projects at the UM campus farm or as an otherwise collaboration with UMSFP; information on UMSFP included in course lectures (Liz Dengate was GSI)

ENGR 100: Engineers Making a Difference	Lorelle Meadows	Fall 2012	No official student work yet, but Lorelle met with the masters project team to talk about ways to get students involved in future semesters. Students solve real-world food problems with local clients, and the campus farm could be a site for a project in the future.
ENVIRON 222: Intro to Environmental Justice	Dorceta Taylor	Fall 2012 (75 students)	Allyson Green (GSI) took students to Cultivating Community garden, led discussion on food justice, gave background on the garden and UMSFP. Students wrote reflections on food—many chose to write about food at UM.
RCIDIV 302: Advanced Issues in Science, Technology, Medicine, and Society (section titled "Environmental Literature/Social Justice")	Virginia Murphy	Fall 2012; Winter 2013 (20 students)	Jerry Tyrrell and Allyson did a panel discussion with students, introducing UMSFP and fielding questions on the role of UM students in promoting sustainable food
UC 254.007 (Much Depends on Dinner)	Margot Finn	Fall 2012; Winter2013 (20 students)	Jerry and Allyson did a panel discussion with students, introducing UMSFP and fielding questions on our own opinions and actions with food, the role of UM students in promoting sustainable food, and what it means for food to be “sustainable” in the first place
NRE 688: 2 nd Year Landscape Architecture Studio	Stan Jones	Winter 2013 (12 students)	Students produced conceptual designs for the campus farm

See Appendix 2:

2.a. Education and Community at the Campus Farm (2013-14 Masters Project Prospectus) – Borgman et. al.

2.b. Faculty Letters of Support (2013)

- Andrew J. Horning
- Lorelle Meadows
- Margot Finn
- Ray DeYoung

2.c. Informal High School Education at a Small Farm Setting: A Curriculum for a Segmented Summer Program (2013) – Dengate

2.d. Sustainable Food System Design Syllabus (2012) – Trumpey

See Appendix 8:

SOP: Contacting faculty

SOP: Class visits

II. Community: Strengthening communities through collaborative programming and outreach

All three of our goals work together, and it is not always easy to distinguish between them. Educational programs often simultaneously enrich community relationships and foster new friendships and connections. Our over-arching goal is to think about how to strengthen communities through education as well as through other methods. Beyond education and enrichment *on* campus, the UMSFP intentionally cultivates both personal and organizational relationships across southeastern Michigan and beyond. Throughout our development process, conversations with local farmers and other members from the community made it clear that University members have a lot to gain from working with our broader community.

In his book *Civic Agriculture: Reconnecting Farm, Food, and Community*, Thomas Lyson (2005) makes the case for a strong community within and around food and agriculture. When this community exists, he argues, we see a “more socially and environmentally integrated food system,” with economic, health, and ecological benefits.⁴ Of course, nobody needs to read a book to tell them that food and community go together; humans have been coming together over meals for hundreds of years. Through the UMSFP, we foster these connections, and ensure that the food people are gathering over is fresh, healthy, sustainable, and delicious.

The University of Michigan is a vast university within a large and diverse community. There is no better way to bring together the many varied components within the university, as well as meshing the university with our Ann Arbor community and beyond, than through food—an appreciation of which all humans share. The UMSFP works to host events and programs that bring people together who would have otherwise never met and prepare UM students to disperse into various communities, spreading messages of sustainability and revitalization.

The following list describes ways in which these relationships are fostered. These projects are all completed or ongoing, and while the main topics are listed in no particular order, the projects under each heading are listed from top to bottom in order of priority.

⁴ Lyson, Thomas A. *Civic Agriculture: Reconnecting Farm, Food, and Community*. Medford, MA: Tufts UP, 2004. Print.

1) *Connecting people from diverse backgrounds through **events that explore pertinent issues** such as food justice, food preservation, and farming practices locally, regionally, and globally by:*

- Hosting **community workdays and staff retreats** to engage diverse groups of people and enable people to get to know one another through casual, hands-on projects,
- Hosting **large events** (such as the Harvest Festival and Spring Kickoff event) that provide a celebratory, informal way for people to meet others with similar interests, while learning more about the UMSFP and local food, and encourage university and community members to mingle and meet each other,
- Helping to promote **UM courses that value student experiences off-site** where members of the community are working closely in some capacity with food systems and where **speakers** are brought into classrooms,
- **Participating in or co-sponsoring non-UMSFP campus events** that enable us to reach out to a wider audience and spread our mission (such as the Earth Week Diag Days, co-sponsoring a TedX screening, or attending student government meetings),
- Supporting and promoting **creative and engaging workshops** led by various student groups and partner organizations, and
- Encouraging seminars and other events that bring together university students from all disciplines with **community members and food professionals**.

2) *Using **outreach and communication** to reach a diverse audience and encourage new connections among diverse groups of people:*

- **Giving students a unified voice** to make serious and lasting positive changes,
- Enabling an interactive **online community** through our website and Facebook page,
- Using the UMSFP as a hub for **coordinating volunteer outreach** among a broad range of on and off campus experiences (through member groups, local farms, etc.), and
- Maintaining a **database of individuals and organizations** that UMSFP leaders may use to link collaborators and spur partnerships between the university and other Michigan communities.

3) ***Creating models** for institutions and communities through the transparent documentation of successes and failures of UMSFP methods, programs, and curriculums by*

- **Maintaining a website** that documents student group activities *ad hoc* and actively synthesizes successful practices and strategies,
- **Releasing educational materials and resources for public use,**
- **Testing a variety of different models**, distilled from examples from our peer institutions and other organizations on campus at Michigan, for fundraising, leadership, and communication,
- Maintaining **personal communication with other campuses** facing similar challenges, and

- Actively **presenting at conferences and symposia** on campus and at other schools about our successes, failures, and suggestions for other groups and our own school in the future.

Member Groups

One of the most important parts of UMSFP's work is bringing together its individual member groups to create a community of food sustainability advocates and activists on campus. This is done through regular member group council meetings (*see part three*), social events such as regular potlucks, and information sharing on member group events and projects, such that students can attend and volunteer at other groups' work, as well as collaboratively trouble-shoot problems different groups are facing.

These member groups contain the most devoted and active sustainability food advocates on campus. When they can come together, unified under the umbrella of UMSFP, they become stronger through collaboration, information sharing, friendly support, and efficiency. Staying in touch with one another also prevents groups from working simultaneously on the same issues, instead of dividing projects efficiently or working together to more easily reach solutions. Our many conversations with students and alumni showed us that our encouragement of conversation and collaboration between similar groups is one of our most important purposes, as this lack of community consistently frustrated students in the past.

We strive to provide member groups with needed resources, both physical (e.g., office space and tools) and supportive (e.g., funding advice). Currently, we are able to provide member groups with publicity resources (through our website, Facebook page, and newsletter), collaboration opportunities (through the member group council and its events), and counseling and experienced advice (through weekly office hours and over emails). We in no way envision the UMSFP as a central bureaucratic organization. Instead, it is intentionally set up as an umbrella network of grassroots student groups who work collectively and individually towards our goals. With a program coordinator versed in leadership development, UMSFP could provide member groups with access to training, leadership development workshops, and an accessible resource to assist with questions and problem-solving. We also hope to eventually offer shared office space for all member groups.

Harvest Festival

The first UMSFP Harvest Festival was held on October 4th, 2012, and is planned to be an annual event. The goals of this event are many: to build a UMSFP community; to spread the word about the work of UMSFP member groups and campus farm; to illustrate how delicious sustainable food is; and to fundraise for UMSFP through a small admission fee. The first festival required over two months of intensive preparation, but the work paid off, as attendance goals doubled (with over 300 attendees and volunteers) and over \$3,000 raised. The festival included a full meal prepared by the University Unions chefs using local produce from Ann Arbor farms, live music from bands including the Crane Wives and Dragon Wagon, lawn games, tours of the campus farm, and a raffle. Perfect weather added to the first festival's complete success. Over the event's duration, students, faculty, staff, and community members (many of whom had never before heard of the UMSFP) mingled, chatted, ate, danced, and played lawn games together.

More information on the festival's different elements and how to plan for future festivals can be found in Appendix 3.

Workdays at the Farm

Our weekly volunteer workdays at the campus farm contribute to all three of our goal areas: they provide volunteers with hands-on education; they help us form a community of interested volunteers; and they enable us to reach our food production goals. Since our workdays are populated by a group of students all there for very diverse reasons (some because they are interested in the environment, some because they love gardening, some for a class project, some because they are looking for community service hours), the attendees end up getting to know someone they might otherwise never have met. Working alongside one another to shovel compost, plant seeds, or pull weeds, students seem to forge surprisingly good connections after only an hour or two of work time. Although we encourage students to return weekly, those students that come one time with a group of friends or a class team are also important, as they help spread the word about what is happening at the farm to the entire campus community. These workdays are an important time to spread the message of UMSFP, empower potential new leaders, engage students, and open people's eyes to the reality of growing your own food on a small scale.

See Appendix 3:

- 3.a. UMSFP Member Groups (2012-2013)
- 3.b. UMSFP Member Groups Requirements and Application

See Appendix 8:

- SOP: Approving new member groups
- SOP: Farm workdays
- SOP: Harvest Festival
- SOP: Spring Kickoff event

III. Food: Growing sustainable food that supports the well-being of people and the environment at the University of Michigan and beyond

The University of Michigan feeds thousands of faculty, staff, students, and visitors every day, through the campus dining halls, venues at the University Unions, and catered events. The University, University Housing, and the University Unions share the UMSFP's goal of providing healthy and sustainable food. By producing food sustainably right on campus at our farm site, UMSFP can help them meet their specific goals.

On their website, University Housing states that "establishing a healthy relationship with food is an important part of learning," and the Unions' MHealthy programs and MyNutrition programs back up their commitment to good nutrition. The University Dining site also features a section on 'Sustainable Dining,' with how-tos for students, explanation of their local sourcing policies, and waste reduction, including information on the "Go Blue/Eat Green," campaign, which labels all food products sold at the university which were grown or produced in the State of Michigan or within a 250-mile radius of the university. The University Unions also began hosting an on-campus farmers market in 2011, featuring produce from several nearby farms. These

campaigns are part of the work to meet the goal laid out in the University's 2011 Sustainability Integrated Assessment calling for 20% of the food served by the university to be local and sustainability by 2025. We admire these verbal commitments and the actions taken already to support sustainable food, but UMSFP advocates for higher standards for the definition of 'sustainable' and 'local.' Through our work, we will help to not only achieve these standards but also to go beyond current goals to become leaders in sustainability.

There are myriad benefits to local, sustainable food, the full extent of which can be read elsewhere. In short, sourcing food locally from sustainable farms means fewer carbon emissions and less of a contribution to climate change; more efficient use of water and less water pollution; supporting a localized, thriving economy; fostering a high biodiversity of beneficial native species; ensuring healthy, nutrient-rich soil for years to come, with manageable levels of erosion; and other environmental, economic, and social benefits.

UMSFP can help the university reach true levels of sustainability in food and source produce so local it is actually grown on university property. These projects are all completed or ongoing, and while the main topics are listed in no particular order, the projects under each heading are listed from top to bottom in order of priority.

1. *Supporting UM's goal of **sourcing 20% local and sustainable food** by 2025 by*
 - **Producing a wide variety of vegetables, greens, fruit, herbs, and honey at the campus farm**, ensuring it becomes certified according to the University of Michigan's food purchasing standards, and selling this produce to be used by the university,
 - Providing produce to be sold on-campus through the Student Food Co.'s food carts and at the MFarmers Market, and further improving access to fresh produce on campus by advocating for and supporting on-campus **food stands, food carts, and farmers markets**,
 - **Selling and donating campus farm produce** to campus events and groups, and
 - **Documenting the certification process** as a roadmap for other small, local farmers to follow and benefit from, in order to encourage other sustainable vendors to sell to the university.
2. *Serving to **visibly illustrate the University's commitment** to healthy people and a healthy environment by*
 - Requiring produce from the Campus Farm used in dining halls, farmers markets, unions, and catered events to be **labeled "Grown at the University of Michigan Campus Farm"**
 - Supporting the creation of other **on-campus satellite gardens** with informative signage in areas of high-traffic to increase the visibility of the project, and
 - Maintaining an **active media and community presence** that illustrates that the university is committing resources to support food education, social change, and sustainability.
3. ***Showcasing safe, ethical, and sustainable practices** alongside the thoughtful creativity with which Ann Arbor and the University of Michigan are celebrated by*

- Promoting **chemical-free food production** and researching and testing other **small-scale, sustainable agriculture methods**
- Specifically encouraging engineers and entrepreneurs to help **solve practical problems** faced by Michiganders, and
- **Looking to students as designers of a healthier food system.**

Specifics on Campus Farm Operations

Early History

Long before the campus farm became a reality, Cultivating Community followed by Outdoor Adventures, were growing food on campus in plots that would later become UMSFP satellite gardens. (More information on these groups can be found in Appendix 3.) While both of these groups provided valuable hands-on education and some delicious herbs and veggies to students, production was on a very small-scale.

In Fall of 2011, a group of Environ 391 students developed a proposal for a farm on campus; the foundation for the farm planning that the SNRE masters project team would begin in February of 2012. The Matthaei Botanical Gardens had generously offered one of two spaces on their grounds for the farm site; during early 2012, the masters project team finally decided on the site nearest the Botanical Gardens greenhouses, due to its proximity to parking, water sources, tools, greenhouse space, and the Project Grow gardens, as well as its higher visibility on the Botanical Gardens campus. (In addition, the other available site, a short walk from the greenhouses near a historical barn, is home to endangered species of rattlesnake, the Eastern Massasauga.)

Pilot Garden

During the first summer of production, UMSFP planned and maintained a smaller-scale 'pilot garden' adjacent to both the Project Grow sites and the eventual campus farm space. This first pilot garden space was 600 square feet. The site was prepared during May 2012, when the first weekly volunteer workdays were held (workdays which have continued without pause through the present.) In addition to the volunteers at the workdays, the masters project students (primarily MacDonald, Green, and Tyrrell) were responsible for primary maintenance of the space (regular watering, weeding, etc.). The pilot garden produced over 700 pounds of vegetables and herbs between June and October 2012, which was given to volunteers, donated to student groups, and given away on campus to students, staff, and faculty. Tours of the garden space were given during the first annual Harvest Festival.

Farm Plans 2013 and Beyond

In the fall of 2013, the campus farm moved into Matthaei Botanical Gardens greenhouse space to extend the season, keep volunteers engaged, and experiment with indoor growing techniques. After spending the fall replacing the dirt in four in-ground beds, we began growing greens, radishes, carrots, and peas in the winter, and produce was taken home by volunteers and sold to students through the Ann Arbor Student Food Co, a UMSFP member group. The campus farm will move into its full outdoor space in the summer of 2013. Although there is currently a two-acre site available for planting, plans for 2013 are to grow in a quarter-acre of land. Over the next five years, production will gradually increase until the entire space is being used. Beyond the

two acres of planting space, the farm site includes a small storage shed, bee hives, grassy areas, and a patch of small trees. A class of landscape architecture students completed a set of potential farm space designs for the entire space in early 2013; these designs can be seen in the appendix. There is a great deal of potential for creative uses of the space, including ponds, educational signage and walking tours, fruit trees, native wildflower gardens, and so on.

During the summer of 2013, the farm will be managed by two graduate student interns under the supervision of Matthaei Botanical Gardens (Parker Anderson [full-time farm intern] and Meaghan Guckian [half-time farm intern, half-time Cultivating Community intern].) Candidates were required to submit cover letters and résumés; the initial screening and interview processes were co-conducted by the UMSFP leadership team and Botanical Gardens staff. These interns, working a cumulative 60 hours a week, will be primarily responsible for creating site plans, planting, watering, weeding, harvesting, applying for GAP/GHP certification, engaging volunteers, maintaining a meaningful connection with all of UMSFP's entities and the community, and running workdays.

As we expand in cultivated area and production over the next five years, we will need to simultaneously add farm interns, volunteers, and eventually a full-time farm manager to oversee planning, production, and more certifications, including becoming certified USDA organic.

Produce Distribution

We will begin adding revenue during the 2013 growing season, through selling produce to the Ann Arbor Student Food Co. Assuming GAP/GHP certification is successfully completed by the start of the 2014 growing season, we will be able to sell to the university Unions and Dining Services and vastly increase our revenue stream.

We propose that produce will be:

- 2012: Given to volunteers, donated to student groups, and given away on campus to students, staff, and faculty
- 2013: Sold to the Ann Arbor Student Food Co., given to volunteers, and donated to student groups.
- 2014: Sold to the University Unions and MFarmers Market; trial year of a small CSA program; Sold to the Ann Arbor Student Food Co., given to volunteers, and donated to student groups.
- 2015 +: Sold to the University Unions, MFarmers Market, and Dining Services; CSA shares sold to university students, staff, and faculty; Sold to the Ann Arbor Student Food Co., given to volunteers, and donated to student groups.

Certifications

In order to sell produce to the University, we need to complete GAP/GHP certification. This process was begun by the leadership team in March 2013, and will be completed by the farm interns during the 2013 growing season. A program coordinator would be ideal to serve as the consistent 'Person in Charge' (PIC) for this certification process.

Eventually the farm will look into obtaining MAEAP and USDA organic certification.

See Appendix 4:

4.a. Seed Order List for Campus Farm (Spring 2013)

- 4.b. UMSFP and Campus Farm Summer Intern Job Description (Summer 2013)
- 4.c. USDA GAP & GHP Certification Progress and Paperwork (Spring 2013)
- 4.d. Friends of the Campus Farm Constitution (2012)
- 4.e. Friends of the Campus Farm Leadership Tasks (2012-2013)
- 4.f. Campus Farms at Peer Institutions

See Appendix 8:

SOP: Volunteer workdays

SOP: Working with MBGNA staff

SOP: Working in the greenhouse

Organization and Leadership

Basic Structure

Because fostering collaborative leadership is central to the mission of UMSFP, the program is structured to be intentionally student-driven with support from faculty, staff, and administration. The leadership structure displayed in Figure 1 below arose iteratively through experience, stakeholder engagement, and peer institution research. As of 2013, UMSFP is organized into these five separate but connected entities: Member Groups, Member Group Council, Leadership Team, Advisory Board, and the Campus Farm. The specific roles for each group within this structure were designed to fit the current needs of the program and to guide its growth into the future.

The leadership structure of UMSFP emerged through research and practice, as student leadership evolved to fit the needs of the growing program. Successes from similar programs at peer institutions (See Appendix 4) and from other organizations at U of M (Outdoor Adventures and the Student Sustainability Initiative) helped inform the current structure. Initially organized with four SNRE Masters students as program managers facilitating student committees, the student-driven structure of UMSFP is designed to engage students from all disciplines and class levels in meaningful leadership.

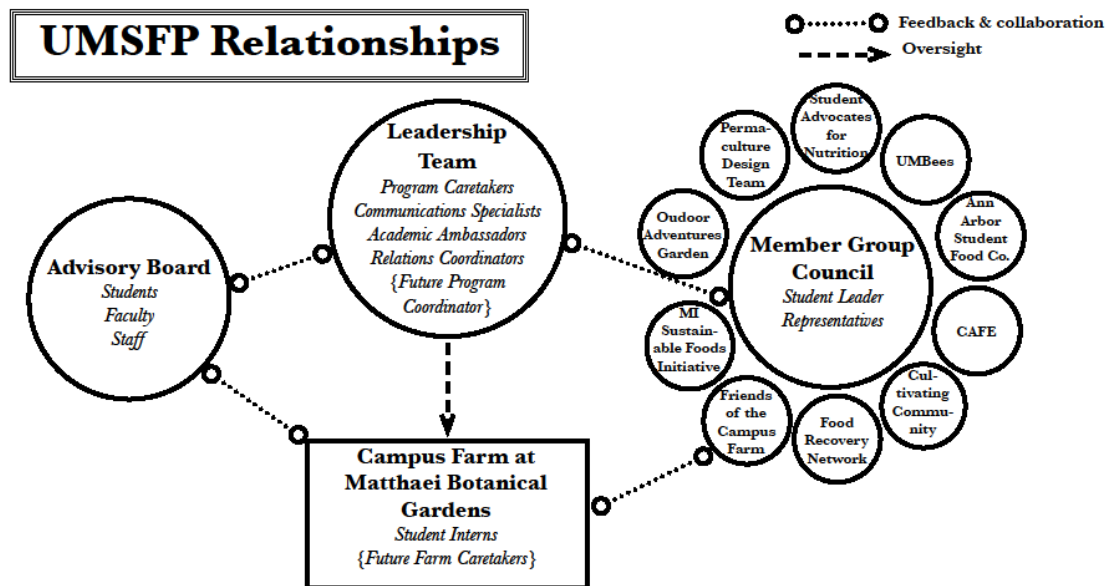


Figure 1. UMSFP Leadership Structure as of April 2013. Directional arrows indicate lines of communication and influence. NOTE: MBGNA is not a formal entity within UMSFP but is included to show its role in supporting our work. We imagine other such entities (e.g., Division of Student Affairs) being added as the program grows. Paid Director is highlighted in blue under the Leadership Team because this position is not yet a reality.

Leadership History

2012

In spring of 2012, the SNRE Masters project students worked with undergraduates Sarah Schwimmer ('13 PitE grad who helped create the Outdoor Adventures Garden) and Lauren Beriont ('13 PitE grad who helped propose the Campus Farm) to pitch the following student committees:

- Branding, Communication, and Education - working to develop programs for children and to get for-credit courses at UM to use the site.
- Website - putting together a website as a hub for all things food related at UM, and especially communicating the mission and current events on the farm.
- Advisory Board - reaching out to key professors and faculty to put together a board that can offer advice and support as well as help maintain a professional link between this student run initiative as we move forward.
- Development - focusing on exploring possible fundraising opportunities from grants and foundations, and developing proposals to fund a full time farm manager.
- Social - organizing events and meetings that bring the whole UM Sustainable Food Program together to share ideas and grow the internal community working on the project.

Introductory mass emails were sent out in March to student listservs across campus to recruit volunteers and committee members. From this came a solid group of volunteers who helped create outreach materials (including a website and logos), identify individuals to serve on an advisory board, and grow community around this initiative through potlucks and other social events. While these committees were a short-lived, early piece of UMSFP's work, they helped guide some of the planning and structure for later progress.

The Branding, Communication, and Education committee (later renamed COE—Communication, Outreach, and Education), spearheaded by Liz and Allyson, first met in March 2012 with 3 undergraduates in attendance. The group identified 4 priority areas for the committee: (1) naming the campus farm, (2) documenting lines of communication and making it available to everyone involved (e.g., who is actually involved in the program and to what extent), (3) using the website for updates and communicating the mission of the program, and (4) clarifying key contacts (e.g., who to go to with specific questions). After the first meeting, Liz and Allyson worked on a mission statement draft for the committee, while undergraduates (Adriana Saroki and Nadine Gilmer) worked with the Website Committee to craft logos. No one from beyond the masters project team attended the second meeting, and the Committee dissolved shortly afterwards, when the semester ended, due to lack of involvement and direction.

The Website Committee, led by Jerry, might have been the most productive and valuable committee in the short term. Members designed the website and accompanying graphics and kept it updated with blogs and events. Neil Matouka (Co-committee Captain) was instrumental in creating, hosting, and designing the website, and Jerry took over as webmaster in summer 2012.

The Social Committee, led by Lauren and Sarah, was especially instrumental in raising the level of imagination surrounding this project through potlucks that incorporated visioning exercises. Potluck attendees helped brainstorm crops to grow at the summer 2012 pilot garden and narrowed down a list of potential farm names started by the COE Committee. While the final list

of names was put to a vote, the SNRE Masters project team felt it was too premature to name the farm and decided to hold off and let the name grow alongside the farm.

The Advisory Board Committee, led by Lindsey with help from Sarah Schwimmer and Neil Matouka, outlined what a UMSFP advisory board should look like and identified UM faculty and staff who be ideal to have on the board. This group also crafted emails faculty/staff inviting people to the board and an email inviting students to apply for advisory board positions.

The Development Committee, originally spearheaded by SNRE student Laura Jackson and then taken over by Liz and Allyson, held two meetings and then disbanded when no one showed up to either meeting.

Each committee showed varying levels of success, so the Masters project students put these committees on hiatus over the summer, taking lessons from this experience and from successes at other institutions to reformulate leadership for the fall.

Over the summer, the SNRE masters project group, with the help of dedicated volunteers, maintained the pilot garden, created a framework for class collaborations, and planned for the fall semester.

In fall 2012, UMSFP held elections for four student advisory board positions. These positions were designed to give more diverse input about the program and to make sure student input was the priority on the advisory board. Emails were sent out again to listserves across campus to solicit applications in September, and the UMSFP Advisory Board officially convened on October. The four elected students (two Program in the Environment undergraduates—Lauren Beriont '13 and Izzy Morrison '14, an SNRE PhD student—John Graham, and a Social Work Masters student—Allison Sponseller), joined the Masters project team in further refining the goals of the program. With insights from faculty and staff advisory board members, students sat down and formulated the current model so as to maximize student involvement and creativity while providing an avenue for formal support within UM through the advisory board.

2013

Lauren coordinated monthly Member Group Council meetings starting in January 2013, with a representative from each Member Group present. Member Group Council members began using the UMSFP Facebook page more frequently to post events and photos, and meetings continued to clarify UMSFP and the role of Member Groups in promoting its mission. Izzy Morrison also resurrected UMSFP potlucks in March 2013, adding depth to the connections between groups and igniting excitement leading into the summer and the next school year.

In preparation for a transition of leadership, the Masters project group outlined all the tasks they and volunteers had been performing over the last year to keep UMSFP running. Together with student board members and newly hired part-time interns (Sarah Schwimmer and Lauren Beriont), they grouped these tasks into four specific leadership roles to be filled by eight students on the next Leadership Team. Emails were again sent out to student listserves and announcements were made in the weekly UMSFP newsletter and on Facebook to solicit applications during the first week of March. A total of 33 undergrad and graduate students applied for eight positions—an overwhelming response! Over two weeks, 127 students voted and elected the very first completely elected UMSFP Leadership Team. These students began their terms of service right away before the semester ended...and the rest is history!

Member Groups

UM student groups make up the core of UMSFP, as they are on the ground working on various aspects of sustainable food each day. Student groups whose missions fit within the mission of UMSFP are encouraged to apply for Member Group status (see Appendix 3 for application). Originally conceived of as the “roots” of UMSFP, Member Groups carry out their unique missions within the University and community while sharing expertise, successes, and struggles with each other and with the other UMSFP leadership. To facilitate this collaboration between Member Groups, each one is represented on the Member Group Council.

Purpose: To carry out the good work of sustainable food on campus

Problem Addressed: Lack of communication between student groups was identified as a major struggle in moving sustainable food forward at UM. The member group model gives student groups the benefit of collaboration and a public platform to share their work so that they can collectively work towards their goals. They in turn benefit UMSFP as a whole by mobilizing students and providing on-the-ground publicity and action.

Plan for Succession: Each student group has its own plan for leadership transition but can use UMSFP to help facilitate if needed. New member group applications are evaluated by the Leadership Team.

Major Roles and Responsibilities:

- Carry out group mission—spread the good food revolution!
- Communicate amongst Member Groups and Leadership Team in planning events

Member Group Council

Representatives from each Member Group meet together bimonthly to share updates on their respective groups, troubleshoot and give insights on individual upcoming events and activities, and plan collaborative UMSFP events. Meetings are called and facilitated by the Leadership Team with support from Member Group representatives (see Appendix 5 for guiding document).

Purpose: To empower member groups to work to their full potential individually and collectively by sharing expertise and resources in learning, planning, and acting to advance sustainable food at UM

Problem Addressed: Member group council members facilitate communication between their own student members and UMSFP to streamline the dissemination of information going in both directions. This model also provides a regularly scheduled forum for collaboration and communication.

Plan for Succession: Each member group is responsible for selecting representatives. The Leadership Team will facilitate this process and keep track of representatives.

Major Roles and Responsibilities:

- Attend monthly meetings
- Communicate amongst Member Groups and Leadership Team

- Disseminate information among group members

Leadership Team

The UMSFP Leadership Team exists as a liaison between Member Groups, the Advisory Board, and the University. In addition to facilitating that communication, this student-run team also works on the day-to-day tasks involved in running a successful program: communications, finances, and scheduling (see Appendix 5 for team charter).

Purpose: To carry out the mission of UMSFP and grow the program through communication, outreach, and organizing

Problem Addressed: Without a paid Program Director to do much of the administrative work of UMSFP, the burden falls to students. The SNRE Masters project team consistently devoted 10 hours per week to these tasks, which is the equivalent of a work study position without the financial support. Dividing these tasks into 8 volunteer positions of up to 5 hours per week gives students the opportunity to learn through the experience without the fear of over-commitment.

Plan for Succession: New Leadership Team members will be elected by the student body in March of each year, with terms beginning in April to allow for a month overlap between teams.

Major Roles and Responsibilities:

- Attend weekly meetings
- Keep website and social media up to date
- Communicate amongst Member Groups, Member Group Council, Advisory Board, and UM stakeholders
- Uphold and spread the mission of UMSFP
- Organize and facilitate Member Group Council and Advisory Board Meetings

See Appendix 5 for Leadership Team members.

Advisory Board

Recognizing the many advocates of sustainable food within the University, the UMSFP Advisory Board exists to unify and leverage that support beyond the reach of purely student leadership. The Advisory Board, made up of students, faculty, staff, and administration, not only serves in a consulting role but also helps cement the long-term institutionalization and credibility of the program as student leadership changes. The purpose of the UMSFP Advisory Board is to provide *vision, guidance, advocacy, and support for the operations, programs, outcomes, and leadership* of the UMSFP. Its goal is to raise awareness about and support for sustainable food practices among students, faculty, staff, and alumni and in partnership with related organizations regionally. See Appendix 5 for the Advisory Board Charter.

Purpose: To provide vision, guidance, advocacy, and support for the operations, programs, outcomes, and leadership of the UMSFP. Its goal will be to raise awareness about and support for sustainable food practices among students, faculty, staff, and alumni; and in partnership with related organizations regionally. Its efforts will include, for example, offering support and advice

for farmers' markets, student groups, the Campus Farm, and events and programs that further the overall goals of the UMSFP.

Problem Addressed: The Advisory Board gives not only guidance but legitimacy to UMSFP, as foundations, organizations, and UM itself are leery of student initiatives without long term stability. The Advisory Board will help provide this stability while also demonstrating interdisciplinary support from within UM and Ann Arbor. Board members can leverage their influence in support of UMSFP but will not be the guiding force; thus, allowing for student creativity to flourish without putting members in danger of bearing responsibility for student actions.

Plan for Succession: Student members on the Leadership Team will also serve on the Advisory Board. Elections each March will ensure continued leadership. Faculty and staff members can serve up to 2 one year terms in succession. New members will be invited to the Board by the Leadership Team.

Major Roles and Responsibilities:

- Attend monthly meetings
- Provide guidance while respecting and encouraging student innovation
- Lobby for UMSFP within each members' sphere of influence

Campus Farm

Serving as the central hub of hands-on activity, the Campus Farm is set apart from other Member Groups at this point in time because of its need for resources and support in these beginning stages of development, the long-term commitment of resources and development of infrastructure to support farm activities, and its direct role in providing one of UMSFP's three targets (sustainable food production). It is primarily overseen by students (interns and FCF members) with the support of MBGNA staff and the Advisory Board.

Purpose: To provide a medium through which UMSFP can promote its mission on a large scale and produce food sustainably on campus

Problem Addressed: Student interest in gaining practical food growing experience has expanded beyond the capacity of on-campus gardens like Cultivating Community, Outdoor Adventures, and the garden run by Student Advocates for Nutrition. In addition to this practical experience, students are calling for more locally-sourced, sustainable food available on campus. In rising to the expectations of students, the campus farm will be a center for experiential and academic education and will help increase access to fresh food on campus while adding

Plan for Succession: The Friends of the Campus Farm (FCF) student group, started by the SNRE Masters project group, has led workdays since summer 2012. Marissa Silverberg (undergraduate '15) joined in leading workdays during Winter 2013 and will continue to be involved through the summer as an intern. Allyson, Marissa, and other committed students will continue to work with FCF through the 2013-14 school year and will transition leadership by mentoring new students. The campus farm will also have two interns in summer 2013, one full-time position funded by a \$25,000 grant proposal through the UM 3rd Century Initiative Quick Wins (TLTC) grant and the half-time position covered by Matthaei-Nichols. The TLTC grant can be used to extend either internship or work-study positions through the following school year. The original PBSIF grant

also includes funding for interns. The UMSFP Leadership Team along with Matthaei-Nichols staff will ensure interns are hired each season.

Major Roles and Responsibilities:

- Interns: Manage day to day operations of the farm, communicate with MBGNA staff, Friend of the Campus Farm, and UMSFP Leadership Team (see Appendix 4 for job description)
- Friends of the Campus Farm: Work with interns to plan workdays and events, represent FCF on Member Group Council, manage SOAS account (see Appendix 4 for FCF Constitution)

See Appendix 5:

- 5.a. UMSFP Member Group Council Description and Purpose (2013)
- 5.b. UMSFP Leadership Team Charter (2012-2013)
- 5.c. UMSFP Leadership Team List
- 5.d. University of Michigan Sustainable Food Program Advisory Board Charter
- 5.e. UMSFP Leadership Team Tasks
- 5.f. UMSFP Leadership Team Elections (2013)
- 5.g. 2012-2013 UMSFP Advisory Board Members
- 5.h. UMSFP Annual Report (2012)
- 5.i. UMSFP Infographics
- 5.j. Expectations for UMSFP Success

See Appendix 8:

- SOP: Running Member Group Council meetings
- SOP: Running Leadership Team meetings
- SOP: Running Advisory Board Meetings

Finance

Budget Key

KEY	TLTC	PBSIF	Unmade asks	Student volunteer hours	In-Kind
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Budget

2-YEAR UMSFP BUDGET	Fall, 2012	Winter, 2013	Summer, 2013	Fall, 2013	Winter, 2014	Summer, 2014	Fall, 2014	Winter, 2015	TOTALS
COSTS									
PERSONNEL									
UMSFP Intern (7hrs/week)	-	\$1,232	-	-	-	-	-	-	\$1,232
UMSFP Intern (8.5hrs/week)	-	\$1,496	-	-	-	-	-	-	\$1,496
Farm/CC Intern (20hrs/week)	-	-	MBGNA	-	-	MBGNA	-	-	\$0
Farm Intern (39.9hr/week)	-	-	\$8,000	-	-	\$8,000	-	-	\$16,000
TLTC Contribution to Full-time Program Coordinator	-	-	\$6,000	\$6,000	\$6,000	\$6,000	?	?	\$24,000
DSA Contribution to Full-time Coordinator	-	-	\$3,336	\$3,336	\$3,336	\$3,336	\$3,336	\$3,336	\$20,016
SNRE Contribution to Full-time Coordinator	-	-	\$1,668	\$1,668	\$1,668	\$1,668	\$1,668	\$1,668	\$10,008
Graham Institute Contribution to Full-time Coordinator	-	-	\$1,668	\$1,668	\$1,668	\$1,668	\$1,668	\$1,668	\$10,008
MBGNA Contribution to Full-time Coordinator	-	-	\$3,336	\$3,336	\$3,336	\$3,336	\$3,336	\$3,336	\$20,016
Farm Caretaker (10hrs/week)	-	-	-	Provost	Provost	Provost	Provost	Provost	-
Farm Caretaker (10hrs/week)	-	-	-	Provost	Provost	Provost	Provost	Provost	-

New MP Team (7 unpaid)	-	-	Students	Students	Students	-	-	-	-
Leadership Team (8 unpaid)	-	Students	Students	Students	Students	Students	Students	Students	-
Farm Volunteer Hours (40/month)	-	Students	Students	Students	Students	Students	Students	Students	-
GAP/GHP Certification	-	-	OSEH	OSEH	OSEH	OSEH	OSEH	OSEH	-
Grant writing Technical Assistance	-	-	OCS	OCS	OCS	OCS	OCS	OCS	-
Soil Testing	-	-	OSEH	-	-	-	-	-	-

EQUIPMENT

Seeds	-	\$667.10	-	-	\$750.00	-	-	?	\$1,417
Fence	-	\$11,000	-	-	-	-	-	-	\$11,000
Rototiller Use (by Intern)	-	-	MBGNA	MBGNA	MBGNA	MBGNA	MBGNA	MBGNA	-
Workday tools (10 shovels, 20 trowels, 5 rakes, 25 gloves, 5 weeding tools, 5 kneeling boards, 2 hand tillers)	-	\$540							\$540
Drip Irrigation	-	\$321	-	-	\$321	-	-	?	\$642
Tractor Use & Operation	-	MBGNA	MBGNA	MBGNA	MBGNA	MBGNA	MBGNA	MBGNA	-
Organic Pest Control	-	-	\$200	-	-	\$200	-	-	\$400
Compost	-	\$730	-	-	\$730	-	-	-	\$1,460
Harvesting Buckets	-	\$50	-	-	-	-	-	-	\$50
Transport Crates	-	\$100	-	-	-	-	-	-	\$100

SPACE

Winter Greenhouse space	-	MBGNA	MBGNA	MBGNA	MBGNA	MBGNA	MBGNA	MBGNA	-
Blue Shed - Field Office and Storage	-	-	MBGNA	MBGNA	MBGNA	MBGNA	MBGNA	MBGNA	-
Central Campus Office	-	SNRE	DSA	DSA	DSA	DSA	DSA	DSA	-
Crop Cleaning Facility (simple)	-	-	\$300	-	-	-	-	-	\$300

UTILITIES

Water	-	MBGNA	MBGNA	MBGNA	MBGNA	MBGNA	MBGNA	MBGNA	-
Electrical	-	MBGNA	MBGNA	MBGNA	MBGNA	MBGNA	MBGNA	MBGNA	-

MISCELLANEOUS

Student Transportation	-	-	MBGNA	MBGNA	MBGNA	MBGNA	MBGNA	MBGNA	-
Marketing Costs	-	-	-	\$300	\$300	\$300	\$300	\$300	\$1,500
Signage for Farm Space and Satellite Gardens	-	-	-	\$5,000	-	-	-	-	\$5,000

FUNDS REMAINING

PBSIF - \$42,000 (amount remaining after semester expenses)	-	\$25,864	\$17,364	\$12,064	\$9,963	\$1,463	\$1,163	\$863
TLTC - \$25,000 (amount remaining after semester expenses)	-	\$25,000	\$19,000	\$13,000	\$7,000	\$1,000	\$1,000	\$1,000

2-YEAR UMSFP BUDGET	Fall, 2012	Winter, 2013	Summer, 2013	Fall, 2013	Winter, 2014	Summer, 2014	Fall, 2014	Winter, 2015	TOTALS
REVENUE									
FROM FOOD									
Cobblestone Farmers Market	-	-	TBD	-	-	-	-	-	-
Student Food Co Weekly Cart Sales	-	-	Being negotiated	-	-	-	-	-	-
CSA - 15 Members	-	-	-	-	-	TBD	TBD	TBD	-
Residential Dining Services	-	-	-	-	-	TBD	TBD	TBD	-
FROM EVENTS									
Harvest Festival	\$3,000	-	-	\$3,000	-	-	\$3,000	-	-
Student Summer Orientation Trip	-	-	-	-	-	\$500 per person	-	-	-
Staff Retreats	-	-	TBD	-	-	TBD	-	-	-
MISCELLANEOUS									
T-shirt sales	\$200	\$200	\$50	\$200	\$200	\$50	\$200	\$200	-

DISTANT EXPENSES	
Hoophouse	\$10,000
Handwashing Station	Large range
Organic Certification	TBD
Refrigerator packaging and storage space	\$5,000
Funding of innovative Student Project ideas for the farm	TBD

Justified Line Items

Costs

Personnel

Intern (7hrs/week) – These are Lauren Beriont's hours. She has worked a bit under 6hours/week on average, so this average was extended out through April, adding in a bit extra just in case she has more time to work extra hours. Lauren is being paid \$11/hour, although she was originally told she would be paid \$10/hour.

Intern (8.5hrs/week) – These are Sarah Schwimmer's hours. She has worked a bit over 7 hours/week on average, so this average was extended out through April, rounding up to 8.5. Sarah is being paid \$11/hour, although she was originally told she would be paid \$10/hour.

Farm Intern (39.9hrs/week) - This summer, the intern can only work 30hours/week due to another University job. So, this position will actually be split between a 30-hour person and a 10-hour person (the 10 hour person will primarily do manual labor on farm).

TLTC (Transforming Learning for a Third Century) Contribution to Full-time Program Coordinator - This uses more of the current funding early on, but provides an avenue for building the program over the next year and institutionalizing for the future. This also reduces tension with paid vs. unpaid student workers.

DSA (Division of Student Affairs) Contribution to full-time coordinator – These numbers are based on a potential agreement between DSA and the UMSFP in which produce from the Farm would be provided for units within DSA, like the MFarmers Market and University Unions. This would be similar to how restaurant CSAs work. DSA is aware that the UMSFP cannot guarantee a certain amount in the first year, because the farm leadership will be exploring what is possible, trying new things out in the first season. DSA would simply ask that the Campus Farm provide what it can. The funding would be reassessed after two pilot years. DSA has communicated that they do not currently have money to make this investment, but that they are interested in working to attain this money through creative avenues.

SNRE (School of Natural Resources and Environment) Contribution to Full-time Coordinator – These numbers are based on projected perceived value to SNRE. Having a full-time coordinator would be of direct benefit to SNRE, for drawing a more diverse and qualified pool of graduate students to the school and for providing research opportunities at the farm and satellite garden spaces. A program coordinator would legitimize the program, which would allow SNRE to market the School as a place for innovative sustainable food system research and education. Further, a coordinator would work with SNRE students to arrange use of space and equipment within the farm and satellite garden spaces. This would be of great benefit, especially to SNRE thesis students looking for support in their research.

Graham Institute Contribution to Full-time Coordinator – These numbers are based on projected perceived value to the Graham Institute Planet Blue Ambassador Program, which works to engage students, faculty, and staff on culture change for sustainability. The UMSFP engages in this same work for sustainable food, daily. The UMSFP would work directly with the Planet Blue Ambassador Coordinator to co-host events and activities that would further both their mission and the mission of the UMSFP. An example of this includes the spring Planet Blue Ambassador event to be held at the farm this coming May. With this financial support to pay for part of the coordinator position, the UMSFP could commit to hosting an event or two each semester that

would be available to Planet Blue Ambassadors. This relationship would strengthen the effectiveness of the Planet Blue Ambassador program.

MBGNA (Matthaei Botanical Gardens and Nichols Arboretum) Contribution to Full-time Coordinator – These numbers are based on projected perceived value to the Botanical Gardens. The relationship between the UMSFP and the Botanical Gardens is of great benefit to both parties. The Botanical Gardens has been incredibly generous in providing space, equipment, guidance, and expertise to the UMSFP as the Campus Farm has been developed. The UMSFP, in turn, has created great visibility for the Botanical Gardens, bringing students, faculty, and staff to the wonderful space who might not otherwise ever go. Further, the Campus Farm diversifies programming within the scope of the Botanical Gardens' mission in an attractive way. This being said, coordinating logistics with multiple staff people within the Botanical Gardens is currently time consuming and inefficient. For example, no UMSFP leadership team members have access to the Botanical Gardens calendar, so coordinating visits and workdays takes extra time. Further, use of equipment, like the tractor and even the leased van, is limited because volunteers are not allowed to operate. Incorporating a program coordinator would reduce the current above and beyond work from different Botanical Gardens staff people. This will help the Campus Farm grow to reach its full potential in a safe way.

2 Farm Caretakers (10hrs/week) – This item is based on a desire to obtain the rental house property across the service entrance road from the Campus Farm. If this house could be obtained from the University Real Estate Office, the UMSFP could operate a caretaker model similar to that of the Arboretum, and other locations around campus, in which student housing is provided for free in return for 10 hours of caretaker work/week. This request would have the highest leverage within the Real Estate Office, if made from the office of the Provost. Provost Phil Hanlon expressed interest in the success of the UMSFP when he attended the UMSFP presentation at the MBGNA 50th Anniversary Celebration. Although Provost Hanlon is leaving Michigan, it still seems like a realistic request, given the academic value of the program and the values of the Office of the Provost.

Farm Volunteer Hours (40/month) This is based on pilot garden and greenhouse averages/workday since last May, 2012. It is assumed that summer workdays will happen at least twice/week for 2 hours each.

GAP/GHP (Good Agriculture Practices/Good Handling Practices) Certification – The Office of Campus Sustainability has confirmed that OSEH will cover certification costs in the first year of growth.

Grant-writing Technical Assistance - Anya Dale has agreed to serve in this capacity (researching resource/opportunities, and document preparation and review). This is not a dedicated amount of time/month, but she is willing to help where she can (although she cannot actually help with writing).

Since the Graham Institute, Division of Student Affairs, and Matthaei Botanical Gardens have communicated a desire to see this program succeed, it is the hope of the UMSFP that these entities all work together, and in their own units, to find ways to make this program financially sustainable into the future.

Equipment

Seeds - This is assuming that the same number of seeds is ordered every year. This is realistic if seeds can be saved, or if there is no plan for growth of planting space (currently 1/4acre).

Fence – This is the current bid estimate, but this number is not finalized.

Workday Tools (10 shovels, 20 trowels, 5 rakes, 25 gloves, 5 weeding tools, 5 kneeling boards, 2 hand tillers) - shovel - \$12x10, trowel - \$7x20, rake \$8x5, gloves - \$2x25, weeding tools \$15x5, kneeling board - \$15x5, hand tiller - \$20x2. There will be replacement costs that are not accounted for here. Costs are estimates based on online averages (Botanical Gardens may have insights for wholesale prices on some of these items).

Drip Irrigation - Based on farmer conversations, philosophy of the UMSFP, interest in long-term investment, efficiency for summer interns, and ability to reuse, drip irrigation is the preferred method for watering. The second cost in May of 2014 would be for expansion to 1/2 acre.

Compost - This number assumes compost depth similar to what was used for the pilot garden (2 cubic yards for a 600 square foot space). This is scaled up for 1/4 of an acre. It is assumed that the space where compost is applied this summer will not need the same levels of compost, if anything spring of 2014.

Crop Cleaning Facility (simple) - This is an estimate for a simple grated structure that a hose can be run over at waist height (based on a station seen at UVM).

Miscellaneous

Marketing Costs - this is for printed materials only.

Signage for Farm Space and Satellite Gardens - Professional signage at the Campus Farm and satellite gardens will improve visibility.

Revenue

Cobblestone Farmers Market – The Market managers would like to have the UMSFP at their market. It is just a matter of coordination with summer workers.

Student Food Co Weekly Cart Sales – This selling relationship has been piloted for one food stand sale day. The food crops from the farm were a hit, so this continued relationship should be no problem into the future. However, at this point in time, the Food Stand only operates during the academic year.

Potential Grants

The following pages identify potential sources for continued long and short term funding through grants.

POTENTIAL GRANTS

All information provided by Anya Dale, at the Office of Campus Sustainability

Grant/Funder	Summary	\$	Timeline	Eligible?	Notes	contact
Profits for the Planet, Stoneyfield Farm	help protect and restore the environment and generate measurable results. Focus on preserving habitat, stopping global warming, replacing pesticides with eco alternatives, promote sustainable farming, etc. http://www.stoneyfield.com/about-us/our-mission/profits-planet	undisclosed	Continuing funding of 2012 projects. If 2013 funds become available, will post on website in summer		2007: internship for SNRE students resustainable systems Funder for Center for sustainable Systems 2010 \$25K to Graham	
Environmental Education Regional Grants, EPA	Supports environmental education projects that increase awareness, promote environmental stewardship and develop knowledgeable students, teachers, and citizens. Project must design, demonstrate or be part of education practices, methods or techniques. Two rounds awarded per region. 20% success. http://www.epa.gov/enviroed	\$15-100K each region will fund 2 programs	May, Sept	Yes	focuses on staff time, program development, money can not be used for equipment, 25% match required	Megan Gavin gavin.megan@epa.gov 312-353-5282 spoke 7/26: funds might come around in winter, focus must be on education. Signed up to receive announcement. regional coordinator: http://www.epa.gov/enviroed/grants_contact.shtml
Sustainable Ag Research & Education, USDA National Institute of Food and Ag.*	Funds research and extension activities to reduce chemical use in ag production, and facilitate research of ag production in systems with various characteristics that optimize conservation practices and promote partnerships among farmers, nonprofits, and public and private research institutes. www.sare.org and www.cdfa.gov (Search on program 10.215/10.500)	\$10,000- \$200,000	August - call for Preproposals Nov: Preproposals due Late Feb: Preproposal Status April: Full proposals due August: notifications	Yes	we would focus on Research and Education program http://www.northcentralsare.org/Grants/Our-Grant-Programs/Research-and-Education - Needs some research component and talk about how it is built into curriculum. Push farmer involvement angle - how local farmers can share information with	Beth Nelson, Ph.D. Regional Coordinator Phone: 612-626-4436 Schre002@umn.edu

<p>Ag & Food Research Initiative: Ag and Nat Resources Science for Climate Variability & Change, USDA National Institute of Food and Ag.</p>	<p>Funds research, education and extension projects which demonstrate benefits of reducing energy and nutrient inputs and GHG outputs from practices. Our campus farm is less research based, but we could apply under "Climate Science Education and Extension" which increases the number of ag sciences, educators and ag professionals who have knowledge to address climate variability and impact on food systems. http://nifa.usda.gov/funding/rfas/pdfs/13_afri_climate_variability.pdf</p>		<p>4/15/2013 Next release: Oct 1, '13 Letter of Intent by Dec.</p>	<p>Yes</p>	<p>students.</p>	
<p>James A and Faith Knight Foundation</p>	<p>Animals & the Natural World: invests in programs which protect diversity and integrity of ecosystems and educates citizens about the importance of ecological communities. http://www.knightfoundationmi.org/guidelines.htm</p>			<p>Yes</p>		

*Grant in yellow is currently the best fit.

See Appendix 6:

- 6.a. UMSFP Business Plan (2013) (includes its own appendices)
- 6.b. Example PBSIF Funding Request Form (2013)
- 6.c. Original PBSIF Funding Proposal (2012)
- 6.d. Updated PBSIF Funding Proposal (2013)
- 6.e. UMSFP Program Coordinator Job Description (2013)
- 6.f. TLTC Funding Proposal (2013)
- 6.g. Bank of Ann Arbor Grant Application (2012)
- 6.h. Harvest Festival Zero-Waste Funding Proposal (2012)
- 6.i. Women's National Farm and Garden Association Grant Proposal (2012-2013)
- 6.j. UM Credit Union Sponsorship Proposal (2012)

Evaluating Success

As UMSFP grows into its mission, regularly scheduled evaluations will be critical, especially in these early stages of development. Evaluation will focus on three major tasks:

1. Evaluating progress towards goals and metrics in all three focus areas (education, community, and food production) by
 - a. Comparing records to goals and metrics laid out in original business plan
 - b. Celebrating successes and documenting factors that contributed to success
 - c. Identifying areas for improvement, identifying barriers to reaching goals, and implementing strategies that address those barriers
 - d. Re-evaluating goals to align with current successes and challenges
2. Evaluating alignment with mission statement in events, outreach, and partnerships
 - a. Adjusting actions or program focus as needed to ensure the mission is being carried out fully
3. Collective visioning towards the future
 - a. Focusing on big picture vision and outlining on-the-ground, short-term and long-term steps to work towards that vision

The Leadership Team should initiate this evaluation at the beginning of the Fall and Winter semesters. They should also evaluate their own group processes as laid out in the Leadership Team Charter. Insights from program evaluation should be shared with the Advisory Board. The first board meeting of the semester should also have time built in to start addressing challenges, with the guidance of board members to help steer towards concrete actions.

At the end of the school year (April/May), another round of evaluation should be undertaken by the Leadership Team and Advisory Board, focusing on celebrating success and collective visioning as the Advisory Board goes on hiatus for the summer and the Leadership Team transitions to new members. A retreat with new and old Leadership Team members is a great venue for this process, especially if time is created for transfer of knowledge at the same time. Member Groups should be invited to share feedback, and the Leadership Team (old and new together) should create strategies to address concerns raised by Member Groups and the Advisory Board.

Documenting successes, challenges, and progress towards goals is crucial to the continued growth of the program. Concrete actions should be laid out with each evaluation in response to needs, but documentation and transferring program history from year to year will ensure that actions will continue towards the stated goals. We realize that the initial goals laid out by the Leadership Team, while informed by research and practice, may not meet the needs of the program down the road. Continual evaluation involving all stakeholders will drive new goals that better serve the needs of the UM community and go above and beyond the plans of the original leadership.

Web and Communication (Publicity)

Goals: To use communications tools to promote the good work that students are doing at UM and share opportunities for action and education. This guide will describe web-technologies and how we use them to publicize our work and events.

At a Glance

- 1. Website (UMSFP.com):** We use our website like a blog to document what we do, posting blogs, news, pictures, events etc. We also create special pages for big events like the Food Careers Symposium and Harvest Festival.
- 2. Calendars (umichsfp@gmail.com):** We have a Google account that "owns" our calendars
 - Events Calendar
 - Internal Calendar
- 3. Newsletter (mailchimp.com):** We use Mailchimp to manage our list of weekly newsletter subscribers and to send newsletters on Sundays.
- 4. Listserves (<https://mcommunity.umich.edu/#search:umsfp>):** We use MCommunity to manage all of our other listserves (not the newsletters sent through Mailchimp)
 - UMSFP Leadership Team (umsfp.core@umich.edu)
 - Advisory Board (umsfp.board.students@umich.edu; umsfp.board.staff@umich.edu)
 - Member Group Council (umsfp.members@umich.edu)
 - Helpful professors
 - Helpful community leaders
 - Student lists
- 5. Facebook ([facebook.com/umsfp](https://www.facebook.com/umsfp)):** We use Facebook to publicize events and photos and stay engaged with our audience
 - Facebook.com/UMSFP
 - Facebook pages of other helpful groups
- 6. M+Box (umich.box.com):** We use M+Box to store all of our documents and other digital files and as a workspace (similar to CTools or Dropbox)

Using Web and Communications tools to publicize

Following is a list of different tools you can use to publicize events. They are in the order that you should approach them. As you go through this list, think about the event or information you want to publicize and the audience that you want to reach (students vs. professors vs. community members etc.)

1. UMSFP.com

We use the UMSFP website to house information. This includes details about events, news, blogs, job listings and so on. By creating a site for this information, we are giving people a place to pull

information from in the future, but sometimes that already exists and there is no need to add it to the UMSFP website.

If information about a topic is not already online and presented in a useful manner, then create a new article on the UMSFP website.

> SOP: Creating an article on the UMSFP website

(https://umich.box.com/files/o/f/740148236/Website_Tutorials)

Including Registration

For some events, it is helpful to know how many people will be attending, especially if you are serving food and need a good number of meals to purchase or prepare. Following, you will find options for including registration, although not all events require this.

Facebook: For free events, we recommend creating an event on Facebook. This option is quick to set up and easy to share with lots of potential guests. This basic option is best when you only need to know approximately how many people will show up. We use this for some public lectures to gauge how many attendees we will have.

Google Forms: This alternative is also good for free events, but you have the option to ask more questions of each person. CAFE used this option for the Sustainable Food Careers Symposium because they wanted to ask if anyone had dietary allergies and to submit a “fun food fact” which were all shared during the symposium. You can also embed these forms directly into an article on UMSFP.com but it can get tricky.

2. UMSFP Calendar

You should add any relevant public events to the Events Calendar. This calendar is used to tell people about things like: lectures, movie screenings, volunteer opportunities, open group meetings, fundraisers, and a number of other events, but do not add private meetings to this calendar.

> SOP: Adding to the UMSFP Public Events Calendar

(https://umich.box.com/files/o/f/740148236/Website_Tutorials)

You ought to add private meetings to the Internal Calendar. These are meetings that you are holding with professors, the advisory board, other group leaders, or UM administrators and you do not want random strangers to pop in.

> SOP: Adding to the UMSFP Internal Events Calendar

(https://umich.box.com/files/o/f/740148236/Website_Tutorials)

3. UMSFP Newsletter

The UMSFP newsletter is sent to over 500 people every Sunday evening and is a good venue to tell people about current events or milestones. We get a lot of requests to put things into the newsletter and we cannot include everything. Generally speaking, if we write too much people will not read, will not open the email or will not act on what they see. We try to accommodate all of these requests by very briefly listing many different pieces of information. This usually means that entire events will only get a short sentence in the newsletter, similar to a subject line in an

email, and a link for readers to find more information. You can use the body of the newsletter to offer more details about some things.

When you are considering content for the newsletter, give priority in the following ways:

- Student projects > Community projects > For-profit projects
- Projects that impact a lot of people > Projects with low or specific impact
- Ann Arbor > Anywhere else

The newsletter consists of 6 different parts:

Upcoming Events: This section lists any events coming up in that week. If the public Events Calendar is kept up to date, you can usually just type up the current weeks' events as a list. We usually make the event title a hyperlink to the calendar on the website (<http://umsfp.com/index.php/calendar>). Sometimes you may want to use a different link if the event has more or better information listed on some other website. It is important to put a link on each event listed because we can track people's interest based on which links are clicked the most.
Example: "UMSFP: [Office Hours](#) (Mon, 4-5pm)"
Example: "UM Bees: [Weekly colony meeting](#) (3/27, 4-5pm)"

On the Horizon: This section lists big events that are more than one week away. Again, you should include a link to the calendar or to the host organization's site if there is more information there.

Example: "[Sepp Holzer Permaculture in MI](#): 4/2-4/4"
Example: "[Food Day on the Diag](#): 4/1"

Jobs and News: This section includes food related jobs and internships that Ann Arbor students might find useful. Occasionally we will also link to relevant news articles, like the UMSFP Annual Report. If you know that a job listing has expired you should delete it from the list. If the list gets too long delete the oldest or worst jobs first. Since many of these will remain in the newsletter from week to week we generally put "NEW" next to listings in their first week so students can scan for new listings. It is also helpful if you list the location where the job will take place if possible. Again, make sure the links point to the most useful information.

Example: "NEW [PBSIF Board Positions for UM students](#)"
Example: "[Brines Farm internships in Dexter](#)"

Body: This section will contain your longest block of text and take the longest to write each week. You will get a lot of requests to "please send this out in your newsletter" with a specific paragraph of text that someone wants you to copy and paste into the weekly newsletter. NEVER do that! Often there will be a lot of things that you want to put into the body, but you should not. Prioritize using the guide above and choose 1 or 2 things to write about (or 3 if they are related to each other). There is no best way to write this section, but try to make it interesting and conversational. Write for a general audience and provide links so that people can find more information if they would like. Do not write too much, you will scare people off. We usually end the body with a few recent pictures. Pictures of people are better than pictures of things which are better than boring old flyers (people love seeing pictures of themselves, their friends, and other people, use this to your advantage).

> [You can find lots of examples of body content from our old newsletters here](#)

Header: The header is the small block of text that appears in the blue header section at the top of each email. It usually shows up in people's inbox right after the subject line. Most newsletters are never opened. The subject and header may be the only text people read and is the only way that you can get people to check out the rest. Use the header area to provide a one or two line summary of the body content.

Example: "The Spring CSA Fair is on March 24 + 1 new job + the new leadership team + Earth Week starts March 31 and Food Day is April 1!"

Example: "UMSFP Leadership election is in full swing, and your votes count!"

Subject Lines: The catchier the better, but do not play with your readers too much. If you got an email that says "[UMSFP] This picture of YOU is terrible!" you would probably open it, how could you resist, but for us it would be meaningless. On the other hand you may never open an email with a subject that says "[UMSFP] We are looking for volunteers to lead a panel discussion on compost management," it just sounds too boring. The best subject lines are somewhere in the middle, enticing but not crazy. Mailchimp provides statistics on which emails are opened most. On average 39% of our emails are opened and links are clicked in 10% of our emails.

Our worst subject lines -

Example: "[UMSFP] Planet Blue Student Innovation Fund info session tomorrow at 7pm!"

- (36.1% opens, 3.9% clicks)

Example: "[UMSFP] Three events to look forward to in the new year!"

- (35.2% opens, 4.7% clicks)

Example: "[UMSFP] Grab a friend then go meet some farmers!"

- (33.7% opens, 9.6% clicks)

Our best subject lines -

Example: "[UMSFP] New pictures plus a UMBees hive meeting"

- (48.2% opens, 12.9% clicks)

Example: [UMSFP] Internships, fellowships and scholar opportunities!

- (48.1% opens, 22.9% clicks)

Example: [UMSFP] Looking for a campus farm summer intern and student leaders!

- (46.7% opens, 20.1% clicks)

> SOP: Creating a newsletter (https://umich.box.com/files/o/f/740148236/Website_Tutorials)

4. Listserves (Email Blasts)

You may want to tell as many people about your event as possible. Write a catchy short email, include a summary of your event (What? When? Where? Who?). Include a link to the UMSFP article or website with the best information and send it to relevant groups. Remember that email blasts are often treated as spam so only send information to lists or groups of people that are relevant. See Appendix 7 for lists of key contacts, departments, schools, groups etc.

These groups include: UMSFP member groups, UM colleges/schools/departments, regional food listserves, professors, UM administrators, community activists and specific organizations. See Appendix 7 for a full list including contact information and notes about each.

5. Facebook

Facebook is your friend. You can publicize an event simply by copying the web address from the UMSFP article you created (or whatever site has the information) and pasting it as a “status update” on the UMSFP page (<http://www.facebook.com/umsfp>). You can post that link onto the Facebook pages of other relevant organizations. See Appendix 7 for a list of organizations we’ve found helpful in the past.

> SOP: Adding new managers to the UMSFP Facebook Page (https://umich.box.com/files/o/f/740148236/Website_Tutorials)

6. M+Box

We use M+Box to store all digital files related to UMSFP or the Campus Farm. You can access the file space at <https://umich.box.com/>. We store things like photos, standard operating procedures, old presentations, the current budget, education and communication materials, and anything else we write or produce. M+Box allows us to access files online from any computer, share and collaborate on projects and works with a wide variety of files.

> SOP: Working with M+Box (https://umich.box.com/files/o/f/740148236/Website_Tutorials)

See Appendix 7:

- 7.a. Member Group Liasons (2012-2013)
- 7.b. Other University and Community Contacts (2012-2013)
- 7.c. Publicity Lists (2012-2013)
- 7.d. Sample Newsletter (February 2013)
- 7.e. Publicity: Articles and Newsletter Appearances from Various Media (2012-2013)

Appendix 1: History

1.a. Sustainable Agriculture and Food Systems: Research, Teaching, and Outreach Potential at the University of Michigan (2007) – ed. Brines

1.b. Environ 391 Campus Farm Proposal (2011) – Beriont et. al.

1.c. Creation and Development of the University of Michigan Sustainable Food Program and Campus Farm (2012-2013 Masters Project Prospectus) – Dengate et. al.

**Sustainable Agriculture and Food Systems:
Research, Teaching, and Outreach Potential
at the
University of Michigan**

Compiled by Shannon Brines
with input from current and former students, staff and faculty.

DRAFT, May 4, 2007

Sustainable Agriculture and Food Systems: Research, Teaching, and Outreach Potential at the University of Michigan

Introduction

Supporting student interest in sustainable food systems that positively affect our communities is not only a healthy trend, it a necessity. Students acknowledge that we must take action to preserve this basic human need while facing the realized inequalities in food distribution and the projected impacts of global climate change and resource scarcity on the near horizon.

In the US, the organic food movement followed the emergence of the environmental movement in the late 1960s. Rooted in these inextricably linked issues, interest in sustainable agriculture, food security and sovereignty, local food, slow food, nutrition, fair trade and a multitude of related branches of study emerged over the next few decades and now contribute to the public dialogue about food systems.

Throughout the US and Canada, these interests are magnified within university faculty, staff and most importantly, the undergraduate and graduate student body. Academic institutions are seizing the opportunity that this increased interest allows to undertake exciting and intellectually enriching research projects and educational programs.

The following submission documents the history, current infrastructure, and latent potential at the University of Michigan (U-M) relevant to these subject areas, while highlighting inspiring efforts of other academic institutions and NGOs. Enhanced organization and dedicated funds at U-M could help to form a more cohesive program of study and expanded research opportunities to explore food system issues in many of the university departments and public amenities.

While this document is only an attempt to synthesize many of the ideas discussed on campus and within the local food community, many other opportunities certainly exist and may be stimulated by the material herein. Any portion of the research, curriculum, outreach, and pilot project ideas suggested in the following text will be referred to as the “U-M Sustainable Food Research Program” (SFRP) for sake of having an initial umbrella definition and identity.

Baseline: Program Definition

Two essential elements for the successful growth and continuity of a U-M SFRP are 1) establishing sites on university property to serve as agricultural research areas and 2) employing staff to coordinate research, teach methodology, and give demonstrations.

The following excerpt from the article *University of British Columbia Food System Project: Towards Sustainable and Secure Campus Food Systems* (Royas et. al. 2007) discusses an ongoing and expanding food system project that is integrated with the “Land, Food, and Community” (LFC) program courses. This material is provided to

further demonstrate the universal interest in the study of food systems and to clarify the rationale for using the university and campus food system to provide context for research.

The UBC food system was also chosen as a terrain of investigation because all of our students could relate to the food system, both as professionals and as consumers. Although LFC students have diverse areas of expertise, they have a shared interest in food and the complexity of the food system. More generally, they share the realization that there is no aspect of life that cannot be related to food: from human well-being and health to biodiversity and ecosystem health (in which humans are intrinsically a part), to the impacts of human activity in the natural world, to issues related to hunger and malnutrition, and to the very nature of human communities. Food thus became an ideal terrain for the integration of knowledge.

The approach adopted also recognized the UBC food system as a microcosm of the global food system. On the one hand, our global food system has delivered a revolutionary and unprecedented capacity to increase food production, and to respond to international famine crises. Yet on the other hand, we are experiencing an epidemic of malnutrition, with at least 1.1 billion people suffering from chronic hunger (deficiency of calories and protein) and 2–3.5 billion people suffering from micronutrient deficiency (deficiency of minerals and vitamins), while at least another 1.1 billion people are over-consuming (consuming more calories than they need) (World Health Organization in Gardner and Halweil, 2000). We are also experiencing vulnerabilities in our food system epitomized by sudden crises in subsystems that appeared to be economically dynamic (i.e., mad cow disease in the beef sector, avian influenza in the chicken sector). Moreover, the global food system has both contributed to, and been subject to, dramatic ecosystem changes, including water and soil contamination and depletion, energy shortages, decreases in biodiversity, and climate change. Some of these ecosystem impacts are a consequence of food now traveling much farther to get to our plates—between 2500 and 4000 km for the average food item in North America—than it did in the past (Halweil, 2003).

...

In the context of a global food system threatened by a enormously complex environmental, social, and economic menaces and uncertainties, and based on UBC's public policy in support of sustainability, we thought that the UBC community must assume full responsibility for what happens in our own backyard. Assuming such responsibility required that we improve our understanding of the impacts of the food system currently feeding this community. We needed to envision changes to the campus and food system that would not only ameliorate the negative impacts human density tends to create, but would actively facilitate alternatives to how we dwell, work, and eat that place less demand on natural and social resources and contribute toward a vision of socially, ecologically, and economically sustainable living. Our study of the UBC food system was therefore designed to provide us with the opportunity to understand globally relevant issues while studying a very locally and personally relevant topic and taking action, as a community, to create changes towards food system sustainability. Moreover, studying the university food system and acting upon it provides a rich opportunity to understand that the integrity of the campus ecosystem and the health of UBC's community are intrinsically inseparable.

Program Setting

Developing a sustainable food system requires the understanding of environmental, political and social settings. The complex and multi-disciplinary nature of food system research suggests that the School of Natural Resources & Environment (SNRE), which specializes in such multifaceted issues, is a natural fit to house a Sustainable Food Research Program at the University of Michigan. SNRE's mission statement reads,

The School of Natural Resources and Environment's overarching objective is to contribute to the protection of the earth's resources and the achievement of a sustainable society. Through research, teaching, and outreach, the school's faculty, staff, and students are devoted to generating knowledge and developing policies, techniques and skills to help practitioners manage and conserve natural and environmental resources to meet the full range of human needs on a sustainable basis."

Consequently, SNRE has an array of faculty involved with projects that partner with numerous other departments and schools within U-M as well as university operational units such as grounds, housing, physical plant, and public goods (i.e. museums and conservatories). The majority of current on-campus, contemporary interdisciplinary food system research projects are undertaken by students and faculty affiliated with SNRE. For example, the on-campus community gardening program cUltivating coMmunity and local/organic food Internet site Eat This Michigan! were initiated by SNRE graduate or Program in the Environment (PITE) undergraduate students with faculty contributions and the enthusiastic involvement of non-academic U-M units.

Current SNRE courses could easily be incorporated into a focused area of study for undergraduates students interested in studying the SFRP. For example, the course "Our Common Future" taught by Prof. Ivette Perfecto of SNRE explores the implications of political, economic and agricultural policies from the context of environmental justice. The "Sustainable Food Systems" course taught jointly by Prof. Ivette Perfecto and Prof. Catherine Badgley of the Residential College explores the multitude of environmental and social issues in the current food system, and explores food production with field trips and experiences with local farms and food processors. The "Agroecology" course taught by SNRE adjunct faculty Prof. John Vandermeer of EEB correlates the historical context to the environmental and social implications of our agricultural practices.

SNRE faculty, staff, and alums have gone on to work with food related organizations or have started food related businesses. Within the last five years alone, SNRE alums working locally in this arena include the current manager of the MSU Student Organic Farm (www.msuorganicfarm.com), the initiator and current director of Growing Hope non-profit gardening program (www.growinghope.net), the program coordinator of the Detroit Agricultural Network (www.geocities.com/detroitag), and the former manager of Southeast Michigan's Food System Economic Partnership (FSEP) (www.fsepmichigan.org). These individuals and many others are notable potential program partners or resources for a U-M SFRP.

Providing opportunities for practicum development, as detailed in the above paragraph, as well as providing appropriate applied research opportunities, are essential for involving the SNRE graduate students in this program of study. With this in mind, the following list suggests possibilities for the physical site location.

Program Physical Site

Significantly, U-M and SNRE owns and administers some local properties that may be useful as Sustainable Food Research Program research sites. As detailed above, it is important that the program have an actual physical “farm” that it could call home to provide a consistent and accessible site for research. While independent projects could be networked with community gardens, farms and greenhouses across the greater Ann Arbor region, the U-M SFRP farm will serve as a research, teaching, and demonstration site and a place for storage of tools and supplies procured for agricultural production and research.

Elements that allow for authentic research and experimentation of farming methods include:

- an adequately sized and controlled farm site with space for experimental design and testing of various technology and methods
- a site located near central campus and accessible for student research projects, and work study positions, and “experiential learning” courses such as the popular undergraduate Ecology and Practical Botany courses.

Technologies of interest that could be integrated include:

- season extension techniques like cold frames and hoopouses (inexpensive passive solar greenhouses) and permaculture. The further development of such technologies is vital to securing access to local food year-round in colder climates like Michigan while reducing our need for agricultural inputs. Such “season smoothing techniques” are also of increasingly importance for sustainable agriculture conditions under global warming induced climate change that includes more extreme events.
- biointensive, and edible landscape designs. These techniques could be integrated into the “new urbanism” fabric and sustainable food systems of the future that empower the community while increasing food security.

The farm site would be an exceptional centerpiece for both publicity and demonstration of components of the SFRP not only for university students, but also for communities outside of the academic setting. Such outreach might include training and workshops, perhaps coordinated with the Michigan Agricultural Extension Agency, which could generate revenue or grants to help fund the SFRP.

U-M and SNRE are fortunate to have some properties that are very promising potential SFRP farm sites. Several of these properties are briefly detailed below along with a few pros and cons to each potential site.

Matthaei Botanical Gardens (MBG) – a large and high-profile university property with established formal gardens, a conservatory, and natural areas. *Pros:* such a Sustainable Food Research Program farm site fits under the umbrella of their mission statement to serve students and the public. The Director, Dr. Bob Grese, is also SNRE Landscape Architecture faculty has been active in the research and displaying of sustainable initiatives such as green roofs and solar housing. MBG has given support and space for the student-led Cultivating Community urban agriculture initiative. In addition to some underutilized parcels of good size, MBG has available classrooms and a history of both academic and public teaching on site. MBG is on the east edge of the city limit, relatively close to main Ann Arbor campus. *Cons:* MBG is truly a high-profile prime space and functions as an independent public goods unit with institutional organization that expanding beyond the programming mentioned. Obtaining the space and acceptance to covert underutilized fields to farm use could prove complex, as aesthetic and ecological impacts on nearby watershed areas would be thoroughly considered. Currently there is not direct service by city or U-M bus transportation to the site, MBG is encouraging the city to expand the line service. Students now must take university rental vans to reach the site for class and field trips.

Saginaw Forest – largely forested property owned and administered by SNRE. It is currently an extremely under-utilized property with very little research activity. *Pros:* SNRE has greater flexibility and control of the use of the land. An infusion of funds would have positive impact on current infrastructure of the property site, and the on-site resident property caretaker(s) will add greater security of site and could potentially assist to some degree with farm duties. The property is on the western city limit boundary slightly closer to central campus than MBG with a more direct route on a main road that has a bike lane. *Cons:* As the property is largely forested, a space may have to be cleared or the area would be limited to permaculture method development in the understory. If tree removal is deemed desirable, the cleared timbers could be included in farm structures including greenhouse frames or cold frames. No direct public transportation service from Ann Arbor bus lines although one line gets fairly close to the site.

Newcomb Tract – a largely forested property with some meadow that is owned and administered by SNRE. This tract is currently an under-utilized property with very little research activity occurring at sporadic intervals. *Pros:* SNRE has greater flexibility and control of the use of the land. An infusion of funds would have positive impact on current infrastructure of the property site, and the on-site resident property caretaker(s) will add greater security of site and could potentially assist to some degree with farm duties. There is existing meadow area and some infrastructure that have been used for a student agro-ecological study in the past and would allow for more easy conversion to farm space. *Cons:* The tract is not easily accessible by students and staff for regular research, classes, and farm work since it is located nearly 20 miles away from campus: up to a 30-minute drive from central campus.

Stinchfield Woods – over 770 acre, largely forested property with some meadows owned and administered by SNRE. This tract is currently an under-utilized property with very little research activity occurring at sporadic intervals. *Pros:* SNRE has greater flexibility and control of the use of the land. An infusion of funds would have positive impact on current infrastructure of the property site, and the on-site resident property caretaker(s) will add greater security of site and could potentially assist to some degree with farm duties. There is existing open areas and some infrastructure that have been used for a student agro-ecological study in the past and would allow for more easy conversion to farm space. *Cons:* The tract is not easily accessible by students and staff for regular research, classes, and farm work since it is located nearly 20 miles away from campus: up to a 30-minute drive from central campus.

Like undertakings at Yale, Oberlin College, and UBC for example, utilizing the university land and campus food system for research and knowledge production for the SFRP is most logical. The farm can be scaled to yield enough volume of produce that it could potentially be sold in select venues such as an on-campus mini-farmers market, to catering outlets for high-profile events, to on-campus restaurants such as the U-Club or the Michigan League, or to portions of U-M Housing Food Services such as the organic and local food initiative in the U-M Residential College. Such markets will lead to increased publicity and interest, creating a positive feedback loop as noted in scenarios at other universities and colleges, and provides a venue for informal education regarding food system issues.

Creating a U-M Sustainable Food Research Program would represent a tapping of tremendous latent potential that readily exists within the U-M and local Ann Arbor community. Establishing the program within SNRE initially provides administrative and development assistance. It would also provide a more defined platform for the university regarding increasingly high-profile subject areas (e.g. “local food” was a recent Time magazine cover story even) that are rapidly emerging as areas of rich and robust academic research and pedagogy.

Potential Program Research

The potential research in the sustainable agriculture and food systems arena extends vastly across disciplines as noted in the introduction because agriculture is now essential for human existence. The many facets of sustainable food systems are ripe for research and exploration. Relevant knowledge and skills, from small business management, to impact analysis, to innovative production and distribution methods are increasing in demand and are likely to be held in high value in a society that must move towards sustainability.

In light of the shortcomings of the conventional industrial food system that are increasingly recognized by the media and general public, a food system that is more stable, secure, and equitable will need to have a smaller footprint – notably be less

dependent on energy derived from carbon – and utilize and enhance its natural and human capital. It will need to be distributed and interwoven into the increasingly urban fabric of our society. Research conducted as part of this program will develop students' knowledge and skills for exploring the science/technology, social, and policy based solutions toward that end.

Potential areas of research include but are in no way limited to:

- sustainable technology employed to create year-round/season smoothing production structures;
- sustainable technology for energy and water systems of such structures;
- sustainable technology employed in more urban integrated environment (e.g. rooftop, balcony);
- landscape architecture design that integrates food production;
- plant physiology and nutritional value of year-round produced produce in such systems;
- public health impacts of local food and food systems;
- ecological benefits of biointensive, permaculture, integrated pest management etc.;
- associated soil science including resulting soil science with integration of animals and their nitrogen rich by-products;
- quantification of regional food systems – how sustainable are they and what geographic footprints would be needed to increase sustainable level;
- life cycle analysis of sustainable production designs and regional food systems;
- sustainable agriculture and food business design;
- quantification and life cycle analysis of organic factory-scale production (what should their role be);
- policy analysis of food systems and barriers/incentives for future sustainable food systems;
- community development and food security empowerment of food production; and
- sustainable agriculture and food public outreach/education.

Potential Program Teaching

In addition to the Our Common Future, Sustainable Food Systems, and Agroecology classes previously mentioned, there are other classes that have been taught at the University of Michigan which also could have direct relevance to an emerging Sustainable Food Research Program. Most notably would be: Environ 256 Culture, Adaptation, and Environment; Environ 263 Energy and the Environment; Environ 318 Food, Land, and Society; Environ 391 Sustainable Campus; NRE 664 Food & Water Research; and NRE 605 Green Development. All of these courses and many others would benefit from some coordination with a Sustainable Food Research Program to integrate incorporate experiential learning and hands-on research, case studies, and demonstrations.

What would be important to the potential Sustainable Food Research Program would be one or more significant Sustainable Agriculture and Food Systems courses. These would

be proposed to be 500 level NRE courses. A first course would cover the basic concepts and key dimensions of sustainable agriculture and food systems. A pivotal part of such a class would be the hands-on experience at the farm site(s) and potentially larger group projects/designs undertaken each class. An extremely exciting possibility with a SFRP program would be to create a “capstone” or experiential learning course that establishes and then manages the farm. The University of Minnesota established a successful farm and marketing plan through its course “Student Organic Farm: Planning, Growing, and Marketing” (http://sof.cfans.umn.edu/Spring_Course_2007.html) given each spring before the growing season. Using the *Building a Sustainable Business: A Guide to Developing a Business Plan for Farms and Rural Businesses* text published by Sustainable Agriculture Research and Education organization, the students planned and executed the garden by consensus decision-making, incorporating physical research as well as market surveys and budget balancing skills into their skill set. An additional class in the sequence could expand on the first and capstone classes examining concepts in more depth through case studies and continued hands-on experience while also experimenting and documenting continued aspects of the capstone.

Potential Program Outreach

Exciting partnerships and relationships have already begun to be established at the University of Michigan both off and on campus despite the lack of any existing program that could provide more structured coordination. With the establishment of a U-M Sustainable Food Research Program these efforts are highly likely to flourish and allow momentum to continue to build as opposed to the ebb and flow and periodic stagnancy that now occurs.

Cultivating Community, a student organization at the University of Michigan, was essentially started by a SNRE graduate student with support from interested faculty, staff, and alums. Its intent was to provide sustainable food system learning & research opportunities; produce local food in campus gardens; recover waste by composting; create mutually beneficial community partnerships; and develop infrastructure to sustain project components. It has made great strides in these efforts. What this overall document outlines is in a lot of ways a continuation of the idea momentum and excitement generated by the student initiated Cultivating Community but done in a larger, structured capacity with larger initial funding. Hands down Cultivating Community has shown that there is certainly student interest, with it being initiated by students and having had undergraduate independent study students and work-study graduate students working on it. Cultivating Community created some small gardens on campus and established some very important relationships on campus - most notably with the campus restaurants, housing food services, and grounds services - regarding recovering some food scraps to be composted through vermiculture and by giving interested chefs much of the produce generated by the small campus gardens. There is currently a Matthei Botanical Gardens part-time staffer working to continue Cultivating Community efforts and explore sustained funding.

“Eat This Michigan!” is another student initiated project where 2 undergraduate students and 1 graduate student received a small initial grant from “GROCS”, a campus Digital Media Commons funding program to fund student research on the use of rich media in collaborative learning. They created a blog “Eat This University of Michigan!” which has definitely been receiving traffic, primarily local traffic as to be expected. It is dedicated to relaying what these students learn about local food, organic food, and community. Additionally, they have organized such things as a “Fun Day at the Arb” which including educational components regarding local and organic foods.

The efforts of student groups, faculty, and staff at the U-M have already established many positive relationships off campus as well with the local food community. Further engagement with local producers, such as Community Farm of Ann Arbor, Brines Farm, and Lesser Farms will provide context for students and allow them to see the challenges faced by farmers at different scales and under various management plans – from conventional to biodynamic Community Supported Agriculture.

Working relationships with alumni as mentioned in the “Project Setting” section could be further established and serve as independent study opportunities for undergraduates and practical experience for graduate interns. Outreach into communities of need thorough organizations such as Growing Hope in nearby Ypsilanti, MI and the Detroit Agriculture Network could serve to share the accumulated knowledge with those in greatest need of food security.

Opportunities also exist to introduce aspiring, novice, and transitioning farmers to new methods and technologies in sustainable agriculture. The Michigan Agricultural Extension Agency is progressing along with interest in the field of sustainable agriculture, and is open to co-developing programs to support farmers in these efforts. Working with FSEP or other distribution projects would provide outlets for the joint SNRE-business graduate program to practice and develop skills for market assessment and optimization of resources.

Established organizations that are practicing and teaching many desirable technologies, such as the vermiculture and season extension work of Growing Power (Milwaukee, WI), could be engaged in training exchanges with students or staff from the proposed U-M SFRP. Additionally, training and intellectual exchanges could also be undertaken and very well received with future and returning Peace Corps fellows, of which there are many at the University of Michigan.

Summary

In summary, even without an existing program, there has been and currently are existing research and projects on campus pertaining to sustainable agriculture and food systems. Students involved in these are going on to positions of leadership in agriculture and food systems related venues. There is huge latent potential for much more at the University of Michigan. The School of Natural Resources and Environment is a logical place to establish a Sustainable Food Research program to help coordinate action and fan the flames of research, teaching, and outreach on these topics. It would not usurp but complement existing efforts on and off campus. Establishing a demonstration physical site or "farm" for research, teaching, and outreach would be a key component. The botanical gardens or the extremely under-utilized SNRE properties in Washtenaw County are very good potential sites. Portions of such a program could in a short amount of time begin to generate revenue to fund back into the program.

ENVIRON391 – CAMPUS FARM PROJECT

“To forget how to dig the earth and tend the soil is to forget ourselves.” -Gandhi

University of Michigan Campus Farm Proposal
ENVIRONMENT 391: Sustainability and the Campus
Lauren Beriont, Corinne Erickson, Mackenzie Munro, Emily Pendleton, Cristine Santanna,
Peter Ward, Seohee You
December 15, 2011

Executive Summary

While the University of Michigan clearly demonstrates its commitments to the environment and sustainability through various programs and activities, it currently lacks a platform for students to directly observe, learn, and apply sustainable food practices. A large-scale farm at the University augments the University's approach to education and provides an interactive avenue for students, staff and community members to learn and practice sustainable living and agricultural practices. The farm enables students to learn in an interactive and dynamic practicum to offer a unique, comprehensive resource that is neither limited by the boundaries of a classroom nor restricted to a field of study. Catering to a diverse spectrum of academic disciplines such as botany, ecology, architecture and statistics fosters a collaborative interdisciplinary and demonstrative educational platform where students can collectively apply and refine their knowledge. A broad interest across campus from students and faculty is corroborated by a randomly distributed survey to five thousand undergraduate and graduate students. The survey verifies, with 457 responses, an overwhelming interest in starting a campus farm, with 83% (377) of respondents having a moderate to high interest, between 3-5. (Scale of survey is 0-5, 0 being no interest, 5 being very strong interest) The survey further determined that if a campus farm were available 94% (428) of respondents would consume produce, 56% (254) would enjoy volunteering at the farm and 54% (245) would have interest in participating at the farm for academic reasons; such as work study, research or class labs. Investing in a hands-on educational facility to satisfy the interests and demands of students can enable students to apply learned skill sets to directly and indirectly satisfy the University's commitments to sustainability.

What is recommended, based on our survey and research, is a practical educational model that incorporates faculty oversight with student organization, management and leadership to maximize learning outcomes for students. A three-phase process is recommended to prioritize and expedite the development of this intensive project:

- Phase 1: Development of a large-scale campus farm at the Matthaei Botanical Gardens. A 1-3 acre plot of land is a viable piece of University property that is sufficient in providing the necessary space and resources. One paid full-time employee will oversee three student managers, who run a certain area of the farm, respectively. These student managers plan and organize logistics during the school year and work at the farm throughout the summer in a work-study position. This phase involves establishing volunteer workdays for students, faculty and staff, with the option to sponsor class field trips, labs, classes and research projects.

- Phase 2: Development of a Sustainable Food Program, integrating satellite gardens from around campus with student groups currently engaged in topics such as sustainable foods, environment, biodiversity, dietetics and agriculture. A Sustainable Food Program will ultimately connect various scattered sustainable food organizations in order to provide a progressive culture and forum for all students around campus to collectively participate and interact in our local food system.

- Phase 3: Expansions and additions to increase sustainability and participant attraction. These additions include additional hoopouses, beekeeping and the implementation of alternative energy to help ensure longevity and success of the farm. This third phase is not finite and can adapt to accommodate various projects that aim to ensure persistent involvement and an exceptional experience.

The farm is an idea that President Coleman specifically mentioned at her sustainability address in September when she stated she is, "already hearing a lot of buzz about plans for a campus farm." A campus farm benefits both students and the University, and is an integral part in providing a foundation to base the claim that sustainability defines the University. Providing a dynamic and interactive platform for the University to teach the basics of sustainability incorporates a different dimension of education that will help students to further appreciate and observe the collective goals of the University.

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I. Objectives

Extensive primary and secondary research finds the need for a large-scale organic campus farm at the University of Michigan (UM). Based on models at similar collegiate institutions and small local farms, this farm should include the following general components:

- Space of one to two acres with room for expansion
- Access to necessary utilities
- Physical infrastructure
- Reliable transportation
- Structured management system
- Fiscally sustainable budget

Further, to be an effective entity for the UM community, this farm should incorporate the following:

- A demonstrative educational facility exhibiting the University's commitment to sustainability
- An organization honoring the inputs, interests, and safety of its students
- Associated with a Sustainable Foods Program
- Research opportunities for faculty that bring together graduate and undergraduate students
- Visibility within the larger campus community
- Student access to healthy, local and sustainable food
- Dedication to four-season farming

II. Introduction

Enthusiasm from students, faculty, and staff for the implementation of a large-scale campus farm continues to grow at the University of Michigan. Currently, the University lacks a comprehensive platform for sustainable food studies and agricultural practices. Although there are several courses that focus on domestic and global food system issues, there is no cohesion between these courses, nor practical application of this subject matter.¹ Despite this, President Coleman's address on sustainability² exhibits a definitive interest from the administration to create this platform for sustainable foods. This farm has the potential to bridge this gap to create applied educational opportunities. In announcing the Planet Blue Student Innovation Fund, Coleman references this farm.

“We are launching the Planet Blue Student Fund, with \$50,000 a year for the next three years. It will support the best ideas to improve our work in the greenest ways. It is entirely in the hands of students to develop, and I'm already hearing a lot of buzz about plans for a campus farm”.²

A thorough analysis of student interest^{3,4} further indicates that a campus farm would successfully fulfill the need for an entity that increases access to sustainably sourced food and provides formal education.

The proposed farm has the potential to serve as a symbol on campus for UM's commitment to sustainability and ability to be the leader and best in a growing national food revolution. With the appropriate location and visibility, this farm would serve as a central location for a larger Sustainable Foods Program. Educating students of all academic disciplines about sustainability, community building, and food systems will better suit the interdisciplinary approach that the University is striving to reach.

III. Methodology

A. Interviews

Research included several personal one-on one interviews with local farmers, professors, managers at other university farms, and additional interested parties. Each interviewee provided information that relates directly to aspects of the farm, which secondary research and larger group meetings could not ascertain.

Ayers, Nathan - Permaculture director for Green Economy Leadership Training (GELT) program in Detroit, and founder of Chiwara Permaculture Research and Education⁵

Becker, Tomm - Owner and founder of Sunseed Farm and former manager of Michigan State University's student organic farm⁶

Biernbaum, John- Department of Horticulture at Michigan State University⁷

Burrell, Jackie- Student farm manager at University of Vermont⁸

Brines, Shannon - Manager of Environmental Spatial Analysis Laboratory at the School of Natural Resources and Environment (SNRE) and owner of local Community Supported Agriculture (CSA) Brines Farm⁹

Gott, Sue - University of Michigan Planner¹⁰

Grese, Bob - Director of Matthaei Botanical Gardens and Nichols Arboretum, Professor in School of Natural Resources and Environment¹¹

Lada, Nate - Owner and founder of Green Things Farm: a two-acre farm established in spring of 2011¹²

MacDonald, Lindsey - Founder of Outdoor Adventure Garden and graduate student in School of Natural Resources and Environment¹³

McCabe, Jeff -Co-founder of Tillian Incubator Program and small business owner hoop house construction company¹⁴

Mortell-Windacker, Catriona - Education Program Manager at Matthaei Botanical Gardens and Nichols Arboretum¹⁵

Palmer, Mike - Horticultural Manager at Matthaei Botanical Gardens¹⁶

Wohns, Sam- Treasurer at Harvard University Community Garden¹⁷

Zollweg, Elizabeth - Assistant Director of Challenge Program at Department of Recreational Sports, Project Manager of North Campus Initiative¹⁸

B. Meetings with larger focus groups

Key Stakeholder Meeting- Gathering of various UM Departments with vested interest in a potential campus farm to discuss logistics and individual departmental requirements. ¹⁹
Departments present:

Office of Campus Sustainability

Occupational of Safety and Environmental Health (OSEH)

Plant Operations Grounds and Waste Management

University of Michigan Sanitarian

University of Michigan Planners Office

Art and Design Professor Joe Trumpey

Graduate Student Lindsey MacDonald

Student Listening Session- Focus group with 30 students of interdisciplinary backgrounds with purpose of compiling student opinions, suggestions and expectations for a potential campus farm. Students left with an agreed unified vision that this farm should aggregate students across campus on a large production farm that incorporates a wider sustainable foods program. ⁴

Michigan Sustainable Foods Initiative- sees their future role with the farm as a connection between Residential Dining Services and food education at dining halls with the student farm. ²⁰

Cultivating Community- Wants to share successes, challenges and knowledge of running a small volunteer run organic farm with the larger farm. ²¹

C. Survey

To further evaluate student interest in a campus farm, we distributed a student survey to 5,500 random students at the University of Michigan³. Questions were based on consultations with Mike Shriberg, Andrew Berki, and Rich Grousset. Survey questions were aimed at identifying levels of potential involvement, how involvement would be effected by factors of transportation and visibility, as well as attitudes and barriers toward purchasing local food. The results of these questions were useful in determining site requirements and ideal locations for the farm.

D. Primary and Secondary Research

Primary and secondary research included but is not limited to site visits to local farms and potential farm locations, inquiry into structures of other Universities farms, and references of scholarly articles.

IV. Recommendations

A. Site Selection

We considered three models for the site of the campus farm at North Campus, Central Campus, and the Matthaei Botanical Gardens. We dismissed the feasibility of the farm on North Campus because of the finite size and lack of visibility to the whole campus; however, we believe the site would be adequate for a future satellite garden. The most popular location, Central Campus, is dismissed because of the lack of space to host the large-scale farm. This location is later identified as ideal for satellite gardens.

Recommendations are based upon specific site attributes such as spatial needs, access to water, electricity, student accommodations, regulatory requirements, historic land use, accessibility, available of equipment, capital investments, student interest, visibility, soil surveys, and management. *Refer to Appendix B for more information on soil surveys.*

We recommend the fields near the Matteson Farm at the Matthaei Botanical Gardens for the final destination of this large-scale farm.

Unique Attributes

- Low Capital Investment because of pre-existing equipment and storage facility at site¹⁶
- Access to year-round greenhouses
- Matthaei Botanical Gardens Stewardship
- Potential office space at on-property housing
- Classroom space at Matthaei Botanical Gardens
- Room for farm expansion
- Increases student involvement with MBGNA
- Connection to electricity

Further, a campus farm fits the mission and vision at the Matthaei Botanical Gardens of “Promoting environmental enjoyment, stewardship and sustainability through education, research, and interaction with the natural world”.²² Not only does the stewardship, horticulture experience, and equipment of the Matthaei Botanical Gardens increase the feasibility of creating a farm and decrease the capital costs for a farm, the presence of a farm at the Matthaei Botanical Gardens also increases the visibility and visitor frequency of the Matthaei Botanical Gardens.

Limitations

Although the survey shows that Central Campus is the most popular site for a farm at UM, a large-scale production farm and educational forum would not be possible on Central Campus. According to the survey bus transportation to the Matthaei Botanical Gardens would increase student interest in a farm at the Matthaei Botanical Gardens by 37%. No current transportation line extends that far to the Northeast corridor of Ann Arbor. As the Matthaei Botanical Gardens is approximately six miles away, visibility to the larger student community is also an issue. The Sustainable Foods Program aims to solve this problem through universal signage and advertising at satellite gardens. According to various interviews and cost-analysis, the unique attributes of the Matthaei Botanical Gardens outweigh its limitations. Water access may be an issue depending on the specific location of the farm. A well might need to be constructed near the Matteson Farm site location.

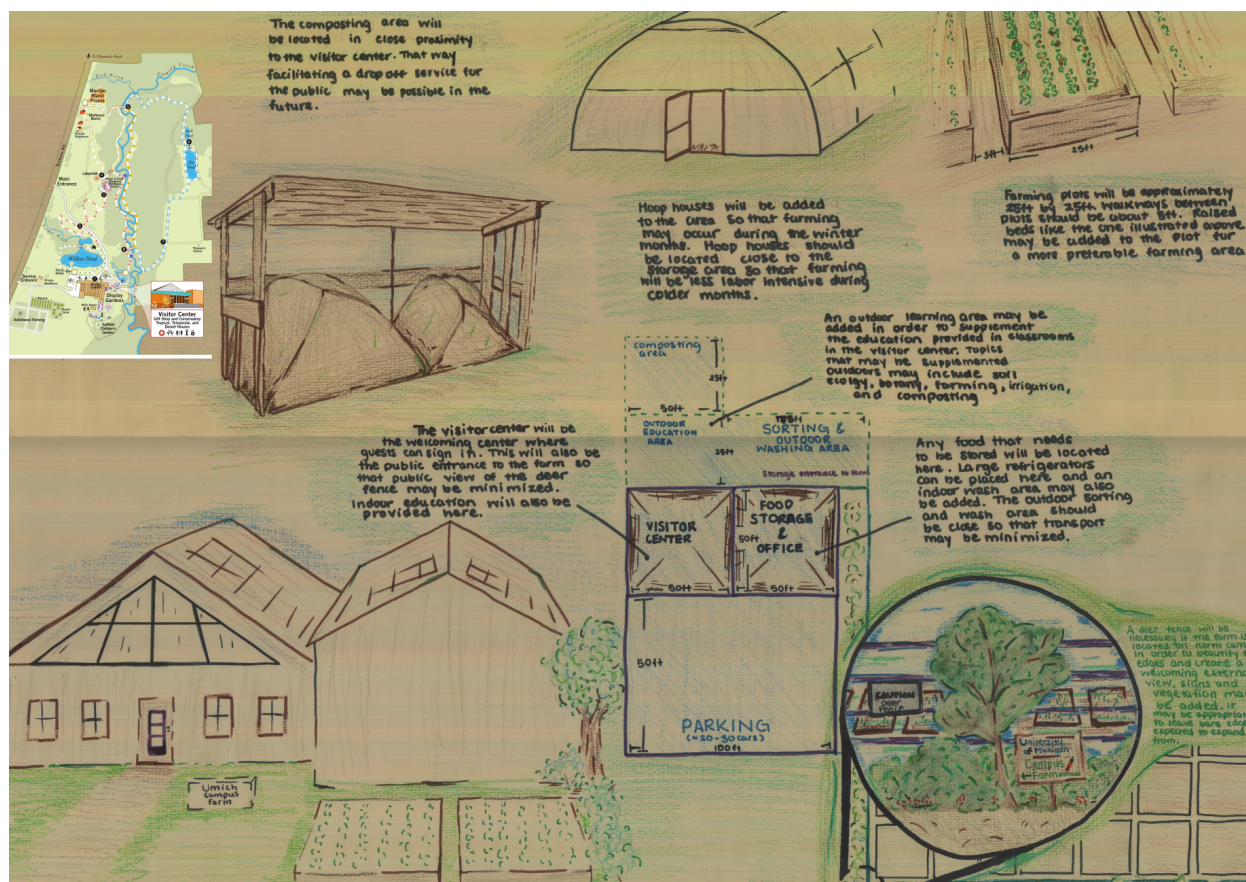


Figure 1.1: A schematic representation of possible plans for a student farm

B. Schedule

Based on student input, stakeholder input, feasibility, and overall impact for the UM community, a UM campus farm with multiple locations of varying scale is most appropriate. A plan broken into three main phases, characterized by feasibility and urgency, will allow the university to successfully integrate this proposal at varying times and costs. Phase I is the main focus for this proposal as a larger farm would create the necessary foundation for a Sustainable Food Program and shift in the overall food culture at UM.

Tentative schedule based on approval and funding acquisition

- Winter Semester 2012 - Phase I
 - Winter – Pre-Phase I
 - Spring - soil preparation, infrastructure, planting
- Fall Semester 2012 - Phase II
- Fall Semester 2015 - Phase III

i. Pre-Phase I

The next group working on this farm initiative needs to secure certain elements involving funding and long-term management before the implementation of Phase I. After these elements are completed, the Farm Manager would be responsible for site layout and breaking ground.

- Find a college to house and manage
- Secure Funding
- Post Farm-Manager position
- Fill Farm-Manager position

-Buy necessary equipment

ii. Phase I: Production Farm

Larger UM Farm - This is the main productive facet of the UM campus farm proposal. The primary purpose of this four-season farm is education with an informal and a formal component. The informal component consists of volunteer workdays comprised of UM students, faculty and staff from diverse backgrounds. This includes visits from interested student organizations, tours with people affiliated with the University, and the creation of a new student organization involved in operations of general planning of this farm. This new organization would also create a bridge of communication between the farm and the UM community. The formal component of this farm involves sponsored class field trips, laboratories, classes with curriculum, research projects through faculty members, and the Sustainable Foods Program. As many smaller gardens exist around campus, UM should focus its resources on the foundation of a larger production farm that has potential to directly and indirectly impact a wide audience on campus.

Site Requirements

- One to two acres of arable land with room for expansion of up to or larger than 5 acres
- One hoop-house for season extensionality to maximize student involvement during active semesters
- Parking (gravel or grass suffices) and lighting near parking area
- Water access
- Electricity access
- Naturally fertile soil
- Building space for office, communal and kitchen areas
- Equipment on site
- Outdoor preparation and rinsing stage
- Storage facility
- Refrigeration space
- Transportation
- Ensures Student Safety

Budget Overview

CAPITAL BUDGET

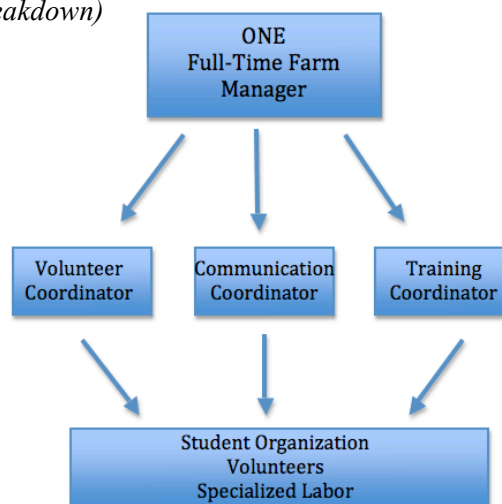
Total: \$59,900

ANNUAL BUDGET

Total: \$105,120

(Refer to Appendix A for budget breakdown)

Phase I Management Structure



- I. One full-time farm manager
 1. Responsible for locating, training, and supervising workers/volunteers
 - A. Manage work-study positions and internships
 - B. Training
 - C. Evaluation semi-annually; reports to be filed with Board of Directors
 - D. Meet each semester with owning Department and Sustainable Foods Program to go over challenges, suggestions, etc
 2. Day-to-day operational decisions
 3. Responsible for maintenance of equipment and storage facilities
 4. Responsible for Annual Budget
 - A. Complete final fiscal budget by Jan. 15; preliminary by Dec. 1.
 - B. Approve budget for the next year between Jan. 15-30 with student organization board
 - C. Maintain monthly reports: actual, year-to-date versus budgeted.
 - D. Grant-writing
 5. Responsible for ordering and purchasing farm tools and equipment.
 6. Consult with student organization and head department on the following:
 - A. Operating plans
 - B. Purchase of new equipment
 - C. Replacement of equipment
 - D. Short, intermediate, and long-range planning
 9. Responsibilities in agricultural production
 - A. Planting
 - B. Harvest Dates
 - C. Determine and order all inputs for crops.
 - D. Maintaining Organic Practices
 - E. Organizes production distribution
 10. Responsibilities may change due to phase breakdown and unforeseen challenges²³
- II. A registered Voluntary Student Organization and member involvement (VSO) will be used to coordinate student involvement and farm management under the full-time farm manager. Three or more Work Study Positions during the school year will report to FTE and oversee the VSO.
 - a. Volunteer Coordinator
 - a. During volunteer work days, the volunteer coordinator should also keep track of who comes in to volunteer. They should keep records and study techniques for involving even more students in the campus farm.
 - b. Training Coordinator
 - a. Training coordinator will be responsible for properly instructing volunteers about tasks they will be completing during workdays and why such activities are important. They will also coordinate larger training sessions for farm machinery.
 - c. Communications Coordinator
 - a. Responsible for finding and recruiting volunteers from the university through emails, advertisements and word of mouth. Should be involved in planning volunteer workdays.
- III. Volunteers (mostly students) to help with farm maintenance, planting, harvesting
 - a. Walk-in work days
 - a. Walk-in workdays may occur during the weekends to attract students looking for new hobbies. These workdays should last for about three or fewer hours so that students will not be overwhelmed. At the same time there will be enough time for sufficient education and work so that volunteers can visually experience a change made.

- b. Typical workdays will involve thirty minutes of indoor and outdoor education, a thirty-minute tour of the farm for new members, and two hours of work in the farm. During work time, VSO coordinators should continue education by pointing out interesting aspects of the farm and plants.
- c. These workdays should involve simple tasks that can be completed in a short period. These tasks can be planting seeds or pulling weeds.
- d. Habitual volunteers only need to take part in one education session and tour to prevent redundancy and lack of initiative.
- e. Volunteers will only work from dawn to dusk for safety reasons

Options for volunteer incentives:

- Receive half CSA share for 10 hours work/week
- University Credit
- Educational opportunity
- Free Therapy

IV. Spring/ Summer Internship (student) - interns (3) working with the farm manager to supervise and aid volunteer activities, food preparation after it has been harvested, farm maintenance, process orders of supplies, and service requests during Spring/ Summer Terms

Funding option: paid, work-study or for credit

- a. Volunteer Coordinator
 - a. Volunteer coordinator should work closely with the communication coordinator in order to maximize volunteer numbers during the season when human resources are minimal while demand for volunteers is high in the farm.
- b. Training Coordinator
 - a. The role of the training coordinator will be the same as the VSO training coordinator
- c. Communication Coordinator
 - a. Communication coordinator's duty during the spring and summer will be very important. They should reach out to the University of Michigan community as well as the local community since human resources from the university will be more limited than during the school year.

V. Specialized labor for installation of farm infrastructure (e.g. water, kitchen, electricity, storage facilities, etc)

- a. One time cost

Phase I Production Distribution

1. There are three models for the production for this farm. The revenue for the farm can come from a single model, a combination of models, or all three models; however, this business plan requires further analysis by a future student group. The simplest model would include offering all produce to the Residential Dining Services because of their pre-existing relationship with UM. A preferred model would include all three designs in order to maximize student access.

Design: In Phase I we expect to offer 10-15 Community Supported Agriculture (CSA) shares, although this is an underestimation of our production capability, we want to start small to ensure success. This could cover approximately 50% of the total food production. Community supported agriculture (CSA) is an alternative form of agriculture where community members take part in the risks and benefits of small local farms by buying weekly shares of produce

- Each Share at \$30 or more 24-30 weeks of harvest (dependent on semester length)
- Expected profit from first year CSA is \$7,200- \$13,500 (depending on harvest time and CSA price)¹²
- The CSA would be most successful if the farm targets key stakeholders such as influential professors or UM leaders who can spread the word good idea.

Limitations: harvest time, weekly share price, size of cultivated land area, volunteer effort, ability of full-time employee to manage CSA, weather

The other 50% of the food production could be sold to

- University Unions, contact Keith Soster²⁴
- Residential Dining Services
- Student farmer's markets

This wholesale of produce increases visibility and education of UM Farm in alternative settings. This fall there were pilot student farmer's markets at the Union that were reported to be highly successfully and well received.

In Phase II, we plan to expand the CSA program to offer more shares and make access to local foods easier for students.

iii. Phase II: Sustainable Foods Program

The accompanying Sustainable Foods Program institutes a common culture and forum between all students across campus to collectively participate and interact in our local food system. This program plans to integrate satellite gardens (see below) and student groups currently engaged in topics such as sustainable foods, environment, biodiversity, nutrition, agriculture, and more. The purpose of this program is to bring together people concerned with a common issue through one forum and to deeply educate students about the source of their food through this highly visible and insistent interchange. Monthly meetings, workdays, a program website, and constant collaboration would be the mediums of communication. This program could also develop to include courses to supplement pre-existing courses on food systems. Suggestions for satellite gardens:

1) Central Campus- three to four education gardens in plain view to the UM community and public, functioning to increase visibility, as well as provide opportunities for the casual participant, keen on volunteering on occasion in an informal setting.

Ideas and options:

- a. Cultivating Community- student run organic farm that teaches about small-scale community productive gardens
- b. DANA Garden- new construction is underway near the East entrance of the DANA building. This new garden focuses on native plant populations and sustainable site designs with increased seating opportunities.²⁵
- c. Outdoor Adventures Garden
- d. Public Health Garden
- e. Establish new Garden with Project Community-community building garden
- f. Establish new garden at Hospital- aesthetic, rehabilitation garden

2) North Campus- the Revitalization Committee at North Campus has expressed interest in a medium-sized garden on North Campus¹⁸. This would be larger than the Central Campus gardens with a larger focus on production for community volunteers. However, this garden will emphasize community building among North Campus students and will allow laboratories an on-campus location to educate students.

iv. Phase III: Expansions to Farm

Phase three includes possible additions and expansions to the farm that are not feasible in the first or second phase, but will help ensure longevity and success.

- Addition of another management position
- Second or third hoop house
- Expansion of size of farm for cultivation
- Organic Certification
- Training programs for organic farming
- Livestock (i.e. bees, chickens)
- Rainwater Catchment System
- Live-In Program
- Alternative Energy (solar-powered farm) sources
- Summer camp program for income and community outreach
- Pre and Post-Consumer compost system for UM

C. Sustainable Recommendations

(To be considered and expanded upon in planning stages)

1. Utilize Organic Farming Practices
2. Saving seeds
3. Rainwater catchment system
4. Drip Irrigation
5. Crop Rotation
6. Self-sufficient (independent of conventional energy systems)
7. No-till Farming
8. Consider the future and longevity of farm in all planning transportation

V. Findings

The findings below shape the recommendations above. These findings include important points from focus meetings, the student survey, and individual interviews.

A. Primary and Secondary Findings

i. Student Listening Session

Approximately 30 students from a broad spectrum of studies and backgrounds attended our focus group in mid-October. This meeting was largely focused on the student opinions, suggestions, and expectations for a potential Campus farm. This group agreed upon a unified vision that the campus farm should be a large farm with a sustainable food program that involves all students and interested staff across campus. Most importantly, we used this student listening session as a preliminary research opportunity to learn of the interests and opinions of the students and ultimately helped frame our vision⁴.

ii. Stakeholder Interests⁷ - In order to create a viable and structurally sustainable farm there are two groups of stakeholders that are imperative for creating a responsibly managed and structurally efficient farm. A third stakeholder involves the voluntary participation from students, staff and community to ensure the farm's longevity and fulfillment of the vision. Division of these stakeholders is necessary in understanding the processes needed for implementation and management.

Stakeholder 1 - Structural Management and Oversight

In order for the farm to be a secure investment ownership from a department, school or facility is needed to oversee fiscal management and ensure longevity. The following is a list

of necessary obligations that is needed from a stakeholder to directly secure and maintain the vision of the farm. The stakeholder involved in Structural Management and Oversight would be responsible for the following:

- Approved budget for one time capital needs
- Annual budget for employees and maintenance
- Development of infrastructure for necessary information sharing to University departments, staff, students, etc.
- Communication between University and farm
- Development and oversight of standard operating procedures
- Oversight of operations and budget
- Regulation of employees
- Transportation of product
- Transportation of student workers/volunteers

Stakeholder 2 - Site Requirements and Development

Ideally, Stakeholder 1 would oversee and be made aware of the development necessities; however, a small group of individuals could ensure that the necessary procedures outlined below are adhered to. The list below describes the process needed for development with the University Planners Office, and is both a compilation of regulations from OSEH.

- Soil testing at each proposed location through Office of Safety and Environmental Health (OSEH)
 - i.e. pH, nutrients, soil type
- Accessible records of soil test for future soil and land management
- Good Agricultural Practices (GAP) and Good Handling Practices (GHP) certification or a third-party audit
- Planned irrigation lines to mitigate for storm water and surface runoff
- Soil Erosion and Sediment Control plans and practices
- Water testing if water for location from local well
- On-site kitchen or structure to wash, store and stage produce
- Standard Operating Procedures and training for active members of farm
- Potential for Future Organic Certification
- Necessary land space with additional space for expansion

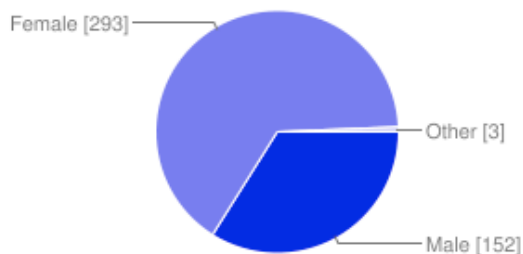
B. Survey Results

Campus Farm Survey Results

Overview: The survey reveals that a very high percentage of undergraduate students have interest in starting a campus farm at the University. Many students find the farm to be a great educational opportunity, however almost all students see the farm as a great way for the University to become more sustainable and provide locally grown food to campus.

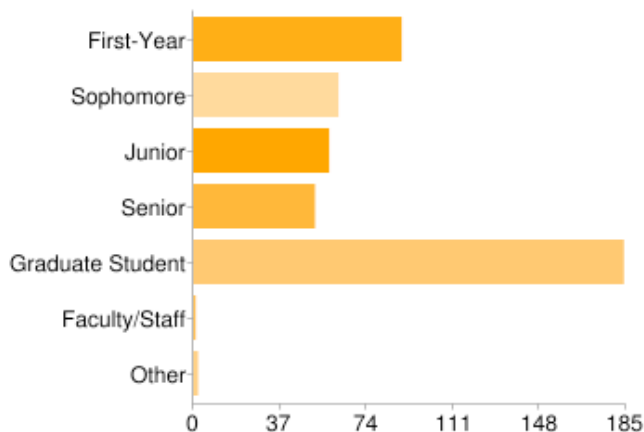
Respondent Data - 457 total responses

What is your gender?



Male	152	34
Female	293	65
Other	3	1

Which of the following best describes you?

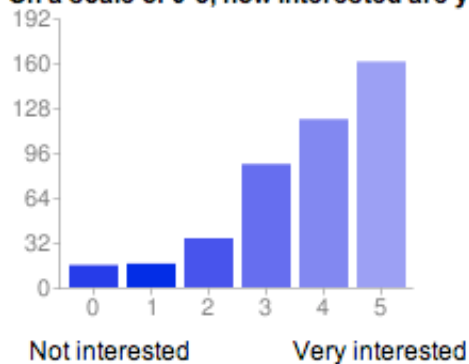


First-Year	89	20
Sophomore	62	14
Junior	58	13
Senior	52	12
Graduate Student	184	41
Faculty/Staff	1	0
Other	2	0

Awareness, Interest and Response Bias

13% of the surveyed participants had previously heard about the campus farm, and only 24% said that they could not see themselves being involved with the farm.

On a scale of 0-5, how interested are you in having a campus farm?



0 - Not interested	16	4%
1	17	4%
2	35	8%
3	88	20%
4	120	27%
5 - Very interested	161	37%

- There was a significant difference in interest between different scholastic disciplines. Between the 71 surveyed participants who responded with an interest between 0 and 2 (no interest to very little interest) 48% were graduate students and 17% were First-Year students. Over two thirds of the graduate students were in the MBA program, with the rest primarily studying in a science/non-arts related field.
 - o This data, although not corroborated, may suggest that their field of study may affect the 65% of students who have very little interest. Graduate students typically have a very tailored and narrowed field of interest while first year students may not have the knowledge to know about the social and academic benefits of providing a farm to campus. This data can be used to help focus the University's vision to incorporate a more inter-disciplinary curriculum.
- 44% of respondents who responded with an interest in the farm of 4-5 (high to very high) rarely eat locally grown food, between 0-2. 35% of respondents who replied with the same amount of interest in the farm hardly ever seek out locally grown food, between 0-2.
 - o This statistic exemplifies that students may be interested in becoming more sustainable with food consumption if given the opportunity, and also provides a way for the University to educate those who are not aware of the benefits a farm will have.

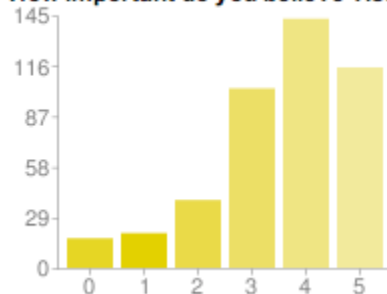
Student Interest and Participation

- 56%, 254, respondents would volunteer at the farm if given the opportunity
- 33%, 152, respondents would participate at the farm for a paid position
- 54%, 245, had interest in participating at the farm for academic reasons; such as work study, research or class lab
- Of the participants who responded 'unsure' when asked if they would participate at the farm, 89% showed a moderate to high interest in starting a farm (3-5). Despite involvement students find the farm to be a great way for the University to

Visibility

Participants were surveyed about whether or not they believed the visibility of a campus farm was important. For example: placing the farm in a high traffic area to promote visibility. Participants generally believe that visibility is important when selecting a site.

How important do you believe visibility is to the farm?



0 - Not Important	17	4%
1	20	5%
2	39	9%
3	103	24%
4	143	33%
5 - Very Important	115	26%

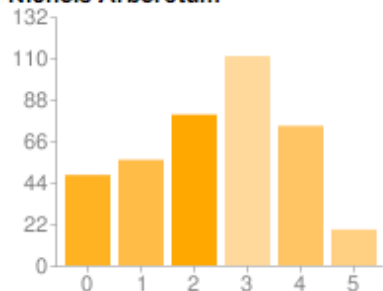
Farm Location

We surveyed students to determine how the location of the farm would impact participation. Results generally showed that the proximity to campus is directly related to participation.

The Matthaei Botanical Gardens, an ideal location in regards to desired scale, resources and visibility was rated as the least desirable site because of distance. We surveyed participants asking if adding public transportation would increase involvement - 37% of respondents said they would participate more at the

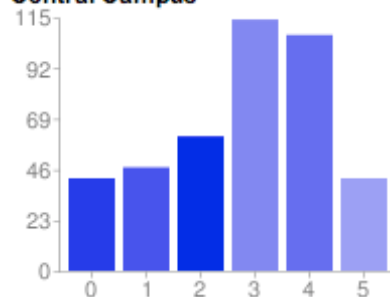
Matthaei Botanical Gardens if there were a bus route provided. 33% were not sure if adding a bus route would influence their participation.

Nichols Arboretum



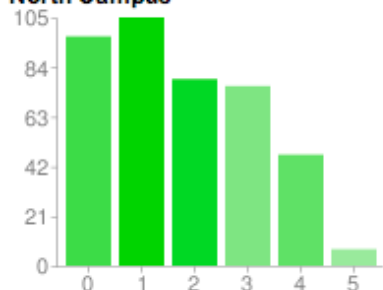
0 -I would never participate	48	12%
1	56	14%
2	80	21%
3	111	29%
4	74	19%
5 -I would participate every day possible	19	5%

Central Campus



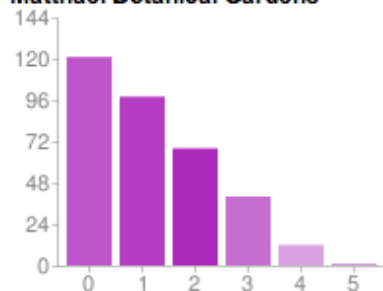
0 -I would never participate	42	10%
1	47	11%
2	61	15%
3	114	28%
4	107	26%
5 -I would participate every day possible	42	10%

North Campus



0 -I would never participate	97	24%
1	105	26%
2	79	19%
3	76	18%
4	47	11%
5 -I would participate every day possible	7	2%

Matthaei Botanical Gardens

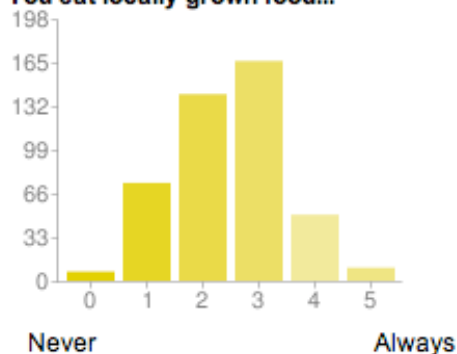


0 -I would never participate	121	36%
1	98	29%
2	68	20%
3	40	12%
4	12	4%
5 -I would participate every day possible	1	0%

Sustainable Consumption and Behavior

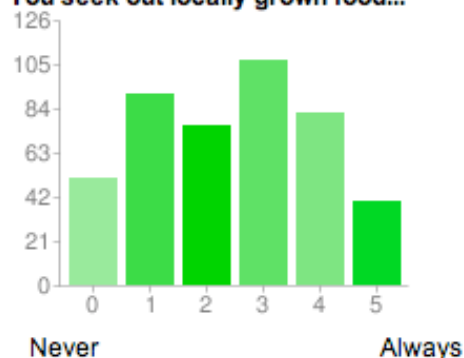
We surveyed participants to determine sustainable consumer behaviors and had generally expected results. We compared these results with how providing a campus farm could affect sustainable consumption as seen below in *Projected Student Food Purchase*

You eat locally grown food...



0 - Never	7	2%
1	74	17%
2	141	31%
3	166	37%
4	50	11%
5 - Always	10	2%

You seek out locally grown food...

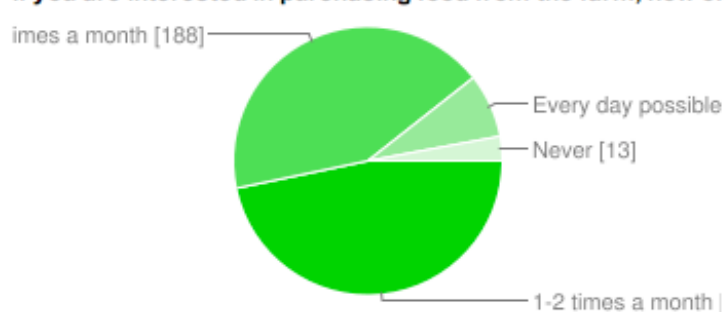


0 - Never	51	11%
1	91	20%
2	76	17%
3	107	24%
4	82	18%
5 - Always	40	9%

Projected Student Food Purchase

- We surveyed participants to determine whether or not a campus farm could influence behaviors. We surveyed participants about whether or not they had heard about the student-run farmers’ market in The Union and 65% of the surveyed students said that they had never heard of it.
- Despite the varied interests and moderate local food consumption, **97% of respondents said that they would purchase food at least once a month from the campus farm if given the opportunity.** Providing produce from the farm will likely increase produce on campus since there is a severe lack of access to groceries on campus. Providing access to sustainable produce is a win-win situation for the University and its students. Furthermore, a campus farm would certainly shift results displayed under *Sustainable Consumption and Behavior*.

If you are interested in purchasing food from the farm, how often would you do so?



1-2 times a month	206	47%
3-4 or more times a month	188	43%
Every day possible	34	8%
Never	13	3%

Additional Findings

- Respondents were also asked to personally appeal to President Coleman about starting a campus farm. Responses were incredibly constructive. *
- The survey also provided respondents to offer comments or advice and were much appreciated, however, our proposal addresses most of the recommendations.

Refer to Appendix B for detailed responses

VI. Next Steps

Primarily, this proposal needs institutional approval and support to move forward. There are portions of planning the farm that were not addressed in this proposal due to time constraints of this semester project and varying degrees of experience. Future topics that need to be addressed include: specific design and layout of the farm, increasing awareness of the farm, connecting the farm to a Sustainable Food Program, and impacts of the farm at a local scale. A new working group was created to focus on the funding and future details of this farm. Several grants through the University of Michigan and Federal government are geared towards sustainable agriculture projects. This farm cannot be successful without initial and long-term funding security. As described in Phase II, a student Sustainable Foods Program needs to be developed and linked to the farm to ensure a solid educational platform. Farming can have negative impacts on the local environment that will need to be addressed by a future student group to ensure sustainable practices. Some of the impacts include soil erosion, runoff, and increased salinity.

VII. Conclusions

The campus farm will be a huge step forward that will help the University meet their sustainability goals, respond to a rising student demand, and ensure that the University of Michigan continues to be a model of excellence. The four-season farm will be the basis of a greater Sustainable Foods Program, which will include student organizations involved in food production and sustainability, faculty and staff interested in sustainability, and members of small-scale gardens on North and Central Campuses. Together the farm and the Sustainable Foods Program will allow for students to gain knowledge about the importance of a sustainable food system, agricultural practices, and the challenges and rewards of growing healthy food in both an informal and formal setting. Furthermore, the recent increase in funding for student-led sustainability projects, such as the Planet Blue Student Innovation Fund coupled with the upcoming sustainable food cluster hire make a campus farm even more feasible at the present time. The campus farm will be a stand-alone image for the University of Michigan that will show their collective commitment to sustainable practices.

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Creation and Development of the University of Michigan Sustainable Food Program and Campus Farm

Executive Summary

The University of Michigan Sustainable Food Program (UMSFP) with its campus farm, intends to improve health and awareness using food as a central guiding theme, and begin to solve food-related issues on and off campus by providing: (1) A strong community network that links faculty, staff, administrators, and students at UM together with local farmers, organizers, and advocates in Ann Arbor, Detroit, and the broader US, (2) Education, both academic and experiential, leveraged through the community to empower people to grow, buy, and eat in a socially and environmentally responsible way, and (3) Healthy, nourishing, sustainable food, grown on campus that will serve as a tasty and visible commitment to sustainability by the University of Michigan.

The UMSFP Masters Project Team will create and direct the program and farm during its inaugural year guided by Advisor Bob Grese, and other key stakeholders. Our charge is largely to establish the program and build the institutional framework that will support the UMSFP when this project finishes, and we are reaching out to the students at UM to help us complete this task. By April 2013, we hope to deliver a well-organized University of Michigan Sustainable Food Program complete with an advisory board, website, network of critical supporters, active student group, business plan establishing the program's value, management plan to guide it in the future, and lastly a farm with funding to support a full time farm manager at Matthaei Botanical Gardens.

Client

The University of Michigan
Bob Grese, Director, Matthaei Botanical Gardens

Team Members

Elizabeth E. Dengate
Allyson Green
Lindsey MacDonald
Gerald Tyrrell

(Laura Jackson was originally in our project group. She currently cannot participate, but if at some point in the near future she is able to, we will adjust accordingly.)

Advisor

Bob Grese, Director, Matthaei Botanical Gardens (for signature, see Appendix 1)

April 17th, 2012

Introduction and Background

On August 22, 2011 the University of Michigan released the *Campus Sustainability Integrated Assessment* (CSIA), its most comprehensive study of sustainability on campus. Endorsed by the Sustainability Executive Council chaired by President Mary Sue Coleman, the study noted that “requests for a campus farm or garden represented the most common submission to Graham Institute’s Integrated Assessment feedback form” (CSIA, pg. 317). Students clearly have a strong desire to learn about food (the plethora of food-related student groups, sustainable food-related speakers and events, and even comment cards at the dining halls asking for more local and organic produce is testament to that as well), but so far the university has no unified vision to cater to the demand, although campus farms and sustainable food programs at other schools exist across the country and the globe.

There are hundreds of courses at UM that cross paths with sustainability, and undoubtedly many of those include food topics. There are, however, few outlets for students who want to dig in hands first; in other words, courses with a significant field component. Some food related student groups put together impressive symposia inviting all to attend, but others wax and wane without a clear niche to occupy. Lacking central leadership, our personal experiences and conversations have shown that many student groups are working separately on the same kinds of issues and topics, without communicating with one another, which results in an inefficient use of resources and time, and potentially undermines the long term sustainability and credibility of the movement. In summary, there is a great deal of interest in sustainable food topics at the university, but no central program providing support and a framework for the movement.

Building a campus farm and satellite gardens was specifically recommended in the CSIA (pg. 317), but these projects risk failing to launch if they are not supported by the university, and failure in their goals if they have a low impact on the community. Without projecting a cohesive and unified vision, the farm and gardens would likely add to the confusion that already exists on campus. This highlights the need for a university-wide organization to act as an interface between all of the sustainable food advocates at UM. Our project will create and develop the UM Sustainable Food Program (UMSFP). The UMSFP will function as an umbrella program, operated by students, faculty and staff, housing all sustainable food related endeavors. It will be a home for all who work to improve awareness about current food issues, ensure that university units collaborate, and provide opportunities for others to become involved, all efficiently leveraging the university’s education, research, and outreach capabilities.

Shortly after releasing the CSIA, President Coleman commented on sustainability, pointing out that the University’s role in addressing these issues is to “prepare the next generation of scientists, leaders and engaged citizens” (Going Green, 2011). The University of Michigan needs to combat increasing ignorance in young people on critical food topics, so that graduates can make informed food choices for themselves and help educate those around them. A review in the *International Journal of Science Education* noted that youth up to age nineteen are chronically confused about food issues. The authors consistently found that youth rate environmental topics like deforestation, pollution and loss of biodiversity as more serious issues than genetic engineering or organic and local food production, but even more arrestingly than this, they fail to recognize the strong connections between food and environmental issues. The subjects of this study included youth from many western societies including the U.S. and U.K., and the authors speculate that an increasing urban population is

in part to blame for this dearth of awareness and knowledge (Dillon et al. 2005). Other authors have found that while all Americans are eating too few fruits and vegetables, American college students are “even less likely to consume the recommended levels of fruits and vegetables,” with over half of them eating *less* than the minimum suggested by leading health agencies. (Ahlstrom 2009; Dinkgrave 2005). Although this may reflect slow progress to incorporate environmental education in primary and secondary schools, Dillon and colleagues also found that most students’ knowledge about food mirrors what they learn at home, not in the classroom (2005), which gives higher education a unique opportunity to correct the learning gap. Colleges and universities need to focus on educating the next generation of leaders, educators, professionals, and parents who will make these connections evident and relevant to their neighbors, coworkers, and children. It’s never too late to correct gaps in education and increasing knowledge of nutrition is often named as the key to increasing positive behaviors (Ahlstrom 2009; Dinkgrave 2005).

Besides increasing positive nutrition and health on campus, integrating farms, gardens, and educational and community programs into people’s lives brings a myriad of other benefits, ranging from the physical to mental wellbeing. Working together in farm or garden settings builds community and individual relationships, increases communal effectiveness, strengthens mental health, increases the positive aesthetics of an area, helps with stress relief, and also benefits the local environment (Armstrong 2000; Milburn 2010; Hale 2011). David Orr, author, and professor of Environmental Studies at Oberlin College, makes a compelling and relevant case for farms at liberal arts colleges:

“...Farms did what no other institution has done as well. They taught directly, and sometimes painfully, the relationship between our daily bread and soil, rainfall, animals, biological diversity, and natural cycles... They also taught the importance of the human qualities of husbandry, patience, hard work, self-reliance, practical skill, and thrift... This leads me to propose that agriculture should be included as part of a complete liberal arts education, first because it offers an important kind of experience no longer available to many young people from predominantly urban areas...” (Orr 2004, 117-18).

Orr goes on to list six more reasons for including agriculture at liberal arts colleges, including the possibility of using campus farms as interdisciplinary laboratories, catalyzing the revitalization of surrounding rural areas, preserving local biodiversity, reducing campus carbon emissions, closing campus waste loops, and “finally, by participating in the design and operation of college farms, students could learn that our problems are not beyond intelligent solution; that solutions are close by; and that institutions that often seem to be inflexible, unimaginative, and remote from the effort to build a sustainable society can be otherwise,” (Orr 2004, 120-21).

Schools like Michigan State University and Ohio State University have strong agriculture programs, and they’re already working to lead the charge in sustainable farming enterprises. Since 2000, MSU has been changing its image as a conventional agriculture school, “where they taught people how to use chemicals and pesticides,” to a place where they are proud of their student organic farm that attracts visiting students and scholars (Birnbaum et al. 2006). In fact, there are many other schools – non-agriculturally inclined schools – already leveraging the renaissance of interest in food and farming, including: Cornell, Dartmouth, Duke, Illinois, Penn. State, Princeton, Stanford, Wisconsin, and Yale (CSIA, pg. 333).

The University of Michigan not only needs to catch up, we're also in position to provide a unique perspective to the sustainable food movement by focusing on multidisciplinary approaches to solving food problems, and bringing education into agriculture in creative ways. With five new faculty specializing in different food topics slated for hire in the next couple years, an active community of faculty already willing to use a campus farm in their courses, and students willing to share skills with their peers, the project may begin producing educational benefits even before the first harvest.

Aside from opportunities to use the farm and gardens in formal educational settings, it would fill a growing desire by students to gain experiential education that will serve them sustainably in their lives after graduation. A recent survey of graduate students in the School of Natural Resources and Environment (SNRE) found a near unanimous outcry for an increase in courses with significant outdoor field components – and educational activities in a farm setting could go far beyond the technical and practical skills used in ecology or landscape architecture classes.

U.M. Professor Raymond DeYoung holds that the transition to a more sustainable future of environmental stewardship will include supplanting economically motivated behaviors with behaviors that provide intrinsic motivation, like the simple satisfaction derived from learning new skills, helping others, and demonstrating excellence under the burgeoning guise of sustainability. We ought to try to lighten our footprints by fostering new values and ethics and by mixing old skills with new (DeYoung, 2011). Comments by other current UM faculty indicate that the farm and gardens could also build community within the student body, facilitate outreach to the broader Ann Arbor community, stimulate interdisciplinary discussion, link theory to practice, and develop skills directly applicable in students' careers (CSIA, pg. 354).

The *Campus Sustainability Integrated Assessment* indicated many of the benefits that a campus farm and garden would offer, but failed to offer a clear path to that future. The School of Natural Resources and Environment's Sustainable Food Program Masters Project Team will focus on developing a cohesive Sustainable Food Program, as well as planning and establishing a campus farm and gardens within that program to kick-start this initiative. We aim to serve the students of the University of Michigan, the staff, and the professors by providing the farm as a functional symbol of UM's commitment to the sustainability goals outlined by President Coleman in 2011.

Proposed Research and Research Methods

Project objectives

The goals of this project are (1) to provide an avenue for formal and informal, interdisciplinary, experiential education on food related topics and an outlet for sustainable food research to the public, (2) to foster community building and organizing experiences for university students and community members, including opportunities for collaboration between local farmers, nonprofits, and schools, and (3) to demonstrate the university's commitment to sustainability by increasing access to local, sustainably grown foods on campus.

Although the University of Michigan is not focused on teaching agriculture, our students and vast alumni network have awesome potential to make lasting change in the

world, and there is already a number of faculty and students who want to do more to work toward food sustainability. Since there are members of the UM community already working on food issues, this project will serve first to establish the University of Michigan Sustainable Food Program (UMSFP) as an umbrella organization to give a unified voice and direction to sustainable food advocates and researchers on campus. This program will kindle creativity by promoting and catalyzing collaboration between students, faculty, staff, and the broader Ann Arbor community. We will also establish a farm at Matthaei Botanical Gardens to be used as a living-learning laboratory for academic programs across campus. The farm will also serve as a site where students can gain hands-on, experiential education not otherwise available at the university, and will be a hub for sharing information across disciplines, generations, and demographic groups.

Research Questions

To aid us in achieving these broad goals, we have formulated a list of guiding questions which we will answer as we move forward.

1. Why does the University of Michigan need a farm, and what will it provide to the community?

We will address this question and produce a business plan that will highlight the need for a campus farm, based on four lines of research. (1) A survey of our peer institutions that already have farms on their campuses, specifically seeking to understand what benefits their farms offer to their campuses and the type of institutional support or commitment required to sustain those benefits. (2) Research about UM's commitment to sustainability, much of which is contained in the Campus Sustainability Integrated Assessment (CSIA), focused on assessing how the campus farm will help the university reach those goals. (3) Surveying students on campus about their desire for a campus farm, and its potential use in enhancing their educational experience. (4) A formal literature review of the costs and benefits involved in using a farm for both formal and informal education (Figure 1).

Research Methods

- (1) Peer institution review
 - a. Identify peer institutions with campus farm using online resources. Final list will include institutions with a range of farm structures in terms of size or production capacity, management structure, funding inputs, and food production methods or practices.
 - b. Conduct baseline data search using campus farm websites.
 - c. Interview farm managers through email, collecting insights on establishing, managing, and maintaining a campus farm.
 - d. Visit 2-3 campus farms to establish personal connections, network with farm managers and students, and participate in on-site workshops.
- (2) Assess how a campus farm helps reach UM sustainability goals
 - a. Review UM sustainability documents and goals
 - b. Conduct interviews with key University administration, staff, and faculty
- (3) Student survey

- a. Review previously conducted surveys, like the survey conducted by Environ 391 in 2011
- b. Initiate further surveys as needed to understand student interests
- (4) Costs and benefits of a farm as an educational resource
 - a. Compile costs and benefits collected from peer institution review
 - b. Perform literature review

2. How can the UMSFP and farm be among the best, and what new knowledge will they provide?

To understand how UM can lead with its campus farm, we will pursue four lines of research that will culminate in a management plan for the UMSFP and farm moving forward, including a budget and job descriptions for proposed full-time positions. (1) Continuing to study peer institutions, we will compile a list of infrastructure options and best practices for the levels of administrative oversight, student and community involvement, and the types of educational programming, and an understanding of what gaps exist in the current network of campus farms and gardens around the nation and specifically in the northern US. (2) Through meetings with administrators, faculty, staff, and community members, we will outline what level of commitment, especially financially, is required to successfully implement the UMSFP and farm. (3) Toward developing a unique niche for the UMSFP and farm, the students on the SNRE Masters Project Team will also conduct individual research related to their personal interests to help the UMSFP and farm explore and integrate un-tested methods of education, community building, and food production. (4) In developing relationships with other groups on campus working in the arenas of sustainability and food, we will understand how they can continue their missions and current projects within the framework we are suggesting (Figure 2). An additional product of our Masters Project will be documentation of our efforts to serve as a model that others can use for similar endeavors.

Research Methods

- (1) Infrastructure options and best practices
 - a. Compile options with first-hand insights through peer institution review and consultation with the University and local farmers
 - b. Elucidate gaps in the existing campus farm movement that UM could fill
- (2) Outline level of commitment needed
 - a. Initiate meetings to gain insights and secure commitments of support and resources
 - b. Estimate funding needs by (1) tracking expenses and needs during pilot garden project in summer 2012, (2) peer institution review, and (3) expertise from local farmers
 - c. Identify short term and long term funding sources and strategies for pursuing them with the guidance of experts and assistance of student UMSFP Development Committee
- (3) Develop a unique niche for the UMSFP and farm
 - a. Interview and survey staff and faculty about their vision for the program and farm

- b. Individual research by Masters Project Team members
 - i. Methods to integrate formal and informal education into a campus farm setting, including a protocol for development of curriculum or lesson plans for the older student (Liz Dengate)
 - a. Research into educational programs at other campus farms previously running at other schools
 - b. Close collaboration with university faculty
 - ii. What is the best leadership structure for overseeing this program? (Lindsey MacDonald)
 - a. Develop a model that demonstrates key skills and techniques for attaining leadership skills for a program of this nature.
 - iii. How can the farm be profitable? (Lindsey MacDonald)
 - a. Develop a 1, 2, 5, and 10 year business plan by analyzing business plans from similar programs.
 - iv. What are some alternative growing strategies? (Jerry Tyrrell)
 - a. Review literature searching for tested growing strategies that aren't widely used, and may be suitable within a research university setting
 - b. Identify best practices for year round growing from case studies and review
 - c. Identify some indoor growing options to expand operations into the greenhouses at Matthaei Botanical Gardens
 - v. What procedures need to be in place to safely distribute food? (Allyson Green)
 - a. Work closely with OSEH, University Unions, and Dining Services to outline requirements for produce used in campus dining facilities
 - b. Identify local training resources for Good Agricultural Practices
 - vi. How can the farm be used to engage issues of food justice and healthy living? (Allyson Green)
 - a. Collaborate with faculty and programs that address food justice and health (Ex: Environmental Justice—SNRE, Nutrition and Dietetics—SPH, School of Social Work) to identify ways in which these programs and the campus farm can increase awareness across campus
 - b. Identify student groups and nonprofits dedicated to food justice and health and outline framework for what kinds of outreach and education could come from future partnerships in this area
- (4) Integrate other campus sustainable food interests under the UMSFP umbrella
- a. Identify and network with current initiatives and groups, forming collaborative partnerships through meetings and supporting their events
 - b. Identify each group's mission and how their work can fit within UMSFP in order to facilitate the growth of sustainable food on campus

Conceptual Models

Business Plan

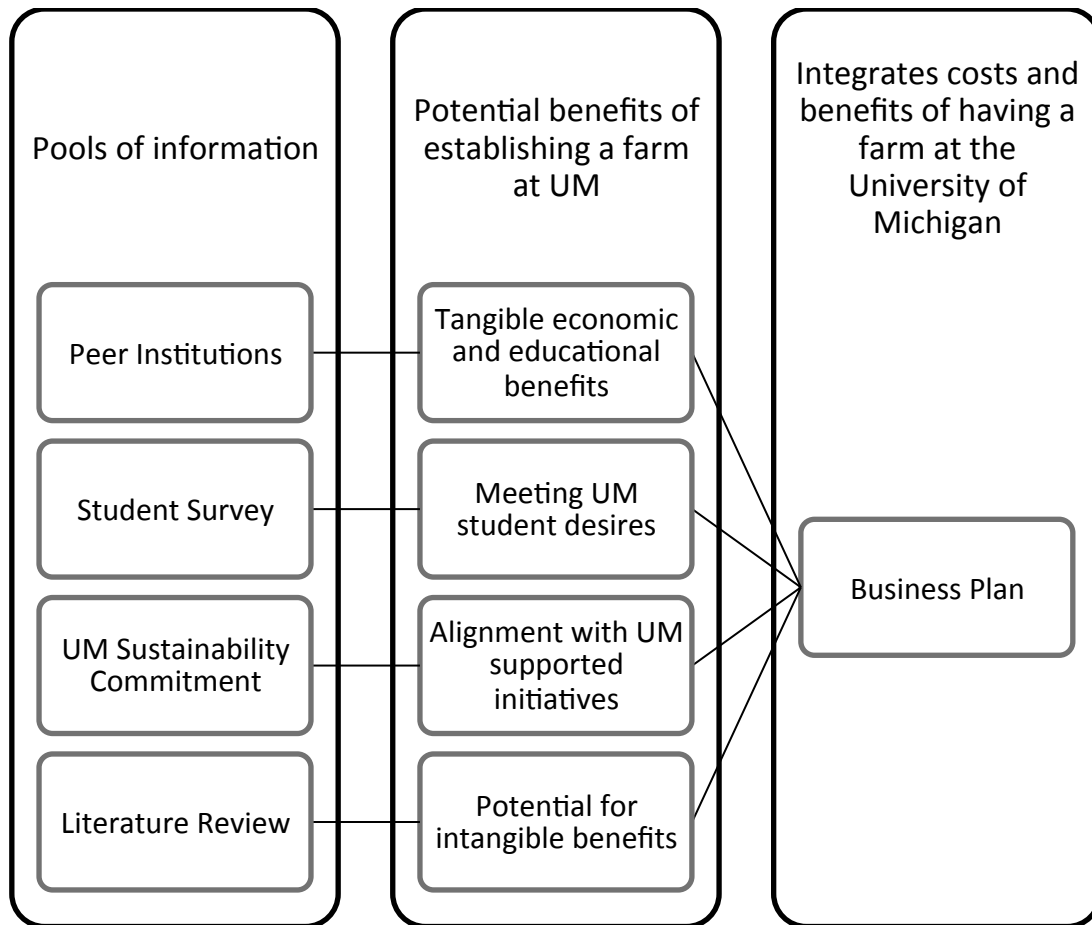


Figure 1 – The business plan will demonstrate that there is a need for a campus farm at the University of Michigan and that the farm will provide benefits to the university which are consistent with student desires, current initiatives, and the overall mission of providing education and research.

Management Plan

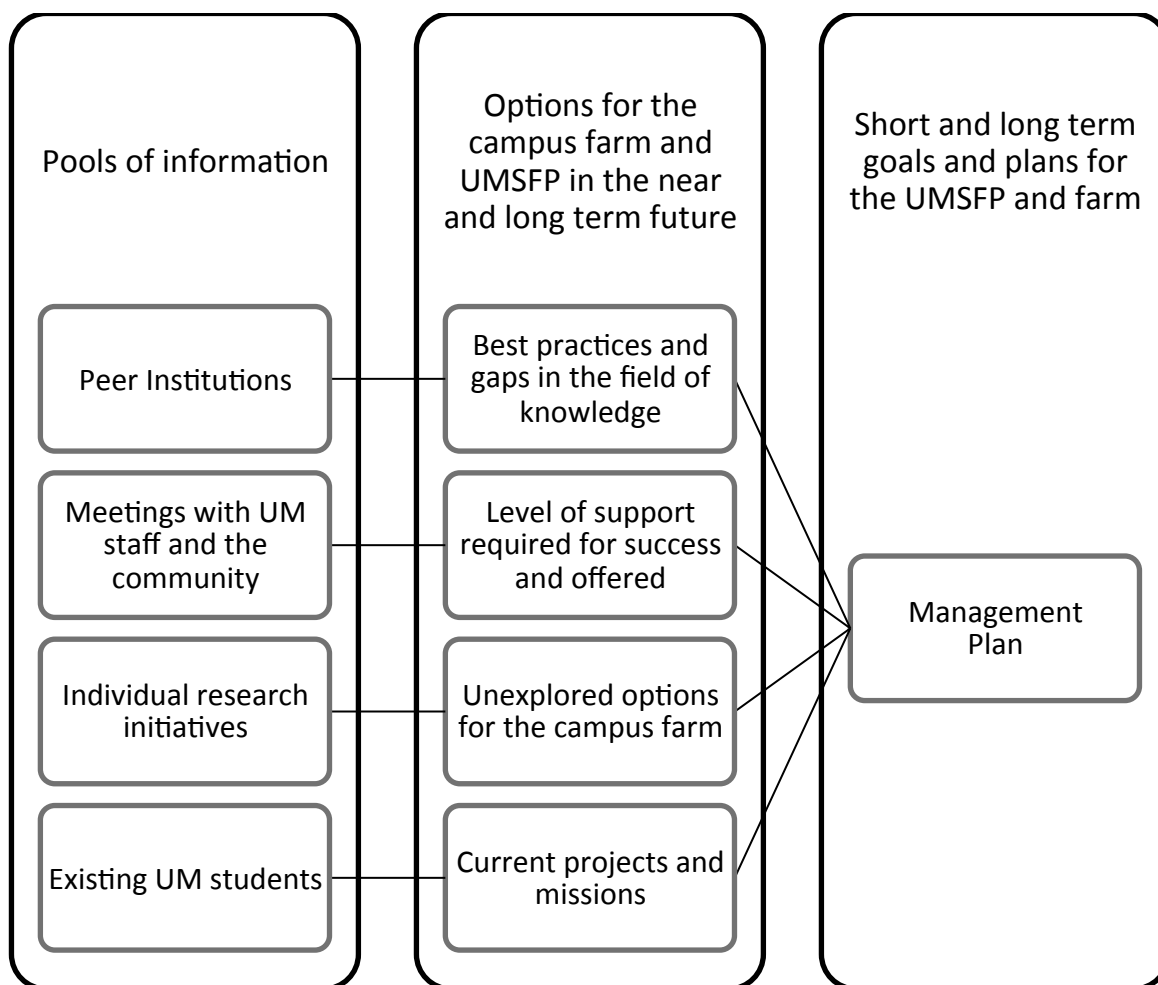


Figure 2 – The management plan will further develop the current Sustainable Food Program and the farm in a way that fits current university groups, fills gaps in the existing network of campus farms, defines roles for the University and broader community, and explores options for the farm at UM to be unique and progressive.

To ensure long-term sustainability after the Masters Project is complete and the students who carry it forward have graduated, the farm needs a business plan that outlines the governance and institutional structure of the UMSFP, including detailed descriptions of the various bodies that will make up the UMSFP.

Primary among these will be the student group, divided into committees with specialized roles: (1) The Advisory Board Committee will maintain a crucial link with a board of UM faculty who will offer advice and guidance through the processes of establishing the UMSFP, farm, and gardens. (2) The Development Committee will work with experts at the university to identify and seek out funding opportunities to help sustain the farm. (3) The Communication, Outreach, and Education Committee will work to develop a brand for the UMSFP and farm to present a cohesive front to the university and outlying community, as well as exploring opportunities to engage students in educational experiences centered on

food sustainability and the farm. (4) The Web Development Committee will work to create and maintain a website which will facilitate communication and involvement for those interested in the UMSFP and food issues in general. (5) The Social Committee will focus on recruiting students to help continue efforts started by the current crop of volunteers and the Masters Project Team. New committees will be established as needed to begin work on new fronts as the Advisory Board and student interests guide the UMSFP in new directions (Figure 3).

UMSFP Organizational Structure

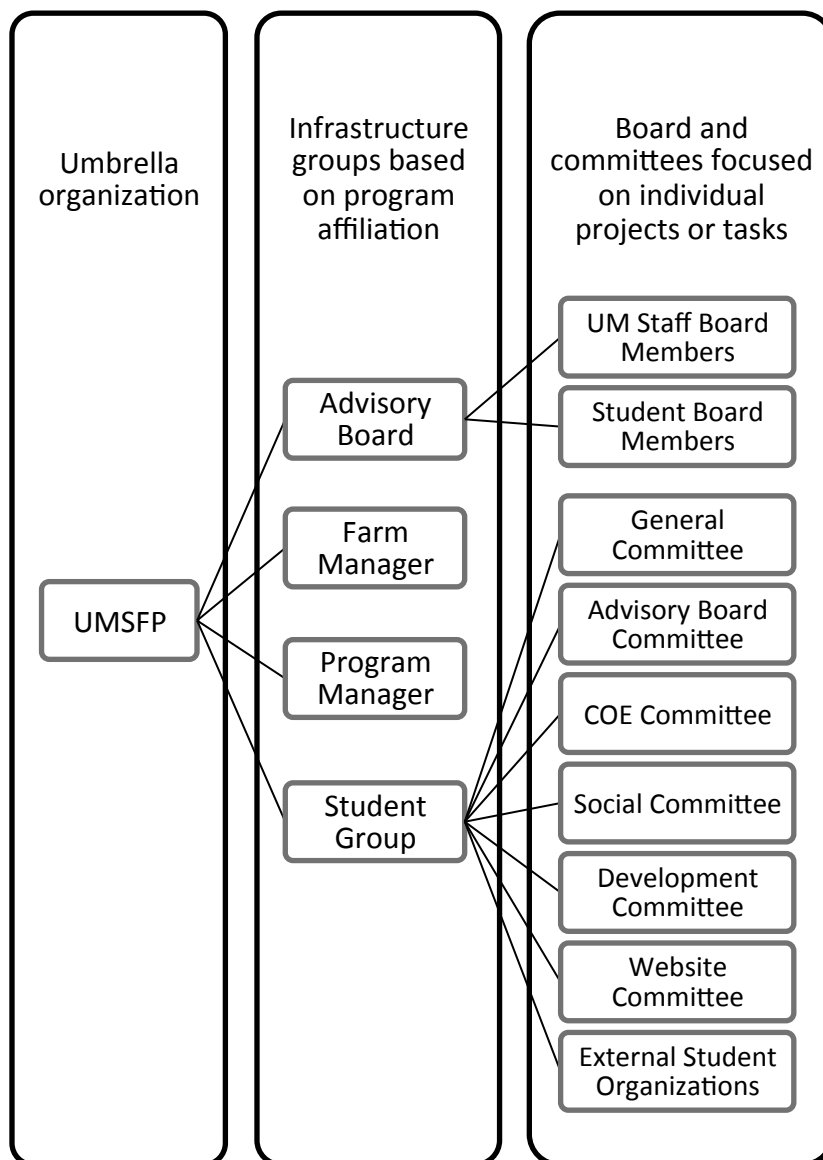


Figure 3 – Current organization of the University of Michigan Sustainable Food Program, currently lacking a formal institutional framework to govern its operation, which will be laid out in the management plan.

Evaluation

We will perform self-evaluations at the end of the Winter 2012 semester, the start of the Fall 2012 semester, and the start of the Winter 2013 semester, which will ask questions related to the dynamics of the Masters Project Team. The questions will include assessment of the quality and quantity of work performed by each member of the team, individual strength, and areas for improvement. We will also assess the project as a whole, by making sure our progress is consistent with goals laid out in our timeline, summarizing what we've accomplished, and identifying what work still needs to be completed. These evaluations will be conducted anonymously via an online survey, and discussed at a group meeting held during the first week of May. We will consult with Bob Grese, our advisor after these evaluations. In addition, we will also provide avenues for our advisor to periodically evaluate our work and the progress of the project as a whole. Finally, after the advisory board is established, monthly meetings between the working groups and advisers will provide valuable opportunities, as we ask them to evaluate progress and recent decisions, and offer advice as we move forward.

Limitations

Although strategies incorporated into the business plan and management plan will be based on expert advice, there is no guarantee that these processes will work specifically for the University of Michigan, as UM has its own unique set of needs, resources, and challenges. The Masters Project Team will thoroughly analyze all options for moving the project forward and will make decisions based on the best available knowledge and the judgment of experts; however, there will continue to be an element of trial and error as the farm is established. Literature reviews and expert advice will ensure that those trials are well-prepared and that errors are minimized, but unexpected issues will still arise. The team is prepared to document successes, failures, challenges, and ideas for the future so that the project can continue to improve through the years. Research and implementation will be highly iterative, with constant review of literature, interviews, and collected insights throughout the process.

Human Subjects

Because this project is intended to contribute to generalizable knowledge, UM Institutional Review Board (IRB) approval will be sought for the purpose of interviewing students, staff, administration, faculty, community members, and peer institution affiliates. An application will first be submitted through eResearch to determine if this project needs IRB approval. If IRB approval is necessary, team members will follow the standard protocol for getting approval. Some research conducted during this process may not fall under IRB regulation (e.g. peer institution review if classified as case studies), but all necessary steps will be followed to clear work with human subjects as a precaution.

Deliverables and Impact

This project will primarily focus on the deliverable of implementation of a campus farm and establishment of a UM Sustainable Food Program. Secondary deliverables include: a report of the process that can be used as a tool (for others interested in starting a Sustainable Food Program or campus farm) and recommendations for management steps moving forward.

Although we hope to implement the UM Sustainable Food Program and Campus Farm, these are ambitious initiatives with limitations that might end up being out of our

control. That being said, our project will be deemed a success if we inspire action within the University on establishment of infrastructure to support a UM Sustainable Food Program and Campus Farm. Ideally, this infrastructure will be entirely implemented by our project team. See below for the perfect world scenario:

All deliverables will be contained within UMSFP. We will create a sustainable, funded program with at least one full-time employee (a farm manager) and possibly a second (a director of education and communication) that will outlast this master's project and all of our terms at campus indefinitely. Specific project deliverables include:

1. Groundbreaking on full-fledged campus farm in April 2013
2. Strategic development of infrastructure for smaller satellite gardens on Central and North Campus consistent with CSIA recommendations (pg. 317)
3. Educational materials/signage for the farm and gardens
4. An associated curriculum developed in conjunction with university faculty, with lesson plans for visiting school/youth groups as well as university classes
5. A full document on our process, which might be used by other institutions as a model for developing their own Sustainable Food Programs
6. A written ten-year-plan for the SFP
 - a. highlighting future goals such as integration of locally produced food into dining halls, a CSA, and on-campus farmers' market
 - b. including details on structure (such as employment of work-study students, etc.)
 - c. and including a long-term financial/business plan for the SFP, farm, and gardens

The SFP, farm, and gardens will affect the entire student, faculty, and administrative body at Michigan, especially with smaller gardens right on campus. Food is an issue that is relevant to everyone, and with a broadly conceived program, the SFP and farm are something that students from a wide range of backgrounds can get excited about.

The program will raise awareness of sustainable food issues on campus, provide avenues for both formal and informal education and volunteer opportunities, eventually provide fresh and healthy local produce, and show the world outside of Michigan how committed the university is to sustainability and environmental issues.

The beneficial impacts of urban and community farms and gardens, including benefits for physical and mental health, community relationships, and environmental health, have been shown in a huge number of recent studies. (Armstrong, 2000; Hale et. al., 2011; Lovell, 2010; Matteson and Langelotto, 2010; Okvat and Zautra, 2011.) It is likely that a farm and garden presence on campus would have a similar positive impact on student, faculty, and employee health and the aesthetics of campus; provide a restorative environment; and foster healthy, effective community relationships among the thousands of people sharing this campus.

Project Timeline and Work Plan

We will be visiting farms and sustainable food programs this summer and into the early fall. We will also be growing our pilot garden over the summer as well. Research for all components of the project will be completed by October, at which point the writing process will begin. Over the next couple of weeks a more detailed timeline will be developed based on the meetings we have with administrators, faculty, and staff.

We will use our team charter as a guiding document for how we will work together. Three out of four of us will be in Ann Arbor this summer. We have discussed how we will

get the appropriate work done through the summer. We will have conference calls every two weeks to give each other updates on progress. Next academic year we will meet weekly as a group and every other week with Professor Bob Grese.

What do we want to do?	When should it be done by?
Meeting with Food Summit Participants	Next Wednesday
Potluck and first planting at pilot garden	Next Thursday
Detroit Visit (2 farms)	Next Friday
Plan of attack for the summer	Next Thursday
Funding proposal development	June
Farm visits	Throughout summer and into fall
Advisory committee finalized	June
Present project at Board of Regents meeting	September
Pilot garden work	Throughout summer and into the fall
Research	Ongoing throughout summer and into the fall
Create a website for the program	Fall
Writing process	Starting in October
Harvest Dinner	October
Meetings	Every other week in the summer, every week in the fall and winter
Presentation	April
Paper due	April

Budget

Because a wealth of knowledge and resources exist at already established campus farms across the country, tapping into those networks will be crucial for both our initial research and for the long-term success of the farm. In order to form lasting relationships with other institutions and to gain first hand insights into the start up, daily operations, and long term planning of campus farms, we are proposing two site visits. The Yale Sustainable Food Program and Farm and has been operating since 2000 and rose from similar student and community effort as those that are driving this project at UM currently. With 12 years of experience, the students and staff at Yale can guide us through anticipating some of the challenges of maintaining a sustainable food program. In contrast to Yale, Duke University broke ground on their campus farm in 2010. Students and staff at Duke can provide valuable insights into getting a program up and running. While we have been researching and corresponding with these institutions already through email, in-person interviews will give us the flexibility to ask the tough questions and get candid answers. We will be able to engage in

real dialogue about the challenges and successes that each of these programs have seen, and we will cement relationships with these institutions that will be valuable moving forward. Since each member on the Masters Project Team is concentrating on particular aspects of the project, and has specific background knowledge, expertise, and interests in the progress of the Sustainable Food Program, we would all like to be present at these visits. One or two representatives could bring back information on educational programming, board development, fundraising, and food distribution; however, none of us have expertise in all of those areas so we would each benefit from being able to engage these issues personally while at the campus farms. We will also be visiting the Michigan State Student Organic Farm to see what structures MSU has in place for running a large scale farm in a northern climate. During these farm visits, we will not only be interviewing and observing, but lending a hand in whatever way we can to fully experience what it takes to run a farm from day to day and further support these crucial relationships that the UMSFP can draw on to be successful in the future.

We will visit additional local farms to get a sense for the vibrant local food culture in Michigan, and cultivate a network that will allow us to produce a more robust farm for the university and provide key links to the communities around it. These local farmers are invaluable resources, as many of them have struggled through starting and growing a business and will be able to share their strategies for funding, organizing, and navigating the local food networks.

We are also planning to attend the following conferences in the next year to further develop the network of contacts and resources we can draw on, and to gain first hand technical expertise to help us engage our community, grow using safe and sustainable farming practices, build a resilient community at UM that will be equipped to start solving some of the most salient environmental and social justice issues facing society today.

The Necessary Revolution for Sustainable Food Systems Conference, University of Vermont, Burlington, VT (June 28, 2012)

- The goal of this event is to bring together an interdisciplinary group of leaders to explore topics such as food safety, food security, and food in education. Leaders from around the nation and around the world will be collaborating to move sustainable food forward in practical ways. This conference represents a chance for UM to integrate itself amongst this group of people, establishing us as an institution that is committed to sustainable food, and an opportunity to learn from those at the forefront of their field.

Growing Power Farm Conference, Milwaukee, WI (September 7-9, 2012)

- This conference brings together some of the biggest names in sustainable food and offers practical workshops geared towards all sectors of the food movement. Specific tracks of interest include Education, Fundraising, Universities, Aquaculture/Aquaponics, and Nutrition. We are also proposing a workshop to lead as part of the Universities track, sharing our experiences about organizing students around a common goal, and specifically engaging them to contribute to not-for-credit academic projects.

Student Initiatives in Sustainable Agriculture, Lawrence University, Appleton, WI (March 30-31, 2013)

- Students and recent graduates from all over the nation attend this event. As this will be near the end of our work on this project, it will be a chance for us to present our progress and ideas for the future. Conference attendees are in all stages of developing their own campus food initiatives, so we can be a resource and can bring back advice and suggestions for continuing the momentum of the project after our project ends. Our presentation and presence here will help establish UM as one of the new leaders in the sustainable food movement.

BUDGET FOR: University of Michigan Sustainable Food Program		Advisor: Bob Grese
TYPE OF BUDGET: Project #239		
TIME PERIOD: May 2012- April 2013		
MEMBERS: Liz Dengate, Allyson Green, Lindsey MacDonald, Jerry Tyrrell		
TRAVEL	AMOUNT	SUB-TOTALS
<u>Peer Institution Visit - Earthworks Farm and D-Town Farms (April 20; Detroit, MI)</u>		
Personal Vehicle Mileage: 95 miles x \$0.55/mile	\$ 52.25	\$ 52.25
<u>Local Food to the Rescue, Seminar by Joel Salatin (April 24; Ann Arbor, MI)</u>		
Registration Fee: \$19.20/person x 4 people	\$ 76.80	\$ 76.80
<u>Peer Institution Visit - Duke University Farm (May 15-17; Durham, NC)</u>		
Lodging: 3 days @ \$91/day	\$ 273.00	\$ 925.50
Meals: 3 days @ \$25/day x 4 people	\$ 300.00	
Rental Car: 3 days @ \$36.50/day	\$ 109.50	
Rental Car Gas: \$4.50/gal, 25mpg, 1350mi	\$ 243.00	
<u>The Necessary Revolution for Sustainable Agriculture Conference (June 27-28; Burlington, VT)</u>		
Registration Fee: \$0/person x 4 people	\$ -	\$ 565.72
Lodging: 1 day (27th) @ \$112/day	\$ 112.00	
Meals: 2 days (27-28) @ \$25/day x 4 people	\$ 200.00	
Rental Car: 2 days (27-28) @ \$36.50/day	\$ 73.00	
Rental Car Gas (Ann Arbor, MI to Burlington, VT): \$4.50/gal, 25mpg, 731 miles	\$ 131.58	
Rental Car Gas (Burlington, VT to New Haven, CT): \$4.50/gal, 25mpg, 273 miles	\$ 49.14	
<u>Peer Institution Visit - Yale University Farm (June 29-30; New Haven, CT)</u>		
Lodging: 2 days (28-29) @ \$87/day	\$ 174.00	\$ 570.66
Meals: 2 days (29-30) @ \$25/day x 4 people	\$ 200.00	
Rental Car: 2 days (29-30) @ \$36.50/day	\$ 73.00	
Rental Car Gas (New Haven, CT to Ann Arbor, MI): \$4.50/gal, 25mpg, 687 miles	\$ 123.66	
<u>Peer Institution Visit - MSU Student Organic Farm (August 1; Lansing, MI)</u>		
Personal Vehicle Mileage: 130 miles x \$0.55/mile	\$ 71.50	\$ 71.50
<u>Washtenaw Community College Permaculture Course (August 18-19; Ann Arbor, MI)</u>		
Registration Fee: \$154/person x 4 people	\$ 616.00	\$ 616.00
Public Transportation: 2 days @ \$0/person x 4 people	\$ -	
<u>Growing Power Conference (Sept 7-9; Milwaukee, WI)</u>		
Registration Fee: \$275/person x 4 people	\$ 1,100.00	\$ 1,760.00
Lodging: 4 days @ \$97/day	\$ 388.00	
Meals: 4 days @ 0\$/day x 4 people	\$ -	
Rental Car: 4 days @ \$36.50/day	\$ 146.00	
Rental Car Gas: \$4.50/gal, 25mpg, 700 mi	\$ 126.00	

Fundraising Plans

Throughout this project, we will be looking for external foundation support and Alumni contributions, as well as internal department and unit support. We are in the process of developing proposals for requests for this kind of funding. We've met with Development staff from the Botanical Gardens and the University to initiate this process.

Resources Needed

Professor Bob Grese will provide us with resources at the Botanical Gardens. We should not need outside support beyond that and what SNRE provides.

Team Composition

See below for resumes of project team. We have backgrounds in education, conservation ecology, and systems thinking. This should suit the project quite well. We will consult others for help on the financial component, but this is the only noticeable gap at this point.

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Appendix

1. Letter of Support from Advisor

Appendix 2: Education

- 2.a. *Education and Community at the Campus Farm* (2013-14 Masters Project Prospectus) – Borgman et. al.
- 2.b. Faculty Letters of Support (2013)
- Andrew J. Horning
 - Lorelle Meadows
 - Margot Finn
 - Ray DeYoung
- 2.c. *Informal High School Education at a Small Farm Setting: A Curriculum for a Segmented Summer Program* (2013) – Dengate
- 2.d. *Sustainable Food System Design* Syllabus (2012) – Trumpey

Education and Community at the Campus Farm

Executive Summary

The University of Michigan (UM) Campus Farm is located at the Matthaei Botanical Gardens and is managed through the UM Sustainable Food Program (UMSFP). The farm began as a pilot program in May 2012, and it will move into a quarter acre of its 2 acre full production space in Spring 2013. The mission of the new campus farm is threefold: provide community enrichment, experiential education opportunities, and healthy produce. Our project is focused on the first two of those objectives. There is a need to develop educational plans to more deeply connect the farm with the UM community, faculty members' curriculum, and the greater Ann Arbor/Detroit community. Additionally, there is a great deal of student interest in sustainable food opportunities, which has led to a cluster hire around sustainable food. The campus farm has fantastic potential as a venue to leverage faculty expertise and serve this student need.

Education about sustainable agriculture and food preparation is necessary to empower the Ann Arbor community to grow, buy, and eat in environmentally responsible ways. Environmental threats such as climate change, topsoil erosion, and descent in available energy strengthen the need for sustainable agriculture in the University of Michigan community. These educational experiences will seek to engage students, faculty, and staff while fostering collaborative projects with community groups, other universities, and local schools. Further, they will unify the several satellite student groups of the University of Michigan Sustainable Food Program through events, curriculum programs, the proposal of a certificate program, and educational signage.

Client

The University of Michigan Sustainable Food Program
Bob Grese, Director, Matthaei Botanical Gardens

Team Members

Mariel Borgman
Dana Burnette
Sara Cole
Ryan Gourley
Meaghan Guckian
Meghan Jacokes
Stephanie Smith

Advisor

Ray De Young, Associate Professor of Environmental Psychology and Planning, School of Natural Resources and Environment

Secondary Advisor

Bob Grese, Professor Landscape Architecture
Director of Matthaei Botanical Gardens

A. Introduction and Background

In response to the recommendation from the Campus Sustainability Integrated Assessment of University of Michigan (CSIA, 2011), the School of Natural Resources and Environment's Sustainable Food Program Masters Project Team started the initiative to establish a campus farm and the University of Michigan Sustainable Food Program (UMSFP). The farm would meet students' desire to learn about sustainable agriculture, provide an exploratory and experimental space for UM classes, further the role of UM as a leading university committed to sustainability, and provide physical and mental well-being benefits to students and community users. Since the planting of the pilot plot in May 2012, the team has scheduled regular work days and volunteer opportunities, sold produce at a fruit and vegetable stand on N. University, organized a Fall Harvest Festival, and held a symposium for sustainable food careers through member group CAFE, among many other activities.

Current global agricultural practices as well as other environmental stressors have made Americans consider more mindfully the food we eat and the way we produce it. The production of food is intrinsically tied to human health, culture, the environment, education, and the global economy. There is a current need for educational programming at the campus farm to promote sustainable growing, food security, and better environmental stewardship practices when it comes to the buying and eating of food. Molly Anderson, a leader in sustainable agriculture research, argues that, "cracks in the industrial food system are wider and more visible now, with health threats in produce, meat, and processed products. Concerns about global climate change are linked to desires to reduce greenhouse gas emissions. Growing awareness that conventional food does not taste as good as fresh, local food joins aesthetic celebration of local foodways to create shifts in consumer demand" (Anderson, 2008). The educational curricula will convey the larger social context of creating long term change in consumption practices to maintain a healthy and vibrant quality of life. In addition, a functional farm in a campus setting conveys to students the importance of being engaged in the local food system.

The implementation of the campus farm and successful educational programs will visibly contribute to the university's commitment to sustainability. The mission statement of the University of Michigan is to "serve the people of Michigan and the world through preeminence in creating, communicating, preserving and applying knowledge, art, and academic values, and in developing leaders and citizens who will challenge the present and enrich the future" (Mission Statement, 2013). A campus farm is consistent with the university's goals to serve the people of Michigan and to challenge

the present. A campus farm has paramount importance in providing for the local need of sustainable agriculture education and will allow UM to join other outstanding leading universities in meeting this need. Local and sustainable food purchasing is becoming more and more popular in media and in the local community (CSIA, 20110). The capacity of higher education to pioneer alternative sustainable food chains that embody ethical principles has moved beyond the stage of a few pilot projects to a wide range of schools across the country (Barlett, 2011). Many other college campuses support farm operations such as Oberlin College, Yale University, the University of Wisconsin in Madison, Michigan State University, and Dickinson College. As a leading university in sustainability research and academic program in the School of Natural Resources and Environment, educational programming that utilizes student interest and connects community organizations would not only benefit the university in terms of reputation, but would be supporting this important grassroots movement.

The University of Michigan currently has 11 members groups within the Sustainable Food Program as well a a number of other food-related student groups, sustainable food-related events and activities, and semester courses focused on food and sustainability. The momentum of interest in this topic has led to a cluster-hire of faculty members in sustainable food topics. There is significant interest and support for sustainable food topics that can be enhanced by educational experiences at the campus farm.

Educational programming at the farm will meet students' need to spend time outdoors, to engage in meaningful action, and to explore and expand existing knowledge. The Reasonable Person Model, developed by Steven and Rachel Kaplan, will guide our framework and be used on a range issues, including helping campus farm users explore new environments, feel enhanced competence, and participate with others toward meaningful goals, along with helping students feel part of a solution (Kaplan, S. & Kaplan, R. , 2009). Successful programs would release the synergistic benefits of participating in physical activities whilst being directly exposed to nature. Being in school, students are required to spend a majority of their time indoors and therefore experience the consequences of little physical contact with the natural environment. Studies have been done on the use of nature as a health promotion intervention as have found that “nature plays a vital role in human health and well-being, and parks and nature reserves play a significant role by providing access to nature for individuals. ... Implications suggest contact with nature may provide an effective population-wide strategy in prevention of mental ill health, with potential application for sub-populations, communities and individuals at higher risk of ill health” (Maller et al, 2005). Linking the campus farm and the Ann Arbor community through educational programming can help restore the independent judgement and value of one's ability to feel awe and wonder, and their sense of stewardship for the earth, as well as cognitive functioning (Louv, 2007).

Education curricula could serve as a bridge between diverse campus constituencies that would normally not intersect across campus and cover topics from how food is grown to land use impacts to urban food issues. There are many courses across campus at UM that study sustainability which could

be connected to food. The creation of programs that allow students to, literally, be “hands-on” would enhance courses with projects that emphasize real world experience that could help students develop skills that would be beneficial after graduation. This could include courses about public health, natural resources, business, ecology, landscape architecture, biology, or urban planning. For this reason, our target audience will mainly be students, faculty, staff, and affiliates of the University of Michigan. However, we foresee other community outreach that involves learning from and collaborating with other community groups that have similar goals to sustainable food and food access. For example, some organizations in the area include the Fair Food Network, Local Food Summit, Homegrown Festival organizers and participants, Growing Hope, Greenthings Farm, the local farmers’ market, Detroit Black Food Security Network, the Ecology Center, and other University of Michigan Sustainable Food program groups. Programs and events could potentially target different groups of the community such as grade school children, mothers and families, or seniors.

Deliverables of the project will take many forms. We will approach this project in terms of turning the campus farm into a community information resource that provides goods and services. All deliverables will be consistent with the UMSFP goals, which are to develop responsible citizens and leaders by facilitating formal and informal education on sustainable food topics, to strengthen communities through collaborative programming and outreach, and to grow sustainable food that support the well-being of people and the environment of the University of Michigan (UMSFP.com). Deliverables could take the form of formal and informal educational experiences, a set of educational curricula that targets different audiences, research reports that guide educational program development, briefings or presentation of programs to stakeholders, websites or articles that serve to advertise the campus farm mission, physical program materials, events and planning materials, a proposed sustainable food certificate program, educational signage and pamphlets, a compilation of community and university contacts for future collaboration, and a written 1-year and 5-year plan for near-term and long-term objectives for community and university collaboration.

The previous Sustainable Food Program Masters Project team has been tremendously successful in establishing the framework and resources necessary to for the implementation of the campus farm. The 2013-2014 Education and Community Masters Project team hopes to further this initiative to serve the students of University of Michigan, the staff, and faculty by creating educational experiences that work toward accomplishing the sustainability goals of the University of Michigan Sustainable Food Program.

B. Project Objectives and Scope

This project focuses on the community and education aspects of the farm’s mission. Through this project we intend to solidify the campus farm as an integral part of the UM community. Our team will also identify opportunities for outreach and connectivity within the greater communities of Ann Arbor,

Ypsilanti, and Detroit. We will create educational materials and curricula for use by both university student/staff visitors, and community members.

Our objectives are as follows:

- To develop educational materials for the UM campus farm, including but not limited to, signage, pamphlets, and curriculum for identified audiences
- To develop a 5 year plan detailing the educational and community outreach goals
- To be a resource and facilitator to other programs within the University such as the Graham Sustainability Institute and Center for Sustainable Systems, and non-UM sustainable agriculture programs, community organizations, and schools
- To identify the farm’s place within in the University, community, and region
- To be an avenue for relationship and network building within the UMSFP, the University, and the local community
- To establish the farm as a campus institution to foster and sustain a tight-knit relationship between faculty members of the sustainable food cluster-hire and to provide a “test kitchen” / outdoor classroom to enhance their courses
- To extend and increase the outreach impact of previous UMSFP/campus farm events, reaching more people and incorporated more structured educational material

C. Conceptual Model, Evaluation Framework or Hypotheses

The conceptual model of this project is focused around the formation and strengthening of relationships between the existing campus farm and community stakeholders. Students, faculty members, university administration, and members of the broader community will each connect with and use the campus farm with differing goals and purposes. While previous work of the campus farm team has helped establish these connections, this project will solidify how the farm, as an entity, interacts with and benefits each outside group. In order to be an integral part of the sustainability community within the university and beyond, the project team will distinguish the values of each group of actors in the system, understand and synthesize their differing goals concerning the campus farm, and tailor our educational and community-based materials to the needs of the actors involved. The materials ultimately created to foster community interest in sustainable agriculture will be informed by academic research in behavior change models, as well as observations from other successful university farms.

The original organization and conception of the campus farm addressed the hypothesis that a

campus farm could be successfully implemented at the University of Michigan. Moving forward, the dominant hypothesis is that the campus farm can be established as an integral part of the curriculum and community of the University. The group's ability to understand and address the needs of interested parties will ultimately influence the establishment of this network.

The group anticipates gathering feedback from invested actors at multiple points throughout the project, in order to facilitate our understanding of the stakeholders' needs and tailor our educational materials to meet the interests of the community. These evaluation metrics may range from casual discussions of group opinions to more systematic survey data collection and follow-up interviews. The results of these information-gathering efforts will help the project team to understand if our work is having an effect, how those effects match up with our goals, and what changes might need to be made to better reach those goals.

D. **Research Questions**

Community Outreach and Engagement

1. UM Community
 - a. Students
 - i. How can the campus farm act as a resource for the student community, for example: student groups, volunteer opportunities, and sustainable food career resources?
 - b. Classroom Extension
 - i. In what ways can the campus farm be used as an extension of the classroom for UM classes? In what capacities can UM Professors and Student Instructors use the campus farm in their curriculum? Is it feasible to develop classes focusing on the campus farm with the potential to extend into a certification program?
 - c. Faculty/Research
 - i. What function can the campus farm serve for UM Faculty and Researchers? What is UM staff's awareness of the farm and its' associated activities?
 - d. Partnerships
 - i. How can the UM campus farm serve as an informational hub and grounded resource for other UM departments/centers such as the Center for Sustainable Systems and the Graham Sustainability Institute?
2. Ann Arbor
 - a. In what ways can the campus farm act as an informational resource and facilitator for the greater Ann Arbor's sustainable food projects and programs?
3. Collaborative Inter-University Partnerships
 - a. How can the UM campus farm connect and maintain networks with other university farm programs? How can we support the UM campus farm being unique amongst other

sustainable food farms from other universities and within the Ann Arbor area? What effective aspects of other university campus farms should the UM campus farm model and employ locally?

Farm-based Education

1. What types of educational programs and curricula are other universities with sustainable food farms implementing? What audiences have these farms targeted? What evaluative tools have been used to measure the effectiveness of these programs?
2. How can the farm act as both an educational tool and resource for the UM and local community? In what ways can the campus farm be a vehicle for current UMSFP club's educational programs, such as UM Bees and Permaculture design?
3. How can the farm design be improved or developed to facilitate a supportive learning environment for the UM and Ann Arbor community? What informative educational signage be implemented to aid UM and Ann Arbor community members' experience at the campus farm?

Building on the Campus Farm Implementation 2012-2013

1. Communication
 - a. How effectively is the campus farm communicating with the UM and Ann Arbor Community? Currently, the Sustainable Food Program and campus farm are using multimedia and social networks (website, facebook, blog), what other communication strategies can we employ?
 - b. Community Support
 - i. In what ways can we expand and improve the campus farm's support of the sustainable food community (Student groups, Symposiums, Conferences, Festivals)?
2. Networks
 - a. With the implementation of the campus farm networks with other university campus farms, UM community, Sustainable Food groups, and Ann Arbor area were established? How can these relationships and partnerships be maintained, built upon, and expanded for long term connections?
3. Sustainable Vision
 - a. Evaluating the campus farm's mission's alignment with UM sustainability vision. Are we currently meeting our own mission statement?
 - b. What portions of the prior master's project design were not implemented, but still deemed relevant, that this project team can implement?
 - c. Continuation of farm activities, networks, community engagement, and educational tools

E. Evaluation Metrics

Our evaluation metrics include quantitative measures of our success as well as self assessment of the

quality and quantity of work performed by each member of the team, individual strength, and areas for improvement. We will also assess the project as a whole, by making sure our progress is consistent with goals laid out in our timeline, summarizing what we've accomplished, and identifying what work still needs to be completed. We will also provide avenues for our advisor to periodically evaluate our work and the progress of the project as a whole.

List of Evaluation Metrics:

- Initial needs assessment in the Fall 2013 and a follow-up needs assessment in February 2014, distributed to faculty, staff, and students. This assessment will also evaluate awareness of the farm and volunteer opportunities.
- Head counts of volunteers, event attendees, students in food-related courses, interns, partnerships/relationships (UM, community, peer institutions)
- Number of impressions/views of campus farm video
- Number of downloads/views of eBook
- Number of visitors to UMSFP website
- Number of UMSFP Facebook friends
- Number of education and community projects at the farm
- Feedback from pilot testing of curricula
- Conferences attended and presentations made
- Number of grants applied to and awarded

F. **Deliverables/Impact**

The UM Campus Farm will first serve as a community information resource that provides goods, services, and information to the campus, local, and regional communities; its service as an education & outreach site will grow as the physical farm becomes more established. As such, the first order of deliverables produced by our team will be related to project logistics, organization and management. The second order of deliverables will be related to university and community partnerships and relevant organizations. The third order will be original UMSFP farm-related education & outreach content.

- **Mission Statement (Report).** The group will agree upon a mission statement as well as a set of goals and objectives. The mission statement will describe the “overarching goals” of the campus farm. Every action we take should serve to advance the mission of the UMSFP and campus farm and is to be referred to before moving ahead with anything or making any decisions (“Does this action or decision advance the mission?” or “How can we design this so that it is more effective at advancing the mission?”).

See “How to Write a Mission Statement”:

<http://www.tgci.com/magazine/How%20to%20Write%20a%20Mission%20Statement.pdf>

Or:

http://www.lmb.org/index.php?option=com_content&view=article&id=173&Itemid=372

- **Goals & Objectives (Report).** Meanwhile, the goals and objectives will describe specific, measurable, attainable, relevant and timely goals (SMART). These will be agreed upon after a meeting with our advisor and the current UMSFP team.
- **Strategic Illustration/Concept Map.** This illustration will be our “project blueprints” visualized as a picture. It will be useful for us to see how we (and our roles) are situated in relation to the project, but also as a tool to communicate to others what our project is about and where they could fit in, too. “Visualize and you will realize.” Just like a written proposal, start the image simple and strong, and then build up and out.
- **One-year plan and five-year plan.** To be discussed after meeting with current master’s team and project advisors.
- **Funding/Fundraising Plan.** This document will describe our plans and strategies for funding the educational and community activities of the campus farm. It will list potential funding sources (e.g., grants) and should include any documents about the farm that could be quickly modified to apply for different grants (e.g., a generic grant application that includes a description of the campus farm, purpose, data, etc.).
- **Monthly progress reports.** Each month, we will hold a campus farm meeting with all group members and advisors. Each meeting will culminate in a monthly progress report that includes (1) meeting notes, (2) a list of group and individual goals that were accomplished in the preceding month, and (3) a list of group and individual goals for the following month. There will be monthly progress reports which will be comprised of individual sub-reports (one is to be expected from each member). A standardized progress report form may be used.
- **Partnership Framework (Report).** Because not much of the farm is in the ground yet, this generation of team members will focus on creating and maintaining partnerships with university, community, regional, and other partners. We will develop a framework that identifies (1) conceptual areas of interest, (2) partners of interest, (3) a set of “rules” for reaching out to potential partners and the act of officiating and maintaining partnerships. How is reaching out done? What is involved in officiating a partnership? What is done one time, and what is

ongoing? What are the expectations of the UMSFP and the partner? How do you assess or evaluate the quality of partnership (e.g., to know how you can improve it, or know whether it's worth maintaining)?

Potential Partnership framework subcategories:

- UofM administration
 - UofM professors and/or courses (e.g., those related to sustainability, agriculture, ecology, environment, etc.)
 - UofM institutions & non-degree granting departments (e.g., Graham Sustainability Institute, Matthaei Botanical Gardens & Nichols Arboretum, etc.)
 - UofM student organizations (e.g., UMBees)
 - Farms - local, regional, state, other campus farms, etc.
 - Farm organizations
 - Urban agriculture organizations
 - Food justice organizations
 - Health organizations
 - Food preparation organizations
- **Education & Outreach Framework.** After the meeting with our advisor and UMSFP team, we will create a framework for education and outreach to be done (1) by the farm and (2) at the farm. Since the campus farm is still fairly young, this generation of team members will likely focus primarily on building a strong, long-term framework and focus secondarily on creating content to fill in that framework. If the educational content is the meat and potatoes, the framework will be the table, tablecloth, plate, cup, and silverware. We have to make sure the table is set before any food is served.
- **Education & Outreach Content (pamphlets, signs, booklets, website, social media, lesson plans, activities, curricula).** As stated, this will be the meat and potatoes, and most will likely come after the groundwork has been laid. These deliverables will meet needs as they emerge, and be custom-tailored for different purposes and audiences.
 - **Literature review.** Before designing any content, we will conduct a review of literature related to approaches to education, outreach, and engagement. These could include

studies related to teaching, learning, engagement, and behavior change (such as those covered in NRE 560/561). We can compile these approaches into a single document and refer to them whenever concocting new educational content and programming.

- **A farm-based curriculum and set of lesson plans.** Eventually, we hope that the campus farm will be used as an “outdoor classroom” for the campus community and beyond - as a place where many different types of experiential learning can be done on site. We will make an effort to involve potential users (e.g., professors, students, community members) before developing any content so that we best design content with their needs, wants, values, and so on in mind (“diagnostic assessment”). Some of the activities will be formal, meaning that they will have a structure, are highly organized, and are designed to meet certain objectives that may line up with state, national, or university education standards; these are the activities that take the form of traditional classroom lesson plans. Some activities will be informal/non-formal, meaning that they are less structured but are still organized around a general theme or concept (e.g., themed farm work days). Whenever possible and appropriate, we will make a point to evaluate and assess the programming to determine (1) whether it is meeting stated objectives, and (2) the impact that it is having on the users (e.g., pre-/post- testing). The results will be used to identify areas of improvement and inform action that can achieve those improvements.
- **Educational video(s) about the campus farm.** These are envisioned as short (~5 minute) documentary style videos that introduce the farm and its activities to visitors. Both informational and entertaining, they will be featured on the website, our social media sites, and posted to youtube for a wider audience.
- **Two eBooks detailing “a year in the life of the farm”.** These eBooks will be accessible to public from the UMSFP website. One eBook will detail through photos and anecdotes the year’s (Summer 2013-Spring 2014) activities. This will be a creative twist on the traditional annual report. The second eBook will detail more generally “a year in the life of the farm,” and will serve as an educational tool to describe the seasonality of the farm.

G. **Research Methods**

As our project is an extension of the current UMSFP Master’s Project, our immediate methodology will be to foster a strong working relationship with the current team members: Allyson Greene, Jerry Tyrrell, Liz Dengate and Lindsey MacDonald. Moving forward will largely be dependent on our ability to maintain and build upon pre-existing relationships and partnerships that the current UMSFP team has created both within and outside of the UM community. In order to achieve a

smooth and fast transition, we will be working with the current team to identify key UM administrators, faculty liaisons and local organizations. In the next two months, we plan to regularly attend UMSFP advisory board meetings, sit in on administrative meetings, meet with faculty, etc. in order to introduce both ourselves and our outlook to the pre-existing UMSFP food network.

Discovering ways to leverage the farm space as a classroom extension will require reaching out to peer institutions, literature review, and engaging with the UM faculty. Engaging the greater UM community and making the UMSFP more visible on campus remains a strong goal for the program. Furthermore, we intend to assess interest from more diverse demographic and disciplinary groups on campus. The majority of our research will rely on interviews.

- Faculty / Research Engagement
 - Identify/ interview faculty interested in food-related issues
 - food justice, economics, environment, social work, public health, etc.
 - Contact food related cluster hire faculty cohort
 - Interview faculty (vision for farm space, vision for interdisciplinary engagement, vision for UMSFP, vision for research)
- Student Engagement
 - Social survey of undergraduate students
 - Increasing awareness / visibility
 - Identify key moments/activities integral to student experience
 - Work with Loren Rullman to incorporate UMSFP into first year student “Welcome Week”; potential for work-day, visit, lunch
 - Harvest Festival, 2013
 - Festi-Fall
 - Establish a Twitter Feed (Potentially with the FOCF, or another member organization)
 - Increase access to farm space
 - Speak with AATA / UM Bus lines regarding route development
 - weekend line
 - Continue volunteer work-days
 - Assess interest of students from diverse demographic and disciplinary (particularly internationals)
 - Comb through list of student groups on campus
 - Conduct interviews / assess interest
 - Form food-culture alliance
 - Invite different groups for a particular work-day
- Ann Arbor
 - Identify/interview local organizations

- Growing Hope, Washtenaw Food Hub, Washtenaw Food Policy,
 - Local Farmers
 - identify/assess potential for volunteer harvest days, cooperative internships, tutorials
 - Contact local elementary schools
- Collaborative Inter-University Partnerships
 - Make site visits to peer institutions
- Farm-Based Education
 - Literature review
 - existing curricula
 - international programs
 - Attend conferences by The Association for the Advancement of Sustainability in Higher Education
 - Resiliency and Adaptation; Nashville, TN, Oct. 7-9
 - Developing a Campus Sustainability Living Lab; Portland, OR, June 6-9
 - Peer Institution review
 - Engage with landscape architecture students to form fitting/educational design
 - permaculture
 - apiary
 - inclusive design

H. Research Issues

There could be several limitations to the development of curricula and educational programming for the UM campus farm. The project currently has a very large scope that involves many different parties and a range of deliverables. This limitation can be managed through prioritizing the goals within the project as well as utilizing the 6 team members by dividing the tasks and roles between the team members. Another concern is the sustainability of these deliverables as well as the maintenance of community and university networks. Since this project requires a high level of communication and relationship development with stakeholders, once team members are no longer in the area or actively maintaining these networks, the program could cease to progress. This limitation could be mitigated through a 5-year plan that creates leadership roles within UMSFP groups or through a salaried position through the University of Michigan or Botanical Gardens. Similar to this issue is the challenge of connecting with the network established by the previous master's project team, building on that network, learning the current farm practices, and building on those activities. With a large team, it will be difficult to maintain these relationships as well as communicate effectively. This limitation can be managed through regular team meetings, regular feedback from our advisor, as well as honest team communication. It will also require the new team to spend time at the farm and to participate at the

previous team during team meetings, events, and stakeholder meetings. Another limitation could be the 18 month time frame to accomplish the campus farm goals. Once again prioritizing goals and the distribution of responsibilities can help manage this constraint. The team may also face difficulties with budgetary constraints and limited motivational interest from stakeholders. This can be managed through persuasive engagement with stakeholders, persistence, help from our advisor and fundraising using team strengths. Along these same challenges is working within university processes, applicability of the programs to current courses, working with the future farm operations manager, identifying a single point person within the university, and the feasibility of working with many UMSFP groups.

Researching bias in literature review may lead to bias in our creation of educational programs as well as the team may value information from different organizations biasedly. If we use social surveys of UM students we will have to ensure that we sample randomly and that we obtain a representative sample. Statistically significant results do not necessarily prove causality, but may provide evidence to suggest what student attitude is or how they currently engage with their food practices. This project is unique in that the University of Michigan is the client, so the team's action and involvement with the community represents the university, meaning the team must be honest and professional. We will be receiving advice from many constituents, but since the campus farm is new to UM and has its own needs, resources, and challenges, there is no guarantee that other processes will work for our site and result in successful engagement with the UM community.

We recognize the role of the IRB to protect the welfare and rights of human subjects. The project will potentially involve interviewing and the survey students, staff, administration, faculty, community members, children, and peer institution affiliates. The team foresees the use of this information to be used to inform educational curricula rather than contribute to a published research paper so therefore may be exempt from IRB approval, but we will follow the standard protocol for getting approval and check with the IRB staff to ensure proper procedure is followed when dealing with human subjects. The information we collect will be on minimal-risk level topics and the team will obtain consent before information is shared that can be linked back to an individual subject. Only team members will have access to raw data.

I. Project Timeline and Work Plan

UMSFP Advisory Board Meeting	March 1st, 2013
Advisor Meeting	March 13th, 2013
Building relationships with contacts from 2012/2013 Masters Project connections, attending meeting, research existing connections	March/April 2013

Develop work plan with Ray De Young	March/April 2013
Become familiar with accomplishments with farm so far and board of advisors, define clear mission, visioning with current project	March/April 2013
Literature review of campus farm curricula and successful educational programming	March/April 2013
Outline External Grant/Funding Opportunities	March/April 2013
GSI Update: Allyson Green	April 1st, 2013
SNRE Funding Application Deadline	April 15, 2013
Final Proposal Due	April 26, 2013
Summer Outline Plan	May 1, 2013
Sustainable Campus Farm Site Visits	May 2013
Partnership and Community Network Building	May-August 2013
Education/Curriculum Research Focus	May-August 2013
Organize summer harvest activities, deal with the produce	May-August 2013
Develop measurement of success for education programs	May-August 2013
Research/Development of Educational Signage	May-July 2013
Install Educational Signage	August 2013
Plan harvest festival and welcome week activities	August/September 2013
Evaluate Fall Project Scheduling	August 2013
Progress Evaluation	September 2013
Harvest Festival 2013	October 2013
Prepping farm for Winter/Spring	October 2013
Implement and Pilot test Education/Curricula	November 2013

Review Evaluation and Revise Education/Curricula	December/January
Implement revised Educational information and curricula/Outline sustainability aspect of educational design	February/March 2014
Washetnaw Community College- Local Food Summit	February 2014
Evaluate future needs of UMSFP and Campus Farm	February 2014
Organize new leadership at the campus farm and UMSFP	February/March 2014
Final presentation and report	April 2014

J. **Budget and Fundraising-Group**

The campus farm has potential funding of over \$12,000, possibly over \$50,000, some of which could be used for educational materials and signage. The previous masters project team and the 2013/2014 team will research further grant opportunities. In addition \$42,000 of the available \$50,000 is committed to a farm director. The following is a template of a budget framework that we will more fully develop when further information is available.. This money falls under the jurisdiction of UMSFP, but if this person were to be hired, a portion of their time would be allocated to education and community activities. The team has applied for SNRE masters project funding of \$1,500 per person on April 15th, 2013. Additionally, the team is applying to two large grants: Ford College Community Challenge (\$25,000) and Dow Distinguished Awards for Interdisciplinary Sustainability (up to \$100,000).

BUDGET FOR: Education and Community at UM Campus Farm #244

TYPE OF BUDGET [Project #244]

TIME PERIOD: [April 2013-April 2014]

		AMOUNT	SUB-TOTALS
TRAVEL			
AASHE Nashville 2013			
October 5-9th, 2013	Rental Car (5 days @\$ 41.70 /day)	\$208.50	\$208.50
	Rental car insurance (N/A)	\$0.00	\$208.50
	Rental car gas (.565/mile*1040 miles)	\$587.60	\$796.10
	Public transportation/ Parking Fees [5 days @\$ 20 /day]	\$100.00	\$896.10
	Lodging [4 days @\$120/room*2 room=\$240/day]	\$960.00	\$1,856.10
	Conference Fees \$250/person*7 person	\$1,750.00	\$3,606.10
	Meals: [5 days @\$ 25*7 persons/day]	\$875.00	\$4,481.10
	Sub-Total		\$4,481.10
Portland Sustainability Lab			
June 6 - June 9	Rental car insurance (N/A)		
	Airfare	\$3,150.00	\$3,150.00
	Public transportation/ Parking Fees [4 days @\$ 40 /day]	\$160.00	\$3,310.00
	Lodging [3 days @\$109/day*2 rooms]	\$654.00	\$3,964.00
	Conference Fees	\$2,677.50	\$6,641.50
	Meals: [4 days @\$ 25 /day/person]	\$700.00	\$7,341.50
	Sub-Total		\$7,341.50
Peer Trip - MSU			
Date TBD	Rental Car (1 days @\$ 41.70 /day)	\$41.70	\$41.70
	Rental car gas (129 miles*.565/mile)	\$72.89	\$114.59
Peer Trip - Asheville			
Date TBD	Rental Car (3 days @\$ 41.70 /day)	\$125.10	\$125.10
	Rental car gas (1224 miles*.565/mile)	\$691.56	\$816.66
	Hostel (2 nights*\$60/night*2 rooms)	\$240.00	\$1,056.66
	Meals: [3 days @\$ 25 /day/person]	\$525.00	\$1,581.66
Peer Trip - Yale			
	Rental Car (3 days @\$ 41.70 /day)	\$125.10	\$125.10

Date TBD	Rental car gas (1380 miles*.565/mile)	\$779.70	\$904.80	
	Hostel (2 nights*\$80/night*2 rooms)	\$320.00	\$1,224.80	
	Meals: [3 days @\$ 25 /day/person]	\$525.00	\$1,749.80	
	Sub-Total		\$3,446.05	
GRAND TOTAL			\$15,268.65	
	Communications & Educational Materials			
	Website (\$5/month*12 months)	\$60.00	\$60.00	
	Printed Materials (Postcards, handouts, bulletin materials)	\$500.00	\$560.00	
	Signage	\$1,000.00	\$1,560.00	
	Sub-Total		\$1,560.00	
	Additional Research			
	Audio/Video interviews			
	Rental equipment	\$0.00	\$0.00	(Will use UM-LSA equipment free of charge)
	Transcription Services	\$150.00	\$150.00	
	Honorarium for videographer/editor	\$200.00	\$350.00	
	Sub-Total		\$350.00	
	Total		\$1,910.00	
	Grand Total		\$17178.65	
POTENTIAL FUNDING SOURCES				
	SNRE Funding		\$10,500.00	
	Rackham travel		\$4,900.00	
	SNRE travel		\$300.00	
	Ford C3		\$25,000.00	
	Dow		\$100,000	

K. Team Composition

Our team members come from diverse backgrounds and represent a wide range of skills that will contribute to the success of this project and convince a reviewer of our team's ability to tackle all of the unique challenges this work will present.

Several members of our team have experience in curriculum development and lesson planning for academic and non-academic learning experiences. At Arches National Park, Meghan Jacokes prepared and presented over 90 curriculum based in-class and field activities for 800 Grand County students and while serving in the U.S. Peace Corps in Thailand collaborated with two primary English teachers in the classroom to develop lesson plans and encourage usage of the participatory learning method. In her role as Program Coordinator for the Leslie Science and Nature Center, Dana Burnette designed and taught education programs to foster an understanding, appreciation, and respect for the natural world for children, families, and other individuals. Sara Cole planned, developed, and piloted a complete citizen science-based educational program for the Smithsonian Migratory Bird Center and has assisted curriculum development for UM Dearborn and Kellogg Biological Station. As Safety, Health, & Environmental Assistant at Louis Dreyfus Agricultural Industries, Stephanie Smith created 3 online safety training programs used in monthly meetings and new employee orientation. As Lead Trainer for the University of Iowa College of Medicine Performance-Based Assessment program, Ryan Gourley designed and delivered training and educational programs for employees and learners. As Graduate Student Instructor and Planet Blue Ambassador Program Assistant at the University of Michigan, Ryan also developed and delivered lesson plans for undergraduate students.

We also have demonstrated skills in preparing educational signage. As Student Liaison for St. Lawrence University Facility and Grounds, Meaghan Guckian designed an integrative sign system for the opening of a LEED gold certified science building. Sara Cole has designed interpretive signs for UM Dearborn Environmental Interpretive Center and Kellogg Biological Station. Many members of the team have strong writing skills, and Stephanie holds a Bachelor of Arts degree in Professional Writing.

Several group members have significant project design and management experience. As Student Liaison for St. Lawrence University Facility and Grounds, Meaghan Guckian established program design for implementation of green construction projects. As an intern for HELP International, Dana developed a design and budget to implement square foot gardens in Fijian homes, schools, and health care facilities and led a group of volunteers to carry out the program. In her role as Product Innovation Manager at Arden Companies, Mariel Borgman managed complex projects to develop, test, and launch new consumer products, oversaw task accountability of individuals from multiple departments and regularly presented project updates to the executive team. As Quality Assurance Manager for the University of Iowa College of Medicine Performance-Based Assessment program, Ryan oversaw a team of 10 staff members, developed goals for the QA program and maintained accountability with senior-level staff.

Strength in creating and managing partnerships has been exhibited in an academic setting by

Meghan, who created new connections and strengthened the partnership between MSU Outreach and Engagement program, Michigan American Indian communities, American Indian Institute of MSU, Inter-tribal council of Michigan, and local Michigan colleges during her internship at Michigan State University. Mariel created and successfully launched unique corporate charitable partnership with Habitat for Humanity of Oakland County and Arden Companies in her role as Marketing Coordinator.

Resumes of all team members are included as an appendix to this document.

L. References

Anderson, Molly 2008 State of the Art Food System Sustainability Metrics. Paper presented at the annual meeting of the Agriculture, Food, and Human Values Society, New Orleans, June 5.

Barlett, P. (2011) Campus Sustainable Food Projects: Critique and Engagement. *American Anthropologist*.

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Kaplan, S. & Kaplan, R. (2009). Creating a larger role for environmental psychology: The Reasonable Person Model as an Integrative Framework: *Journal of Environmental Psychology*, 29(3): 329-339.

Rojas, A. University of British Columbia Food System Project: Towards Sustainable and Secure Campus Food Systems

Scavia, Donald, and Terrance Alexander, comps. *Campus Sustainability Integrated Assessment*. Rep. Ann Arbor: University of Michigan, Graham Institute, and the Office of Campus Sustainability, 2011. <http://www.graham.umich.edu/pdf/phase2-food.pdf>

Maller, C., Townsend, M., Pryor, A., Brown, P., & St Leger, L. (2005). Healthy nature healthy people: 'Contact with nature' as an upstream health promotion intervention for populations. *Health Promotion International*, 21(1), 45-54

"Mission Statement." *University of Michigan Office of the President*. Michigan Marketing & Design. Web. 19 Apr. 2013 <<http://president.umich.edu/mission.php>>

Yale Sustainable Food Project

http://www.yale.edu/sustainablefood/about_board.html



February 26, 2013

To whom it may concern:

This letter is to support the proposal being advanced by the student-led University of Michigan Sustainable Food Program (UMSFP) to secure long-term funding to support their work. I first became aware of the UMSFP's effort in 2011, when the team applied for a grant through the University of Michigan's Planet Blue Student Innovation Fund. As an advisor to that fund, I reviewed the full range of proposals submitted and the proposal to create a campus farm was among the strongest. Based on the strength of the proposal, the team was awarded \$42,000 to jumpstart the farm.

Since receiving initial seed funding for the campus farm, the UMSFP has exceeded all my expectations. The team recruited dozens of volunteers to get the farm off the ground in the first year and produce 700 pounds of food on a modest 20x30 test plot. They have also created a powerful coalition involving nearly a dozen food-oriented student groups to advance sustainable food efforts on campus, ranging from beekeeping, to permaculture, to food donation programs. In addition, they have assembled an advisory board (of which I am a member) that involves senior staff and faculty across the university who possess critical expertise to help the team advance their efforts.

Given the tremendous energy and effort the team has already invested, and their solid planning to sustain efforts over the long run, I am highly confident the UMSFP can become the exemplar for how students can band together to effect positive change on campus. Given permanent support for their efforts, the UMSFP will create a powerful living-learning laboratory at the University of Michigan that will allow students to engage in action-based learning for sustainability while making a positive contribution throughout the campus community and beyond.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andrew J. Horning'.

Andrew J. Horning
Acting Director, Graham Sustainability Institute



LORELLE A. MEADOWS, Ph.D.
ASSISTANT DEAN OF ACADEMIC PROGRAMS
UNDERGRADUATE EDUCATION

1261 LURIE ENGINEERING CENTER
1221 BEAL AVENUE
ANN ARBOR, MICHIGAN 48109-2102
734 764-2244 FAX: 734 647-7126
lmeadows@umich.edu <http://www.engin.umich.edu/>

March 10, 2013

To Whom It May Concern:

I am very pleased to write this letter of support for the UM Sustainable Food Program and Campus Farm. Through my commitment to service-learning in the College of Engineering, I teach two courses each year (one at the introductory level and one in the higher division) addressing community development of sustainable food sources in the urban setting. Through the common commitment to food security and sustainability, I have had several opportunities to engage with the students in this program and am very impressed with their work. Although my students have not yet engaged directly with the Campus Farm, it is my intention to continue to develop this connection and to provide my students the opportunity to learn from fellow students in this powerful educational setting.

Specific opportunities of interest that could result from further funding are workshops for students around best practices in a small-scale and intensive agricultural setting, hands-on projects to improve student learning in this setting through in-class site visits or field trips, and the potential for collaboration with parallel courses in Art & Design, Sociology or Biology.

In my experience, undergraduate students lack a solid understanding of the food systems which we make use of, and a very limited appreciation of what it truly takes to offer healthy, affordable and culturally appropriate food sources. Very often, their understanding of hunger is based solely on visions of poverty in the developing world, and they lack an appreciation for the magnitude of this problem in the US and other developed countries. The development of a resource like the Sustainable Food Program and Campus Farm is invaluable in teaching students these lessons in a local setting that has the potential for significant impact.

I therefore give my full support to this program and the future opportunities that it brings to UM, our faculty, staff, students and the communities that can benefit from this work in the future.

Sincerely,

Lorelle A. Meadows



S. Margot Finn, Ph.D.
 2256 LSA Building
 500 S. State St.
 Ann Arbor, MI 48109

March 25, 2013

To Whom It May Concern:

As a faculty member in the College of Literature, Science and the Arts who teaches classes on food and culture, I'm writing in support of the UM Sustainable Food Program and Campus Farm. The UMSFP has already succeeded in generating conversations about where the food we eat comes from and providing students with an opportunity to get involved in growing food for themselves and the community. With additional funding, I believe the farm has the potential to develop into a site where students and faculty can both practice and evaluate sustainable food production methods.

For the past two semesters, UMSFP leaders have visited my seminar "Much Depends on Dinner" to give a presentation on the farm and discuss the goals of the program with my students. The presentation and the farm itself help make debates about whether Organic and locally-grown foods are better for the environment or feasible for feeding people on a large scale more concrete. Students ask questions about what the farm produces and how much of it, and compare that to the kind of food and amounts used in the dining halls. Some of my students also attended the 2012 Harvest Festival or volunteered for a campus farm work day. Later in the semester, when we read about the Progressive Era crusades for pure foods and 1970s natural foods craze, they were able to draw parallels between the rhetoric and demographics of those earlier movements and the contemporary movement to re-localize the food system exemplified by the UMSFP.

In the Fall, I am teaching a new course titled "Food Studies Research Methods," and one of the assignments will ask teams of students to calculate, as best as they can, the ecological impact of a conventional food item and a "green" alternative. Comparing the produce from the campus farm for sale at the Student Food Co to the produce at a supermarket like Meijer offers one potential topic choice with immediate relevance to students' own lives and consumption choices.

With additional support and funding, the UMSFP can expand their current efforts and engage more of the campus and community in the critical work of defining sustainability, designing and implementing programs that are both culturally acceptable and ecologically meaningful, and evaluating the impact of those programs. I look forward to seeing this program grow, and I plan to design more assignments and courses that take advantage of the hands-on opportunity to learn about the many challenges involved sustainable food production.

Sincerely,

A handwritten signature in black ink that reads "S. Margot Finn".

S. Margot Finn, Ph.D.
 Lecturer in University Courses
 College of Literature, Science & the Arts

February 26, 2013

Subject: Letter of Support for the UM Sustainable Food Program and Campus Farm

I am an Associate Professor of Environmental Psychology and Planning in the School of Natural Resources and Environment at the University of Michigan. My teaching includes NRE560/ENV360 – Behavior and Environment, NRE561/ENV361 – The Psychology of Environmental Stewardship and NRE 662 – Localization Seminar. I am also serving as the faculty advisor of a second SNRE Master’s Project on campus-based sustainable food systems. The focus of this second project is “Education and community at the campus farm.”

As a faculty member involved in the study of foundational sustainability I give my full support to the U-M *Sustainable Food Program* (UMSFP), the campus farm and future efforts related to the study of resilient local food systems.

The program and campus farm have already served as a focal point for students interested in socially and ecologically sound alternatives to industrial agriculture, and the study of the process of localization. Various student research teams in my courses have used UMSFP resources in research papers and taken advantage of its volunteering opportunities.

In the coming years, I plan to closely integrate the UMSFP efforts, and in particular the campus farm, into my course content. I anticipate using both in-class presentations by the UMSFP staff and interns as well as field visits to the campus farm and other local food-related sites and initiatives. I also expect to direct student projects toward fulfilling the research needs of the program and farm.

Additional support and funding would allow significant expansion of the campus farm’s educational outreach and research potential. I can imagine a number of new initiatives emerging including farm-based summer field courses, training workshops, the hosting of numerous undergraduate and graduate research projects, volunteering opportunities and community outreach.

In conclusion, I wholeheartedly support this timely, thoughtful and meaningful campus initiative. It has educational, research and community-outreach potential that we are only beginning to unlock.

Raymond De Young, Ph.D.
Associate Professor of Environmental Psychology and Planning
734-763-3129 | rdeyoung@umich.edu

Informal High School Education at a Small Farm Setting: A Curriculum for a Segmented Summer Program



Liz Dengate
Education 604: Curriculum Development
December 2012

Designed for use at the UM Campus Farm in 2013 and beyond
Permission granted for future use in UM Education courses

Table of Contents

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Introduction

(Adapted from my work, “Education, Adult Students, and the Urban Farm: A Guide for Educators”)

Perhaps you help run a community garden in your neighborhood, or manage a bustling urban farm in a big city, or work on your university’s campus farm. There are a plethora of small-scale agricultural sites that have sprung up and continue to spring these days, and an equally large number of creative, hardworking people who direct them, manage them, work on them, and volunteer at them. This educational guide is for all of you.

This guide is designed to help urban agriculturalists integrate education into their farm or garden setting; specifically, education for the older student: high school students, college and university students, and potentially some adults. There are plenty of resources out there for those who want to work with little kids or middle school students, but finding resources for the older student is much more difficult. Teaching children is important: outdoor education centered around food is a vital addition to early education. But teaching at later ages is important too; not only are high school students and adults important resources for our sites and activities, it’s also likely, at this generation, that they never received an excellent outdoor, environmental, or food-related education as a child, and it’s never too late to fill in those gaps.

Place-based and situated learning is especially vital for adult students, as we’ll see later, making agricultural settings the perfect place for a variety of educational topics and themes. However, as we’ve previously mentioned, this is also the area where we see the fewest amount of resources available. Our hope is that this curriculum will provide a framework and inspiration for running your own informal education program at your own site.

This curriculum is designed as a set of three interlocking programs, intended to be run in order from May through August, as a seasonal, educational camp experience for high school students. However, the intention is for subjects, units, and lesson plans to easily be adapted to other formats, timeframes, and even age groups.

Subjects, Goals, and Outcomes

Major Outcomes for all Participants

Every student, whether they participate in a day-long event or attend programs for an entire summer, should leave this educational experience with some level of understanding in each of these five outcomes. Students attending the full summer session should demonstrate a complete understanding and proficiency in these five areas.

Students will...

1. Understand the ecology of the small-scale agricultural ecosystem (species' interactions with each other and their physical environment.)
2. Understand their place in the agroecosystem and their impacts, both negative and positive, on the ecology of the local area; be able to explain to others how their action affect the living and non-living parts of the agroecosystem.
3. Be able to explain basic principles of agriculture and where food comes from, and demonstrate a practical skill in at least one area of growing fruits, vegetables, or herbs.
4. Have an appreciation and a love for the non-human parts of their environment.
5. Have a strong curiosity about the natural world and a passion to further their knowledge.

Subjects, Strands, and Annual Outcomes

In an informal education program, each subject - and potentially, even each strand within each subject - should be considered a separate, self-contained educational experience, with no assumption that students will complete every experience. These areas and programs together combine to make a dynamic, vibrant educational curriculum, in which students can pick and choose segments to meet their needs.

This curriculum is arranged in three segments: one month and a half long program intended to run from mid-May to the end of June, a month-long program for the month of July, and a second month-long program for the month of August, as an educational summer-camp/work-experience. It should be assumed that some students will attend only one segment, while others will attend the full summer-length sum. The intention is for each program to be complete and valuable on its own, but also to complement the others. The curriculum is designed to work around the common

public school schedule, as well as meshing with the growing season. My focus here is on high school students (grades 9-12).

Thus, instead of dividing this curriculum into traditional ‘subjects,’ it’s divided into three programs. Strands are contained within, each with individual outcomes. After completing this self-contained educational program, students should be able to complete those outcomes.

In addition to these strands and outcomes, every program will include education on the practical, hands-on matters of planting, such as planting, weeding, watering, composting, pest control, and harvesting. This education will change from year-to-year as crop lists change, but will also change from May through August, as tasks move from soil preparation and planting of seeds, to weeding and watering, to harvesting. Through an individual segment or the course of the summer, students should gain a comfort and familiarity with working in a garden and growing fruit, vegetables, and herbs.

Segment One:

May 15 – June 10: 3:30-5 pm, Monday, Wednesday, and Friday (after-school)

June 11 – June 30: 9 am – 12 pm, Monday – Friday

Science and Nature in a Farm Ecosystem

Strands and Their Outcomes:

- a. The Biology of Plants, Animals, and Fungus
 - i. SWBAT explain how each common species survives and produces energy, and to illustrate the process of photosynthesis.
 - ii. SWBAT identify the majority of the common plant, animal, and mushroom species found at the site, and explain the life cycle of a few key species.
- b. Soil Ecology
 - i. SWBAT diagram and explain the key components of healthy soil and how it contributes to a productive agroecosystem.
 - ii. SWBAT categorize and analyze soil using hands-on field tests.
- c. Species Interactions
 - i. SWBAT define the term niche and give several examples of different niches filled by different members of the farm ecosystem.

- ii. SWBAT diagram and describe the processes of pollination, using specific species as examples; and name and describe at least two other examples of plant/fungus/animal symbiosis in the agroecosystem.
- d. Interactions Between Living and Physical Components (Water, Energy, and Nutrient Cycling)
 - i. SWBAT draw an energy, a carbon, and a nitrogen cycle for the farm site.
 - ii. SWBAT explain how underlying geology can affect soil and water processes, using local examples.
- e. Humans' Role in an Agroecosystem
 - i. SWBAT list and analyze multiple ways that humans impact this local system and the broader community.
 - ii. SWBAT articulate their own personal opinion on human manipulation or management of natural systems.
 - iii. SWBAT compare their own biological needs, anatomy, and function with that of the other species in the local system.

Segment Two:

July 1 – July 31: 9 am – 12 pm, Monday – Friday

Food, Culture, and Human Life

- a. The Cultural Importance of Food
 - i. SWBAT articulate the cultural, religious, or historical importance of different plants or prepared dishes for their own family, the local community as a whole, and other groups which may beforehand have been unfamiliar to the student.
- b. Cooking and Food Preparation
 - i. SWBAT list uses or various dishes that might be prepared with the different fruits, vegetables and herbs grown in the farm site, and will be able to confidently prepare at least two healthy dishes using ingredients from on-site.
 - ii. Students will be familiar with the flavor and uses of each plant and animal product, through direct experience.
- c. Stories and Songs
 - i. SWBAT name and analyze a favorite legend, folk story, or song dealing with food.

- ii. SWBAT creatively articulate their own emotions and connection to food, community, and the process of growing food, through an essay, short story, song, or poem.

d. The History of Agriculture

- i. SWBAT summarize the history/timeline of agriculture worldwide, as a constructed series of historical events.
- ii. SWBAT evaluate the current state of agriculture and propose goals for its future.

Segment Three:

August 1 – August 31: 9 am – 12 pm, Monday – Friday

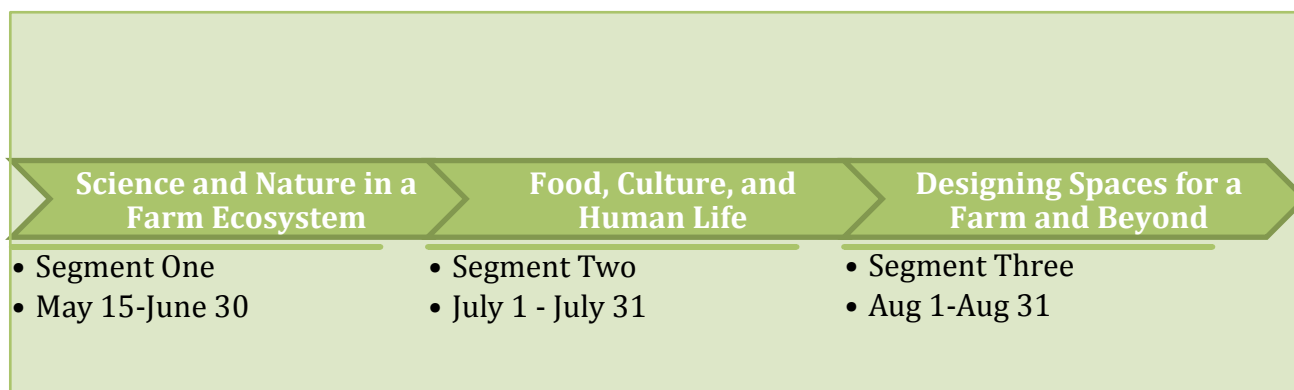
Designing Beautiful, Interactive, Meaningful Spaces for a Farm and Beyond

a. Design:

- i. SWBAT draw or construct an ecologically reasonable site plan for a garden bed or other structure within a farm site, and explain the reasons behind their design.
- ii. SWBAT write and create attractive, educational, and succinct signs for a farm space.

b. Species Interactions: (revised and advanced from segment one)

- i. SWBAT define the word niche and give several examples of different niches filled by different members of the farm ecosystem.
- ii. SWBAT name and describe at least three examples of symbiosis in the ecosystem, and implement this knowledge into a site plan in order to maximize symbiosis and species cooperation.



Guidelines for Designing Learning Activities

Learning activities should...

- Take advantage of the environment; this is *place-based* education. Is the activity appropriate and relevant to the site? Does it make use of its unique features?
- Be interdisciplinary. Just as these three segments of diverse topics fit together, each segment should draw on multiple disciplines in order to convey the complex ideas behind our food systems.
- Develop ownership of learning and curiosity in students and promote self-discovery. Students should feel empowered to take charge of their own education, through the ability to personalize, lead, and be involved in every step along the way.
- Rely heavily on hands-on, experiential learning, rather than the theoretical or abstract.
- Foster collaborative and cooperative learning, focusing on teamwork instead of solo work.
- Be engaging and exciting; this is educational, but students should also be having a good time!

In the early 1980s, Malcolm Knowles, known as an “American Adult Educator,” coined the term ‘andragogy,’ the theory behind adult learning (as opposed to pedagogy, educating children.) For the most part, these hold true for high school students as well, and I used them to design this curriculum. They will be even more useful for those of you working with college students or adults. In Knowles’ work, he broke down the key ways that adult learning differs from that of a younger student. His major points, slightly re-worded here, are that:

1. It’s important for adults to understand the ‘why’ – why is this being taught? Why is it important? Why is this true?

2. Adults learn best when education is “experiential,” and the knowledge is practical and immediately applicable to their lives. Learning is often best approached as “problem-solving.”

3. The educator of adults should remember that they each bring their own expertise, knowledge, and stories, and this personal knowledge should be respected and drawn upon.

4. Adult students like to be self-directed, independent, and highly involved in the education process, and will learn better when these things are true.

5. Educators should be positive, encouraging, and conscious of the fact that it’s hard to suddenly be a rookie when you’re used to being a “grown-up.” (Knowles 1984, Knowles 1990, Peterson 2012.)

Units (Segments) with Schedules and Descriptions

Segment One: Six Weeks

Science and Nature in a Farm Ecosystem

In this segment, students will become familiar with the biology, ecology, and geology of the farm system, through its species, soil, water, and other physical and living systems. Emphasis is placed on the cycling of energy and nutrients, the interconnectedness of all living things and their physical environment, and the identification of different species. Students are encouraged to be curious, ask questions, pick specific species or systems to learn more about, and work on hands-on projects.

In addition, throughout these six weeks, students will learn how to prepare beds for planting, how to plant seeds and which plants to place together, and how to maintain seedlings.

A Suggested Schedule:

Week One: Intro to plant species; Photosynthesis; Healthy soil – Farm tasks: Soil and bed preparation; Becoming familiar with your space

Week Two: Further plant species identification; Mushroom identification; Categorizing and analyzing soil using hands-on tests – Farm tasks: Planting seeds and seedlings

Week Three: Plant life cycles and metabolism; The meaning of “niche”; Intro to symbiosis and species interactions – Farm tasks: Complete planting (question: why have we planted these things near one another?); Maintaining seeds and seedlings

Week Four: Our underlying geology; The water cycle; Physical and living interactions – Farm tasks: Weeding, watering, and otherwise maintaining new plants

Week Five: Nutrient cycles; Energy cycles; Pollination; Interactions, in general, between parts of the environment – Farm tasks: Weeding, watering, and otherwise maintaining new plants

Week Six: Humans’ place in this environment; Humans as animals/organisms; The environment as a whole – Farm tasks: Weeding, watering, and otherwise maintaining plants

Segment Two: Four Weeks

Food, Culture, and Human Life

In this segment, students will explore the relationships between people, our cultures, and the food we eat. They will become familiar with where their food comes from, learn about new types of produce and how to cook new foods, and creatively work through ideas surrounding plants as nutrition and sustenance. Along the way, they'll explore the history of people growing food, some elements of environmental and food justice, and their own family's food traditions.

Throughout the month, students will also maintain the farm, working on weeding, watering, and harvesting produce. They'll learn elements of organic pest control.

A Suggested Schedule:

Week One: Taste testing the produce and learning names; First cooking lesson; Discussion of food traditions; Food folk tales and songs – Farm tasks: Weeding, watering, and otherwise maintaining plants

Week Two: Second cooking lesson; Writing an essay about family/culture food traditions; Discussion of the importance of food in other cultures; The origins of agriculture – Farm tasks: Introduction to pest management; Weeding, watering, and otherwise maintaining plants

Week Three: Third cooking lesson; Later agricultural history; Introduction to food justice and discussion; Creative work based on food – Farm tasks: Weeding, watering, and otherwise maintaining plants

Week Four: Cook a meal as a group; Agriculture today and thoughts for the future; Performance/reading of food poems/songs/stories by the students – Farm tasks: Weeding, watering, and otherwise maintaining plants



Segment Three: Four Weeks

Designing Beautiful, Interactive, Meaningful Spaces for a Farm and Beyond

During this final segment, students will creatively look at how to design a functional growing space. This segment combines design with an ecologists' view of species interactions, and ties together many interdisciplinary aspects, with a focus on creating small-scale, personal food growing spaces – education that students can take back to their own homes and yards.

Throughout the month, students will also maintain the farm, working on weeding, watering, pest control, and harvesting produce.

A Suggested Schedule:

Week One: Exploring the local site; Discussion of interactions between living and non-living aspects of the environment; Intro to “niche” – Farm tasks: Weeding, watering, harvesting, and otherwise maintaining plants

Week Two: Species interactions and symbiosis; Begin students' own design projects; Learn elements of aesthetic design through mini design assignments – Farm tasks: Weeding, watering, harvesting, and otherwise maintaining plants

Week Three: Graphic design and sign creation; Managing elements in a growing space; Efficiency on a small spatial scale – Farm tasks: Weeding, watering, harvesting, and otherwise maintaining plants

Week Four: Share and discuss one another's design projects; Discuss implementation of designs – Farm tasks: Weeding, watering, harvesting, and otherwise maintaining plants



Segment One: Science and Nature

A Detailed Unit Plan with Sample Lesson Plan

As you design your own curriculum for your space, the following more detailed unit plan for the first segment, and a lesson plan for its first lesson, might help in filling out your own programs. These do not need to be followed precisely, but should serve as inspiration.

Above, we saw the description, strands, and desired outcomes for this segment, as well as a week-by-week schedule of main ideas. (Please return and review this material if necessary.)

Driving questions of this segment:

1. What are the different pieces of the agricultural ecosystem? What are their lives like?
2. How do the living and non-living parts of this environment fit together?
3. How do humans fit into that relationship?

Interest-Building Activities: Week One

The goal in the first week is to pose the above questions to the students and explain that we'll spend the next six weeks answering them. Further goals: introduce the plant species we'll be planting; explain photosynthesis and ensure students are familiar with the concept; and introduce the concept of soil and what makes soil healthy. This week is an introduction to the topic and to the site and its components. It should excite students and pique their interest and curiosity. The instructor should emphasize that students have control over their own education, and that they should feel free to ask questions and guide discussion throughout the entire six-week period.

Along the way, some time will be spent preparing beds for planting and exploring the farm space, thinking about where water supplies are, where the wind is coming from, where the nearest trees are, and so forth. These specific activities will be tailored to your own site.

Sample activities and discussion questions:

1. Pose the driving questions to the students, and give them time to brainstorm some answers and write them down, to be returned to in the final week.

2. Connections: ask students what of their school classes they think might be useful in this program; ask students if they've ever had their own garden, and if so, to share their experiences.
3. Tour the farm site and have the students sketch maps of it, marking things like fences, trees, water supplies, sunlight, etc.
4. Supply students with soil from different areas, play with it in hand, and start talking about the differences. Discuss what it might mean to be "healthy" soil. Consider the differences between soil and dirt.
5. Review photosynthesis using diagrams, and then act out the processes with students as actors.
6. Enlist students' help in finalizing a crop list for the plant beds, and familiarize them with the names of everything on the list.

Learning Activities: Weeks Two-Five

During the main bulk of this segment, students will begin to intimately know this space and the organisms (and non-living components, such as geology and water) within it. Over these four weeks, students will build a complex web of knowledge, learning how the different pieces fit together as they go along. Hands-on exploration of the site is encouraged – playing in the dirt, feeling and eating different plants, using all five senses.

In week two, students will deepen their familiarity with the different organisms in the environment, and learn how to classify soil using field tests.

In week three, students will return to the concept of photosynthesis to finish the discussion of plant life cycle and energy cycles, and move from this to discussing food webs and symbiotic relationships.

In week four, we'll bring in the *non*-living components of the environment. Students will hypothesize about the area's geology and discuss water cycling and other ways the living things interact with the non-living things.

In week five, we'll expand to consider even more complex interactions. We'll discuss energy and nutrient cycles (at a basic level) and go in depth on the topic of pollination (with any luck, students will be able to directly observe pollinators at the site.) Students will brainstorm

other interactions, and will be able to add to the list of symbiotic relationships started in week three.

Along the way, students will be planting seeds (and seedlings from greenhouses/hoophouses), watering, weeding, and otherwise caring for the new plants.

Sample activities and discussion questions:

1. Dig a soil pit and classify the strata and soil types found on site.
2. Discussion questions: How are we, as people, similar to the plants and animals found in the farm? (Examples: we all need energy, we all need nutrients, etc.)
3. Draw diagrams of photosynthesis, energy cycles, nutrient cycles, etc.
4. Small-scale experiments on individual plants might be designed and carried out by students (for example, growing the same plant species in different soil types or alongside another species – like a nitrogen-fixing legume species.) Students can take ownership over their experiments and present the results to the group at the end of the six week-period.
5. Students should choose a relationship in the ecosystem and begin researching that relationship and how it fits into the broader web of the ecosystem.

Culminating Activities and Assessment: Week Six

In the final week of the program, students will reflect on everything they've learned and what their own place is in the environment, as part of an interconnecting web of relationships. They will return to their written answers to the three driving questions in the beginning of the segment, and discuss how their perceived answers have changed since then. They'll also return to the maps they drew of the farm space in the beginning, and think about how their understanding of the place has deepened and grown more complex. As a final assessment following these discussions, students will present their chosen relationship to the other students, and explain how that relationship affects the whole, and what role humans play in that connection. If small-scale experiments were conducted, this would also be the time to explain and present their results.

By this point in mid-June, students should have gained experience working with seedlings and small plants, and be able to spend time watering and weeding, as well as directly observing pollinators. The segment can conclude with a picnic or other social event in the space.

Sample Lesson Plan

Science and Nature: Segment One, Day One

1. **Time:** 1.5 hours
2. **Lesson Objective:** Pique students' interest in the ecology of the farm and introduce the place as a frame for future lessons
3. **Lesson Overview:** The group will tour the farm space, discuss any previous experience with growing things, and spend time silently and then collectively discussing answers to the unit's driving questions.
4. **Preparation and Materials:** Beforehand, collect some edible greens (and/or other available produce) from greenhouses or storage, and have large pieces of paper and envelopes on hand. Walk the farm space without the students to ensure a familiarity with its current state.
5. **Lesson:**
 - a. 5 minutes: Gather the students and pass out veggie or greens samples for everyone to try. Explain, "The key through everything we do here is food production. Deliciousness. Nutrition. Try something new!"
 - b. 15 minutes: As students are eating, run your favorite name game/brainteasers, and then ask who has experience with gardening or farming. Have a few students share their experience.
 - c. 40-50 minutes: Tour the farm site. Explain, "All of our work over the next six weeks will take place right here. You're going to know these beds and fields like the back of your hand. Take a look around." Encourage students to talk about what they notice, and wait for their insights instead of explaining what everything is from the beginning. At this point in the season, much of the site will be bare earth. Pause for a few minutes to have students close their eyes and visualize what the site will look like at the end of their six weeks. Encourage them to share their visions. Remind them that they each have the power to make their own vision come true. (Later in the week, students will be making maps of the space, labeling things like wind direction and water sources.)

- d. In the final 20-30 minutes, move indoors or to some tables, and pass out paper and envelopes. Let the students know that they're about to make some predictions about what they'll be learning over the next six weeks. They'll seal those predictions up and return to them at the end of the program to see how their ideas and answers changed. Then walk them through each of the driving questions and have them take the time to write their answers out. Each of their papers will be sealed into a separate labeled envelope; the instructor can take the envelopes and ceremoniously place in a box or cabinet to wait for the end of the program.
1. The driving questions: (1) What are the different pieces of the agricultural ecosystem? What are their lives like? (2) How do the living and non-living parts of this environment fit together? (3) How do humans fit into that relationship?

Connection to Next Lesson: As you send students home for the day, ask them, overnight, to think about *one* plant that they really want to see planted in the farm that summer, and research whether or not it's feasible in the local climate. Let them know that you'll get down and dirty in the space in the next few days and start getting to really know it.

Annual Outcome Assessment with Rubric

I've only completed the following assessment for one of the five annual outcomes, but the same process could be completed for any other annual outcome.

As you might recall from the beginning of this curriculum, one of the major outcomes from this informal education program is the following: "Students will understand their place in the agroecosystem and their impacts, both negative and positive, on the ecology of the local area and be able to explain to others how their action affect the living and non-living parts of the agroecosystem."

Full-time students completing all three segments of this curriculum will be required to present the following as evidence of having reached this outcome: first, on a walk through the farm site with the instructor, students will point out aspects of the ecosystem that they have *personally* affected; second, the instructor will observe as students present to their parents on how agriculture affects the surrounding ecosystem, and how people's food choices (and thus, agriculture) can have positive and negative effects on our environment.

While evaluating students on these criteria, the main idea is that students understand *specific* examples of how they and others affect *this* site and ecosystems in *general* through their actions and their choices. Students' ability to clearly and engagingly communicate these ideas is also key. One goal of this program is to find engaged communicators who might return to the site as student leaders or interns in coming months/seasons.

Four-level scoring rubric showing the three major criteria:

Criteria	4 Excellent	3 Competent	2 Basic	1 Poor
Awareness of personal impact on the site	<ul style="list-style-type: none"> - lists all but one or two of the ways they personally affected the site - includes both positive and negative impacts - includes indirect impacts 	<ul style="list-style-type: none"> - lists at least five different ways they personally affected the site - include both positive and negative impacts 	<ul style="list-style-type: none"> - lists at three different ways they personally affected the site - include either only negative or only positive impacts 	<ul style="list-style-type: none"> - lists fewer than three personal impacts on the site - includes inaccuracies or falsehoods

<p>Understanding of how people's food choices directly and indirectly affect the ecosystem</p>	<ul style="list-style-type: none"> - presents a clear overview of all of the major ways that people directly <i>and</i> indirectly affect their environment through food and agriculture, in a local and current context, including both positive and negative effects 	<ul style="list-style-type: none"> - lists at least five different ways that people in general affect the environment through agriculture - includes both indirect and direct effects - examples are relevant to people in that area 	<ul style="list-style-type: none"> - lists at least three different ways that people in general affect the environment through agriculture - includes either indirect or direct effects – OR examples are not locally relevant 	<ul style="list-style-type: none"> - lists only one or two ways that people affect the environment - examples are not locally relevant - all examples are either direct or indirect
<p>Clear and engaging communication skills</p>	<ul style="list-style-type: none"> - speech is obviously tailored to the audience - speech is clear and well-enunciated - students make eye contact and otherwise engage their audience - conversation is always articulate and smoothly flowing, and topics move easily from one to another 	<ul style="list-style-type: none"> - arguments are directed to the audience and relevant - students have well-enunciated speech and make eye contact - speech is, for the most part, articulate, continuous and smoothly flowing 	<ul style="list-style-type: none"> - some effort has clearly been made to tailor speech to the audience - speech is sometimes well-enunciated - eye contact is occasionally made - there are several breaks or pauses in conversation 	<ul style="list-style-type: none"> - the speech is not relevant or tailored to the audience - speech is poorly enunciated and hard to understand - students never make eye contact - there are long pauses in conversation, or abrupt jumps in topic

The results will be shared with students and their parents after the program. Students receiving a high number of “four”s might be asked back as assistant instructors or interns at the space.

References:

Knowles, Malcolm S. *Andragogy in Action*. San Francisco: Jossey-Bass, 1984. Print.

Knowles, Malcolm S. *The Adult Learner: A Neglected Species*. Houston: Gulf Pub., 1990. Print.

Peterson, Deb. "Five Principles for the Teacher of Adults: Teaching Adult Learners." *About.com Continuing Education*. New York Times Company, 2012. Web. 17 Apr. 2012. <http://adulted.about.com/od/teachers/a/teachingadults_2.htm>.



Sustainable Food System Design

Art & Design 398.002 / 500.34, 3 credits

Professor Joe Trumpey

jtrumpey@umich.edu

Office 2085 AAB hours MW 1:30-2:30 and by appointment

517-605-1321 (cell)

This new course will explore a wide variety of contemporary and historic food systems at several scales including conventional, organic, permaculture. Course participants will visit Michigan farms and farmer's markets including sites in Detroit. Special attention will be given to student farm designs and site visits of peer institutions will take a central role in design thinking and criticism. Students will read and present work from a range of contemporary farm / food literature and will work on completing designs that will 1) take on both a personal focus and 2) investigate designs specific to the University of Michigan. This is not a studio course but creative responses will be expected for work submitted.

Topics

Open to a full array of upstream to downstream topics:

Soil Science

Water and nutrient cycles

Seedstock

Livestock

Organic Ag

Conventional Ag

Michigan Ag

Student / Campus Ag

Urban Ag

Food Justice

Food Movements

Food Services

Farmers Markets

Conventional Markets

Preserving

Cooking

Etc.

Course Goals

Develop a working definition of Sustainable Food

Deepen your knowledge of a particular aspect of Food Systems

Develop a research process focused on site evaluation and critical reflection

Enhance and embrace your creative process

Develop a focused design process

Site Visits

The keystone of this course is first hand experience through personal evaluation and critique of existing food systems. You will need to prepare yourself prior to each visit and follow up with critical reflection involving images and words.

We will need to work to organize ourselves for a full array of site visits. C-tools, other web resources and grad students will assist our organization. Fuel costs must be shared equally among passengers.

Requirement: You will visit a *minimum* of 5 sites this semester. 3 or more should support your own particular research / design project.

You will create a kapsul (kapsul.org) to chronicle your site visits.

MW class time

Most Mondays will be used for visitors, presentations, and discussion. Most Wednesdays will be used for consultation (by sign up) and any group work including book clubs and pre-site visit preparations. Patience please as the schedule is formed!

Reading

1) Required Text

Thomas A. Lyson: Civic Agriculture

<http://www.upne.com/1584654139.html>

2) Additional required and recommended digital readings / resources will be posted on C-tools

3) Book Club

You will self-select into topic groups and agree on reading. Grad students will facilitate some of the discussion and presentation.

Assignments and Grading

<i>Assignments for ART398 students</i>	<i>Points</i>	<i>Due Date</i>
5 Site Visit Kapsuls @ 140pts each	700	ongoing
Reading reflection Kapsul and presentation	300	ongoing
<u>Design Project</u>	<u>1500</u>	<u>12/10</u>
<i>Total</i>	<i>2500 possible points</i>	

<i>Assignments for ART500 students</i>	<i>Points</i>	<i>Due Date</i>
5 Site Visit Kapsuls @ 140pts each	700	ongoing
Reading reflection Kapsul and presentation	300	ongoing
Team leadership book club	250	ongoing
Team leadership site visits	250	ongoing
<u>Design Project</u>	<u>1500</u>	<u>12/10</u>
<i>Total</i>	<i>3000 possible points</i>	

Evaluation

You are expected to be present and thinking creatively. You will not be evaluated on technical skills, but rather the thoroughness of your design process.

Please use the Harvard Parenthetical Referencing Style with references.

Evaluation of projects will use a standard 10-point grading scale:

100-97 = A+	79-77 = C+
96-93 = A	76-73 = C
92-90 = A-	72-70 = C-
89-87 = B+	69-65 = D
86-83 = B	64-00 = E
82-80 = B-	

Upcoming site visit suggestions:

September 15

<http://www.facebook.com/pages/Jackson-County-Family-Farmfest/140560289296607>

Sept 16

<http://www.tillersinternational.org/tillers/events.html>

Sept 28

Bus to Trumpey Farm / Zenz Farm

Appendix 3: Community

3.a. UMSFP Member Groups (2012-2013)

3.b. UMSFP Member Groups Requirements and Application

UMSFP Member Groups 2012-2013

Cultivating Community	Mbgna.cc@umich.edu	Cultivating Community exists to empower and educate University of Michigan students to become leaders in the area of community food systems through hands-on organic gardening, community outreach, and volunteer activities.
Friends of the Campus Farm	Farm.core@umich.edu	FCF empowers students to create a healthy future through sustainable food education and practice at the newly established campus farm and more broadly by working with the UM Sustainable Food Program.
Michigan Sustainable Foods Initiative	Msfi-board@umich.edu	MSFI supports a vision to create a student body that understands the connection between good food and a healthy environment and a campus that supports the sustainable food movement by sourcing from local farmers and producers. The organizations mission is to cultivate awareness of sustainable food on campus through education and service, to empower students to discuss and act on food-related issues, and to bring together students to celebrate good food.
Consortium on Agriculture Food and the Environment	Cafe.core@umich.edu	CAFE's mission, as part of UMSFP, is to advance professional and academic development, catalyze thoughtful dialogue, and foster collaboration and leadership on sustainability of food systems among students and the greater global community.
Ann Arbor Student Food Co.	A2brassica@gmail.com	The Ann Arbor Student Food Co hopes to bring healthy wholesome food to the University of Michigan community and promote discussion and food education.
Permaculture Design Team	maddunn@umich.edu	PDT is a service learning organization with a focus on educating one and other on permaculture methodology and problem solving using complex systems thinking.
Student Advocates for Nutrition	Students4nutrition@gmail.com	SAN is comprised of a group of students concerned about healthy eating and nutrition, sustainable food systems, and cultivating a community garden within the courtyard of the School of Public Health (Building 1).
UM Bees	umichbeekeeping@gmail.com	The goal of this group is to promote, protect, and propagate honeybees! Beekeepers and newBees of all experience levels are welcome to join our group. There are plenty of important roles in our colony.
Food Recovery Network	frnatmichigan@gmail.com	The Food Recovery Network's goal is to recover leftover food from University of Michigan dining halls, divert it from the waste stream to Food Gatherers, the Washtenaw County food bank, where it can be served to those who need it most.
Outdoor Adventures Garden	denuyl@umich.edu	The mission of the Outdoor Adventures Garden is to educate students and community members about sustainable food and living through providing environmentally conscious food for university sponsored trips into the outdoors.

UMSFP Member Group Requirements and Application

UMSFP Member Groups

Does your group support the mission of the UM Sustainable Food Program? Would you like to become an integral part of the conversation, and the work surrounding sustainable food on campus? Support our work and let us support you by becoming a UMSFP Member Group. Apply now!

As a member group of UMSFP, you will have the opportunity to:

- be promoted on our website
- add events and information to our weekly newsletters
- access UMSFP resources and guidance (in areas including networking, independent study, internship and job searches, funding, community initiatives, etc.)
- attend monthly potlucks with the other member groups
- meet members of other groups working on similar issues
- access more volunteers for your events
- benefit from collaboration, connection, and good company with everyone working on food issues at the university
- make sustainable food and agriculture a reality at the university, in Michigan, and around the world

As a member group, your responsibilities are to:

- plan and host one UMSFP potluck per year
- support other member groups by attending or sending volunteers to each others' events
- maintain your presence on the UMSFP website
- maintain an active presence on campus
- uphold the mission statement of UMSFP
- Appoint one group member to be the UMSFP Representative. This person is responsible for attending monthly Leadership Council Meetings, informing UMSFP on current group initiatives, and reporting back to the group on what was discussed at Leadership Council Meetings.

To apply, please send us a 1-2 page document detailing the following information:

1. Your group's name (are you a registered UM student group?)
2. Total number of active members and representative info
3. Group's mission statement

4. How do you believe your group's work matches or complements the mission of UMSFP?
5. Recent and upcoming events/activities/pursuits

UMSFP Mission Statement: Fostering collaborative leadership that empowers students to create a sustainable food system at the University of Michigan while becoming change agents for a vibrant planet

Appendix 4: Food Production

- 4.a. Seed Order List for Campus Farm (Spring 2013)
- 4.b. UMSFP and Campus Farm Summer Intern Job Description (Summer 2013)
- 4.c. USDA GAP & GHP Certification Progress and Paperwork (Spring 2013)
- 4.d. Friends of the Campus Farm Constitution (2012)
- 4.e. Friends of the Campus Farm Leadership Tasks (2012-2013)
- 4.f. Campus Farms at Peer Institutions

Johnny's Selected Seeds Receipt

*** PLEASE PRINT RECEIPT OUT AND RETAIN IT FOR FUTURE REFERENCE ***

Confirmation Number 737335
Order Date 4/9/2013 4:04:37 PM

Bill To:
Michael Palmer
UM Matthaei Botanical Gardens
1800 N Dixboro Rd
Ann Arbor, MI 48105-9741
United States
[734-647-8215](tel:734-647-8215)
lberiont@umich.edu

Ship To:
Michael Palmer
UM Matthaei Botanical Gardens
1800 N Dixboro Rd
Ann Arbor, MI 48105-9741
United States
[734-647-8215](tel:734-647-8215)

Order Date: 4/9/2013 4:04:37 PM
Coupon Code: 13-1014 (FREE STANDARD SHIPPING. U.S. addresses only. Offer does not apply to expedited shipping charges. Offer may be used only once per customer and may not be combined with any other offers.)
Payment Method: CREDITCARD
Card Type: MasterCard

Locale/Currency: en-US / USD
Coupon Details: Free Shipping
Name On Card: Micheal D Palmer
Card Number: ****9445

Product ID:	Product	Quantity	Price	Ext. Price
7038.0	2000-Ft. Irri-Gator Kit-1 Unit Tools and Supplies > Watering & Irrigation > Drip Irrigation Kits	1	\$285.00	\$285.00
2891.26	Arugula (OG)-1 Ounce Vegetables > Greens > Arugula/Roquette > Salad	1	\$5.95	\$5.95
702G.26	Ruby Red or Rhubarb Chard (OG)-1 Ounce Vegetables > Swiss Chard	1	\$6.25	\$6.25
363G.26	Red Russian (OG)-1 Ounce Vegetables > Kale	1	\$6.15	\$6.15
2366G.26	Encore Lettuce Mix (OG)-1 Ounce Vegetables > Lettuce > Salad Mixes	2	\$19.80	\$39.60
2123G.26	Toscana (OG)-1 Ounce Vegetables > Kale	1	\$11.25	\$11.25
2485G.11	Tropicana (OG) Leaf Lettuce-Packet Vegetables > Lettuce > Leaf > Green	4	\$3.95	\$15.80
2963G.11	Coastal Star (OG)-Packet Vegetables > Lettuce > Romaine/Cos > Green	4	\$3.95	\$15.80
2571G.54	Corvair (F1) (OG)-5,000 Seeds Vegetables > Spinach > Smooth-Leaf	1	\$6.50	\$6.50
911G.11	Genovese (OG)-Packet Herbs > Basil > Pesto	1	\$3.45	\$3.45

2178g.11	Nufar (OG)-Packet Herbs > Basil > Fusarium Resistant	1	\$3.45	\$3.45
925.11	Chinese Leeks/Garlic Chives (OG)-Packet Herbs > Chinese Leeks/Garlic Chives	1	\$3.45	\$3.45
3803.26	Calypso Cilantro-1 Ounce Herbs > Cilantro/Coriander	1	\$5.25	\$5.25
2390G.11	Giant of Italy (OG)-Packet Herbs > Parsley	1	\$3.45	\$3.45
934G.11	Common Sage (OG)-Packet Herbs > Sage	1	\$3.45	\$3.45
940G.11	German Winter (OG) Thyme-Packet Herbs > Thyme	1	\$3.45	\$3.45
2841.53	Red Ace (F1) (OG)-1,000 Seeds Vegetables > Quick Hoops™ crops > Root crops (for Quick Hoops™)	3	\$4.35	\$13.05
2912G.26	Bull's Blood (OG)-1 Ounce Vegetables > Beets > Round Red	2	\$6.95	\$13.90
2824G.11	Nectar (F1) (OG)-Packet Vegetables > Carrots > Main Crop	2	\$3.95	\$7.90
2746G.11	White Satin (F1) (OG)-Packet Vegetables > Carrots > Colored	2	\$3.95	\$7.90
496G.53	Walla Walla Sweet (OG)-1,000 Seeds Vegetables > Onions > Sweet Mild	1	\$4.15	\$4.15
499G.25	Purplette (OG)-1/2 Ounce Vegetables > Onions > Mini	1	\$9.00	\$9.00
416G.11	King Richard Seeds (OG)-Packet Vegetables > Leeks > Baby Bunching	1	\$3.95	\$3.95
542.11	Lancer-Packet Vegetables > Parsnips	1	\$3.45	\$3.45
634X.26	American Purple Top-1 Ounce Vegetables > Rutabaga	1	\$5.25	\$5.25
626G.30	Pink Beauty (OG)-1/4 Pound Vegetables > Radish > Colored Round	1	\$12.60	\$12.60
2815G.11	Belstar (F1) (OG)-Packet Vegetables > Broccoli > Hybrid	2	\$3.95	\$7.90
2110G.11	Farao (F1) (OG)-Packet Vegetables > Cabbage > Early Green	1	\$3.95	\$3.95
313G.11	Famosa (F1) (OG)-Packet Vegetables > Cabbage > Savoy	1	\$3.95	\$3.95
2956G.11	Veronica (F1) (OG)-Packet Vegetables > Cauliflower > Romanesco	2	\$8.95	\$17.90
2593G.11	Skywalker (F1) (OG)-Packet Vegetables > Cauliflower > White	2	\$6.95	\$13.90
738.11	Gold Nugget (OG)-Packet Vegetables > Tomatoes > Cherry > Determinante; Colored	1	\$3.95	\$3.95
88G.11	Black Cherry (OG)-Packet Vegetables > Tomatoes > Cherry > Indeterminate; Red	1	\$3.95	\$3.95
3812G.11	Jasper (F1) (OG)-Packet Vegetables > Tomatoes > Cherry > Indeterminate; Red	1	\$4.95	\$4.95

3815G.11	German Johnson (OG)-Packet Vegetables > Tomatoes > Heirloom > Pink	1	\$3.95	\$3.95
748.11	Nepal (OG)-Packet Vegetables > Tomatoes > Heirloom > Red	1	\$3.95	\$3.95
749.11	Valencia (OG)-Packet Vegetables > Tomatoes > Heirloom > Orange and Yellow	1	\$3.95	\$3.95
739.11	Taxi (OG)-Packet Vegetables > Tomatoes > Determinate > Colored	1	\$3.95	\$3.95
757.11	Bellstar (OG)-Packet Vegetables > Tomatoes > Saladette and Sauce > Determinate	1	\$3.45	\$3.45
3817G.11	Amish Paste (OG)-Packet Vegetables > Tomatoes > Saladette and Sauce > Indeterminate	1	\$3.95	\$3.95
566G.11	Yankee Bell (OG)-Packet Vegetables > Peppers > Sweet Bell > Green- to-Red Bells	3	\$4.95	\$14.85
3027G.11	Sweet Sunrise (F1) (OG)-Packet Vegetables > Peppers > Sweet Bell > Colored Sweet Bell	3	\$4.95	\$14.85
2244G.11	Olympus (F1) (OG)-Packet Vegetables > Peppers > Sweet Bell > Green- to-Red Bells	3	\$4.95	\$14.85
579G.11	Sweet Chocolate (OG)-Packet Vegetables > Peppers > Sweet Bell > Colored Sweet Bell	2	\$4.95	\$9.90
3515G.11	Lunchbox Pepper Mix (OG)-Packet Vegetables > Peppers > Sweet Specialty Peppers > Snack Peppers	2	\$4.95	\$9.90
595G.11	Antohi Romanian (OG)-Packet Vegetables > Peppers > Sweet Specialty Peppers	2	\$4.95	\$9.90
3025G.11	Red Flame (F1) (OG)-Packet Vegetables > Peppers > Hot Specialty Peppers > Cayenne Chiles	1	\$3.95	\$3.95
3807.11	Jalafuego (F1)-Packet Vegetables > Peppers > Hot Southwestern Peppers > Jalapeños	1	\$3.95	\$3.95
2397G.11	Ancho 211 (F1) (OG)-Packet Vegetables > Peppers > Hot Southwestern Peppers > Anchos/Poblanos	2	\$4.95	\$9.90
2420G.53	E-Z Pick (OG) Bush Bean-1,000 Seeds Vegetables > Beans > Beans, Bush > Green, Round Pod	1	\$6.95	\$6.95
2259G.11	Luscious (F1) (se+) (OG)-Packet Vegetables > Corn > Normal, Sugary Enhanced, & Synergistic > Bicolor	1	\$3.95	\$3.95
330.51	Northern Pickling (OG)-250 Seeds Vegetables > Cucumbers > American Pickling	1	\$4.60	\$4.60

558G.31	Sugar Snap (OG)-1/2 Pound Vegetables > Peas > Snap	1	\$7.25	\$7.25
592G.11	New England Pie (OG)-Packet Vegetables > Pumpkins > Pie Pumpkins	1	\$3.95	\$3.95
603G.11	Howden (OG)-Packet Vegetables > Pumpkins > Jack-o'-Lanterns	1	\$3.95	\$3.95
2185.11	Valenciano-Packet Vegetables > Pumpkins > Specialty Pumpkins	1	\$3.45	\$3.45
2506.11	Speckled Hound (F1)-Packet Vegetables > Pumpkins > Specialty Pumpkins	1	\$3.45	\$3.45
3067.11	Hooligan (F1)-Packet Vegetables > Pumpkins > Distinctive Ornamentals	1	\$3.45	\$3.45

SubTotal: \$716.10

Order Notes: Regular Shipping: FREE SHIPPING

None FOB Shipping: \$36.00

Tax: \$0.00

Total: \$752.10

Sustainable Food Program and Campus Farm Summer Intern Job Description

Summer 2013

Reports To

Matthaei Botanical Gardens staff with support from current UMSFP Leadership Team and Advisory Board

Summary

The responsibilities of this position are divided into three categories: 1) campus farm care 2) facilitation of communication, student engagement, and events, and 3) administrative support in leadership transition.

Campus Farm Care

- Planting seeds and seedlings in accordance with planting schedule and layout design
- Adjusting planting plan as needed through the season
- Tending greenhouse beds
- Support physical improvements in the farm space (e.g., fencing)
- Weed, water, and harvest as needed
- Prepare produce for distribution according to Good Handling Practices

Student Engagement

- Facilitation of workdays and special events (in greenhouse and outside)
- Marketing of events and initiatives (blog posts, newsletters, etc.)
- Management of UMSFP member group relations

Administrative Support

- Documentation of growing and harvest records, volunteer hours, expenses, and revenue
- Documentation of successes, challenges, and needs
- Following, creating, and revising Standard Operating Procedures as needed
- Creative documentation of events for fundraising and transition purposes
- GAP Certification Paperwork

Required Qualifications

- Familiarity with the work of the UMSFP and Campus Farm
- Experience growing food crops
- Excellent written and verbal communication skills
- Must be self-motivated to complete the work

Compensation

\$10-12/hour for up to 40 hours/week (May-August)

GAP/GHP To-Do's:

1. Create and implement a documented food safety program that incorporates GAP/GHP
2. Designate person to implement and oversee this food safety program
3. *Traceability?*
4. Create and implement training on proper sanitation & hygiene practices to be provided to all employees and visitors
5. Create and post readily understandable signs instructing employees and volunteers/visitors to wash hands before beginning/returning to work
6. Create and implement policy describing procedures for handling & disposing of produce or food contact surfaces that have come into contact w/ bodily fluids/contaminants
7. Perform & document a water quality assessment to determine the quality of water used for irrigation
8. Perform & document a land-use risk-assessment
9. Create & implement a documented pre-harvest assessment for crop production areas, to keep track of risks/possibly contamination, etc
10. Create & implement a standard operating procedure/instructions on measures to be taken in case of contamination by chemicals, petroleum, pesticides, etc
11. Create & implement policy to ensure that product being transported from the field is covered during transportation

**USDA Good Agricultural Practices Good Handling Practices
Audit Verification Checklist**



This program is intended to assess a participant's efforts to minimize the risk of contamination of fresh fruits, vegetables, nuts and miscellaneous commodities by microbial pathogens based on the U.S. Food and Drug Administration's "Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables," and generally recognized good agricultural practices.

Firm Name: Matthaei Botanical Gardens

Contact Person: _____

Audit Site(s): University of Michigan

Main Address: 1800 N Dixboro Rd

City: Ann Arbor **State:** MI **Zip:** 48105

Telephone No: _____ **Fax:** _____

E-mail: _____

Auditor (s): (list all auditors with the lead listed first) _____

USDA or Fed-State Office performing audit:

Arrival Date: _____ **Time:** _____

Departure Date: _____ **Time:** _____

Travel Time _____ **Code** _____

Person(s) Interviewed (use back of sheet if necessary to list all persons interviewed) _____

Did the auditee participate in GAP & GHP training?

Yes No

Is there a map that accurately represents the farm operations?

Yes No N/A

Legal Description/GPS/Lat.-Long. of Location: _____

Are all crop production areas located on this audit site?

Yes No N/A

Total acres farmed (Owned, leased/rented, contracted, consigned): 1/4 acre

Does the company have more than one packing facility?

Yes No N/A

Is there a floor plan of the packing house facility(s) indicating flow of product, storage areas, cull areas, employee break rooms, restrooms, offices?

Yes No N/A

Is any product commingled prior to packing?

Yes No

Audit Scope: (Please check all scopes audited)

General Questions (All audits must begin with and pass this portion)

Part 1 – Farm Review.....

Part 2 - Field Harvest and Field Packing Activities.....

Part 3 - House Packing Facility.....

Part 4 – Storage and Transportation.....

Part 5 – (Not Used)

Part 6 – Wholesale Distribution Center/Terminal Warehouse.....

Part 7 – Preventive Food Defense Procedures.....

Products: _____

Auditors' Signature(s): _____

Conditions Under Which an Automatic "Unsatisfactory" Will be Assessed

- **An immediate food safety risk is present when produce is grown, processed, packed or held under conditions that promote or cause the produce to become contaminated.**
- **The presence or evidence of rodents, an excessive amount of insects or other pests in the produce during packing, processing or storage.**
- **Observation of employee practices (personal or hygienic) that have jeopardized or may jeopardize the safety of the produce.**
- **Falsification of records.**
- **Answering of Questions P1 or P2 as "NO".**

Auditor Completion Instructions

- **For clarification and guidance in answering these questions, please refer to the Good Agricultural Practices & Good Handling Practices Audit Verification Program Policy and Instruction Guide.**
- **Place the point value for each question in the proper column (Yes, No, or N/A).**
- **Gray boxes in the "N/A" column indicate that question cannot be answered "N/A".**
- **Any "N/A" or "No" designation must be explained in the comments section.**
- **The "Doc: column-**
 - **A "D" indicates that a document(s) is required to show conformance to the question. A document may be a combination of standard operating procedures outlining company policy as well as a record indicating that a particular action was taken.**
 - **A "R" indicates that a record is required to be kept showing an action was taken.**
 - **A "P" indicates that a policy/standard operating procedure (SOP) must be documented in the food safety plan in order to show conformance to the question.**

General Questions

Implementation of a Food Safety Program

Questions		Points	Yes	NO	N/A	Doc
P-1	A documented food safety program that incorporates GAP and/or GHP has been implemented.					D
P-2	The operation has designated someone to implement and oversee an established food safety program. Name _____					D

Traceability

Questions		Points	Yes	NO	N/A	Doc
G-1	A documented traceability program has been established.	15				D
G-2	The operation has performed a "mock recall" that was proven to be effective.	10				R

Worker Health & Hygiene

Questions		Points	Yes	NO	N/A	Doc
G-3	Potable water is available to all workers.	10				R
G-4	All employees and all visitors to the location are required to follow proper sanitation and hygiene practices.	10				P
G-5	Training on proper sanitation and hygiene practices is provided to all staff.	15				D
G-6	Employees and visitors are following good hygiene/sanitation practices.	15				
G-7	Employees who handle or package produce are washing their hands before beginning or returning to work.	15				
G-8	Readily understandable signs are posted to instruct employees to wash their hands before beginning or returning to work.	10				
G-9	All toilet/restroom/field sanitation facilities are clean. They are properly supplied with single use towels, toilet paper, hand soap or anti-bacterial soap, and potable water for hand washing.	15				
G-10	All toilet/restroom/field sanitation facilities are serviced and cleaned on a scheduled basis.	10				R

Part 1 - Farm Review

Water Usage

(1-1) What is the source of irrigation water? (Pond, Stream, Well, Municipal, Other)

Please specify:

Municipal

(1-2) How are crops irrigated? (Flood, Drip, Sprinkler, Other) Please specify:

Drip

Questions		Points	Yes	NO	N/A	Doc
1-3	A water quality assessment has been performed to determine the quality of water used for irrigation purpose on the crop(s) being applied.	15				D
1-4	A water quality assessment has been performed to determine the quality of water use for chemical application or fertigation method.	15				D
1-5	If necessary, steps are taken to protect irrigation water from potential direct and non-point source contamination.	15				

Sewage Treatment

Questions		Points	Yes	NO	N/A	Doc
1-6	The farm sewage treatment system/septic system is functioning properly and there is no evidence of leaking or runoff.	15				
1-7	There is no municipal/commercial sewage treatment facility or waste material landfill adjacent to the farm.	10				

Animals/Wildlife/Livestock

Questions		Points	Yes	NO	N/A	Doc
1-8	Crop production areas are not located near or adjacent to dairy, livestock, or fowl production facilities unless adequate barriers exist.	15				
1-9	Manure lagoons located near or adjacent to crop production areas are maintained to prevent leaking/overflowing, or measures have been taken to stop runoff from contaminating the crop production areas.	10				

Questions		Points	Yes	NO	N/A	Doc
1-10	Manure stored near or adjacent to crop production areas is contained to prevent contamination of crops.	10				
1-11	Measures are taken to restrict access of livestock to the source or delivery system of crop irrigation water.	10				
1-12	Crop production areas are monitored for the presence or signs of wild or domestic animals the entering the land.	5				R
1-13	Measures are taken to reduce the opportunity for wild and/or domestic animals from entering crop production areas.	5				R

Manure and Municipal Biosolids

Please choose one of the following options as it relates to the farm operations:

_____ Option A. Raw manure or a combination of raw and composed manure is used as a soil amendment.

_____ Option B. Only composted manure/treated municipal biosolids are used as soil amendments.

_____ Option C. No manure or municipal biosolids of any kind are used as soil amendments.

Only answer the following manure questions (questions 1-14 to 1-22) that are assigned to the Option chosen above. DO NOT answer the questions from the other two options. The points from the manure and municipal biosolids are worth 35 of a total 190 points, and answering questions from the other two options will cause the points to calculate incorrectly.

Option A: Raw Manure		Points	Yes	NO	N/A	Doc
1-14	When raw manure is applied, it is incorporated at least 2 weeks prior to planting or a minimum of 120 days prior to harvest.	10				R
1-15	Raw manure is not used on commodities that are harvested within 120 days of planting.	10				R
1-16	If both raw and treated manure are used, the treated manure is properly treated, composted or exposed to reduce the expected levels of pathogens.	10				R
1-17	Manure is properly stored prior to use.	5				

Option B: Composted Manure		Points	Yes	NO	N/A	Doc
1-18	Only composted manure and/or treated biosolids are used as a soil amendment.	10				R
1-19	Composted manure and/or treated biosolids are properly treated, composted, or exposed to environmental conditions that would lower the expected level of pathogens.	10				D
1-20	Composted manure and/or treated biosolids are properly stored and are protected to minimize recontamination.	10				
1-21	Analysis reports are available for composted manure/treated biosolids.	5				R
Option C: No Manure/Biosolids Used		Points	Yes	NO	N/A	Doc
1-22	No animal manure or municipal biosolids are used.	35				P

Soils

Questions		Points	Yes	NO	N/A	Doc
1-23	A previous land use risk assessment has been performed.	5				R
1-24	When previous land use history indicates a possibility of contamination, preventative measures have been taken to mitigate the known risks and soils have been tested for contaminants and the land use is commensurate with test results.	10				R
1-25	Crop production areas that have been subjected to flooding are tested for potential microbial hazards.	5				R

Traceability

Questions		Points	Yes	NO	N/A	Doc
1-26	Each production area is identified or coded to enable traceability in the event of a recall.	10				R

COMMENTS:

Part 2 - Field Harvest and Field Packing Activities

Field Sanitation and Hygiene

Questions		Points	Yes	NO	N/A	Doc
2-1	A documented pre-harvest assessment is made on the crop production areas. Risks and possible sources of crop contamination are noted and assessed.	15				D
2-2	The number, condition, and placement of field sanitation units comply with applicable state and/or federal regulations.	10				
2-3	When question 2-2 is answered "N/A" (sanitation units are not required), a toilet facility is readily available for all workers.	10				
2-4	Field sanitation units are located in a location that minimizes the potential risk for product contamination and are directly accessible for servicing.	10				
2-5	A response plan is in place for the event of a major spill or leak of field sanitation units or toilet facilities.	10				P

Field Harvesting and Transportation

Questions		Points	Yes	NO	N/A	Doc
2-6	All harvesting containers and bulk hauling vehicles that come in direct contact with product are cleaned and/or sanitized on a scheduled basis and kept as clean as practicable.	10				D
2-7	All hand harvesting equipment and implements (knives, pruners machetes, etc.) are kept as clean as practical and are disinfected on a scheduled basis.	10				D
2-8	Damaged containers are properly repaired or disposed of.	5				
2-9	Harvesting equipment and/or machinery which comes into contact with product is in good repair.	10				
2-10	Light bulbs and glass on harvesting equipment are protected so as not to contaminate produce or fields in the case of breakage.	10				

Questions		Points	Yes	NO	N/A	Doc
2-11	There is a standard operating procedure or instructions on what measures should be taken in the case of glass/plastic breakage and possible contamination during harvesting operations.	5				P
2-12	There is a standard operating procedure or instructions on what measures should be taken in the case of product contamination by chemicals, petroleum, pesticides or other contaminating factors.	5				P
2-13	For mechanically harvested product, measures are taken during harvest to inspect for and remove foreign objects such as glass, metal, rocks, or other dangerous/toxic items.	5				
2-14	Harvesting containers, totes, etc. are not used for carrying or storing non- produce items during the harvest season, and farm workers are instructed in this policy.	5				P
2-15	Water applied to harvested product is microbially safe.	15				R
2-16	Efforts have been made to remove excessive dirt and mud from product and/or containers during harvest.	5				
2-17	Transportation equipment used to move product from field to storage areas or storage areas to processing plant which comes into contact with product is clean and in good repair.	10				
2-18	There is a policy in place and has been implemented that harvested product being moved from field to storage areas or processing plants are covered during transportation.	5				P
2-19	In ranch or field pack operations, only new or sanitized containers are used for packing the product.	10				D
2-20	Packing materials used in ranch or field pack operations are properly stored and protected from contamination.	10				
2-21	Product moving out of the field is uniquely identified to enable traceability in the event of a recall.	10				D

**Good Agricultural Practices & Good Handling Practices
 Audit Verification Program Scoresheet**



Facility Name (Print) as it should appear on Certificate:			
Street Address (Print):		City (Print):	State (Print):
e-mail Address (Print):		fax number:	Zip (Print):
		Date Audit Requested:	
		Date of Previous Audit :	
Date Audit Began:		Date Audit Completed:	USDA Commodity Procurement Audit?
Time Audit Began:		Time Audit Completed:	Check One Yes <input type="checkbox"/> No <input type="checkbox"/>

EVALUATION ELEMENTS

Scopes Requested	Element	Possible Points	Less N/A Points	Adjusted Points	Passing Score*	Facility Score	Pass Fail	Date Passed	General Questions	Reviewing Official	Un-announced
X	General Questions	180									
	Part 1 – Farm Review	190									
	Part 2 – Field Harvesting & Field Packing Activities	185									
	Part 3 – House Packing Facility	290									
	Part 4 – Storage and Transportation	255									
	Part 6 – Wholesale Distribution Center/ Warehouses	410									
	Part 7 – Preventative Food Defense Procedures	180									

**A Passing Score is 80% of the Possible Points or the Adjusted Points, if adjustment are necessary, with no "automatic unsatisfactory" conditions is required for certification.

Commodities Reviewed (Print):	Commodity:								
	Acres:								

Send completed GAP&GHP Certificate to: (choose one) Inspection office: (list office) Directly to auditee above:

Lead Auditor Name (Print): _____ **Duty Station:** _____ **Signature & Date:** _____

Facility Representative signature: _____ **Date:** _____ **All Scopes Completed:** _____

By signing this form, the facility representative agrees to have company information posted to the USDA website. A company will only be listed on the USDA website if all scopes audited receive a passing score.

For USDA HQ use:

Reviewing Official Name (Print) _____ **Signature:** _____

Date Received: _____ **Date Certificate Mailed:** _____ **Date Posted to USDA Website:** _____

Revised January 26, 2012
 USDA, AMS, FVP, FPB
 For Official Government Use Only

USDA Good Agricultural Practices and Good Handling Practices Corrective Action Report

USDA Fruit and Vegetable Programs Good Agricultural Practice & Good Handling Practices CORRECTIVE ACTION REPORT	Report #: _____ of _____
Company Name/Farm:	Date:
Lead Auditor:	
Crop(s):	
Description of Non-Conformity:	
Notified company staff at time of finding non-conformity: _____	
Checklist question number and/or section of auditee food safety plan non-conformity is associated with: _____	
Company Representative Signature: <div style="text-align: center;">SIGNATURE AFFIRMS FACTS CONCERNING NON-CONFORMITY ARE CORRECT</div>	
Corrective Action Proposed and Time Frame for Implementation:	
Auditor Signature for Acceptance of Proposed Corrective Action and Timetable for Implementation:	

Friends of the Campus Farm – Constitution¹

CONSTITUTION

Friends of the Campus Farm

The members of the Friends of the Campus Farm establish this constitution to empower students to create a healthy future through sustainable food education, training, and outreach.

Article I – Name

The name of the organization will be Friends of the Campus Farm, henceforth referred to as FCF.

Article II – Purpose

FCF is established for the purpose of creating an on-campus farm and providing constructive student input at the University of Michigan, which will provide students with opportunities to develop knowledge and skills related to farming and agriculture, food preparation and preservation, personal and environmental health, community outreach, and business and economic development. Our work will focus on providing constructive input into the University of Michigan Sustainable Food Program (UMSFP).

FCF understands and is committed to fulfilling its responsibilities of abiding by the University of Michigan policies and procedures.

Article III – Membership

Active membership shall be limited to persons officially connected with the University of Michigan as faculty, staff or registered students. In addition, the following requirements are necessary to constitute active members: FCF openly admits students to its membership who attend at least one meeting per semester or who maintain regular communication with the group. Passive membership shall be admitted to any who request it. Passive membership grants access to the email newsletter, but does not require active contributions. FCF does not discriminate on the basis of race, sex (including gender identity and expression), color, religion, creed, national origin or ancestry, age, marital status, sexual orientation, disability, or Vietnam-era veteran status.

Article IV – Officers

¹ This text was submitted for application to be a student organization during Fall 2012. This constitution will need to be adjusted as the student organization grows and the farm is further established. For example, the farm has been created, so the language should be changed above.

FCF will be governed by the following means:

1. An elected President will preside at all meetings. The President will maintain the power to appoint all committee chairpersons, shall present all motions to the body, and shall be present at 75% of the FCF meetings.
2. FCF shall also maintain a Vice President. The Vice President's duties shall be to preside at all meetings and functions that the President cannot attend.
3. FCF members shall also elect a Secretary-Treasurer who will handle all dues, accounts, new members, rule observances at stated meetings, protocol, etc.
4. Committee chairpersons shall oversee their respective committee members helping to direct and steer progress on their committee's projects
5. Committees themselves shall be formed around topics of interest, for example: overseeing the website, contributing to grant writing, maintaining contact with the University of Michigan Sustainable Food Program advisory board, etc.

Article V – Operations

1. Voting Eligibility
 - a. Those members meeting all requirements of active membership as set forth in Article III will be granted voting privileges
2. Election Process
 - a. All officers shall be elected by a majority vote of the eligible voting members of FCF. All elections will be held on an annual basis during the month of January or as needed to fill vacant positions.
 - b. The President will take nominations from the group, the nomination process must be closed and the movement seconded. The nominated parties will be allowed to be candidates for election.
 - c. All voting shall be done by secret ballot to be collected and tabulated by the Secretary-Treasurer and one voting member of FCF, appointed by the outgoing President.
3. Meetings
 - a. All meetings will occur on a monthly basis or other regular basis at a time selected by FCF and will follow to the procedure set forth below.
 - i. Attendance
 - ii. Report by the President
 - iii. Committee Reports
 - iv. Vote on all Committee motions/decisions
 - v. Any other Business
 - vi. Dismissal by the President

Article VI – Finances

FCF will finance the activities it engages in by the following means:

1. Direct funding from the University's General Fund Membership dues
2. Future fundraising activities
3. Donations made to the group

Article VII – Amendments

This constitution is binding to all members of FCF. But the constitution is not binding unto itself. Amendments to the constitution may be proposed in writing by any voting member of FCF at any meeting at which 2/3 of the voting members are present.

These amendments will be placed on the agenda for the next regular meeting of the executive council or other officer grouping.

Proposed amendments will become effective following approval of two-thirds (2/3) vote of all active members.

Article VIII – Removal of Membership

1. Removal of Officers
2. Any officer of FCF in violation of FCF's purpose or constitution may be removed from office by the following process:
 - a. A written request by at least three members of the organization
 - b. Written notification to the officer of the request, asking the officer to be present at the next meeting and prepared to speak
 - c. A two-thirds (2/3) majority vote is necessary to remove the officer.

Article IX – Statement of Compliance

By completing the registration process, we agree to abide by the University's policies. We understand that the organization's registration is contingent on the acceptance of these policies.

Article X – Maintenance of UMSFP.com

The FCF Web Committee shall be in charge of maintaining the UMSFP website, <http://www.umsfp.com>. This includes updating the timeline, photos page, job board, blog, sending email updates, and the associated Facebook page. Since the website reflects activities throughout the UMSFP and its member organizations, any individual within any of those organizations may present a grievance about the website to the Web Committee Chair who will address the issue. If issues are not addressed to the satisfaction of any individual member, they may bring their grievances to the FCF president or vice president to be handled to the best of their judgment.

Friends of the Campus Farm Leadership Tasks

Administrative (5 hours/week)

- Answer emails and use listserves for communication
 - Farm.core@umich.edu (for leadership)
 - campusfarm@umich.edu (for general members)
- Communicate with UMSFP: update calendar, send events for UMSFP newsletter, share photos and events for UMSFP facebook page, keep information on website up to date (contact umsfpcomm@umich.edu)
 - Use Maize Pages as needed (search: Friends of the Campus Farm)
- Manage finances in SOAS and Botanical Gardens account

Farm Management (5-10 hours/week, seasonally)

- Work with interns and volunteers to make crop plan each season
- Start seeds in Botanical Gardens greenhouses
- Tend crops with help of interns and volunteers
- Meet quarterly with Matthaei Botanical Gardens staff to review farm planning and operations
- Document successes and challenges
- IMPORTANT: Maintain a good relationship with Matthaei Botanical Gardens staff by letting them know when you are planning workdays and events, and ESPECIALLY when you plan to borrow equipment (eg: shovels, rakes, etc.)

Volunteer Engagement (5 hours/week)

- Follow Standard Operating Procedures for workdays and update SOP as needed
- Upload successful workday themes and ideas to SOPs
- Keep volunteers happy, active, and well-fed at workdays
- Actively recruits new volunteers, especially at the beginning of each semester (Festifall, Northfest and Winterfest)
- Track volunteer names, contact info, and hours
- Work with Botanical Gardens staff to secure tools
- In charge of taking pictures at events and workdays

Campus Farms at Peer Institutions

Since there are over 50 campus farms in existence already, from long-established to brand new and from volunteer-run to institutionally funded, UMSFP does not have to look far for models in establishing our own program. In beginning our research on the most effective structure for UMSFP and the campus farm, we first looked to peer institutions, many of whom did this same research in beginning their own programs. Out of all the institutions we researched through emails, website browsing, and site visits, the following six were chosen as a representative sample of different models relevant to our situation here at UM. Using history, goals, organizational structure, funding, and farm production as our comparison points, we chose these institutions to present a comparison here because they represent various points along the continuum of campus farm models and directions that UMSFP could take in the future.

- **Duke University (Duke Campus Farm):** the most recent campus farm; started in a similar way to UMSFP and with very similar explicit goals; single full-time staff model; sells food to dining halls; not a land-grant school
- **UW-Madison (F.H. King Student Farm):** institutionally funded; student-run model; does not sell to dining halls
- **Yale University (Yale Sustainable Food Project):** broader program accompanying the farm; full institutional support; multiple full-time staff model; sells to dining halls; not a land-grant university
- **UI-Champaign-Urbana (Sustainable Student Farm):** started with seed money; single full-time staff model; sells to dining halls and farm stand
- **University of Vermont (Common Ground Student-Run Educational Farm):** student-run model; CSA model; guidance from Horticultural Research Center
- **Michigan State University (Student Organic Farm):** our in-state neighbors; multiple full-time staff model; large-scale; extensive education initiatives

In researching these institutions, we were able to shape our own goals based on successes of other programs by comparing our resources, goals, and organizational structure. While our experience most closely mirrors that of the Duke Campus Farm, we looked closely at the MSU Student Organic Farm knowing we will inevitably be compared to this program. Like Duke, we are in a unique position to educate a diverse group of student, mostly from non-farming backgrounds, that will bring this education into equally diverse spheres of influence after graduation. UMSFP and the UM campus farm will never be, and should not strive to be, exactly like the MSU Student Organic Farm or the Yale Sustainable Food Project, but we can certainly take lessons from their journeys as we embark on our own.

	Duke University ¹	University of Wisconsin- Madison ²	Yale University ³	University of Illinois at Urbana-Champaign ⁴	University of Vermont ⁵	Michigan State University ⁶
Land-grant school?		X		X	X	X
History						
Year started	2011	2003	2003	2009	1994	1999
Initial organization	Students in "Food and Energy course kept working on project, created business and operational plan, pushed university to support it	1979 started as student group— Students for Sustainable Agriculture	Students in course concerned about food in dining halls in 2000, formed group "Food from the Earth" and organized conference in 2002; Alice Waters got involved, hired staff in 2003 and formed steering committee; pilot project with local food in dining halls led to farm	Project of Student Sustainability Committee with collaboration from student leader (Zachary Grant), two faculty, and UIUC Dining	Common Ground Agricultural Club did research, two students started as independent study, financial help from Plant and Soil Science Dpt and guidance from Hort Farm manager, funding from Friends for the Horticultural Farm	Student initiative to apply coursework from horticultural classes; support from faculty member
Institutional Structure						
University partners	Join management: Duke Dining (Bon Appetite) and Sustainability Office	N/A	N/A	Dept. of Crop Sciences, UIUC Dining, Student Sustainability Committee	UVM Horticulture Research Center	Horticulture Department, Residential Initiative on the Study of the Environment, Departments of Animal Science and Forestry, and Residential and Hospitality Services
Leadership						
Student volunteers	X	X (trying to make students feel more involved)	x	X	X	X
Interns	2 full-time summer, 4 work-study during school year	12-15 one-year internships; garden caretaker is 2-year position	6 full-time summer undergraduates; roughly 20 total per year	N/A	5 one-year interns, 40-50hr/wk each during summer and 5-8 hr/wk each during school year	9 interns on Farm Crew

Full-time staff	1 farm manager, 1 Fellow (funded by endowment) focused on education	N/A	Program Director, Farm Coordinator, Outreach and Education Coordinator, Program Support, and Fellow	1 full-time currently with future model of 1 full-time 50/50 farm and education manager, 1 full-time farm manager, and seasonal employees	N/A	9 full-time in farm, communications, programming, and business management positions
Advisory board	X (1/3 faculty, community members, and administration)	N/A	X	N/A	N/A	X (Steering team with staff and one faculty member)
Funding						
Start-up funds	Initial seed grants from Duke	N/A	N/A	Grant from student sustainability Committee (\$50k in 2008, \$25k in 2010, \$10k in 2011 to be repayed in 5 years)	N/A	\$95,000 in start up funds from Kellogg Foundation in 2002
Institutional	Farm manager salary	~\$1.20/per student from fees collected and distributed among 15 Registered Student Organizations	Yale operating budget; Yale Advisory Committee on Env. Management's Green Fund	University dining services and the Department of Crop Sciences	Student Government Association	N/A
Grants	\$75,000 from The Duke Endowment	Occasionally apply for small-scale grants	Lazarus family donation to support fellowships	N/A	N/A	\$100,000 USDA Higher Education Challenge Grant in 2003; USDA Integrated Organic Program grant + MSU funding in 2005-2007 for course development
Revenue streams	Dining Services, farmers market, CSA (\$15,800 in 2012), individual donors	Past revenue from pilot CSA project not currently running	Farmers market; individual donors	Produce sales: 34% of operating budget (\$15,000/acre), about \$25k per year	CSA sales, fundraising	CSA, farm stand, dining services, fundraising, individual donors
Education						
Practical coursework	X (developing certificate program)	X	X	X	X (farm planning course)	X (extensive coursework)
Informal education	X	X	X	X	X	X
Farm						
Size	1 acre (half acre in production, half cover-crop)	1 acre with 5000 sq feet for perennials and fruit trees	1 acre	3 acres + 10,000 sq. ft. high tunnel space	3 acres, 1 acre always in cover crop	10 acres

Produce market	Dining Services, farmers market, pilot summer CSA (15 shares) instead of selling to Dining Services	75-80% given away at free farm stand on campus each week; 20-25% to local food pantry; Have done CSA in the past (10 paid shares, 15 shares for volunteers); possibly UW Dining Services (website says so, personal communications does not)	Farmers market, donations, volunteers	75% Dining Services, 25% farm stand	Farmers market, CSA, donations to local food shelves through Campus Kitchen partnership	CSA, farm stand, dining services
Proximity to campus	7 miles	Far west end, 2 miles from east end	15 minute walk from central campus	2 miles	3-4 miles from campus	5 miles from central campus
Transportation	carpool	Bus, bike	Walk, bus	N/A	bike	carpools
Production	2011: 6,500 lbs 2012: 7,400 lbs	N/A	N/A	25,000 lbs in 2009	64 CSA shares in 2011	65 year-round CSA shares, 100 summer shares; 22,500lbs harvested in first year from 10,000 sq ft of greenhouse and 1.5 acres

Note: N/A refers to informational that was not available or unclear during research.

1. Interview with Emily Sloss, Farm Manager (emily.sloss@duke.edu), 9/21/2012; <http://sites.duke.edu/farm/>
2. Email correspondence with farm staff, especially Matt Covert
3. <http://www.yale.edu/sustainablefood/>
4. Email correspondence with Zachary Grant (Sustainable Student Farm Manager, zbgrant@gmail.com); <http://thefarm.illinois.edu/>
5. Personal interviews, 11/2012; <http://www.uvm.edu/~cgsref/>
6. <http://www.msuorganicfarm.com/>; "Development of a Year-Round Student Organic Farm and Organic Farming Curriculum at Michigan State University" (<http://horttech.ashspublications.org/content/16/3/432.full.pdf>)

Appendix 5: Organization and Leadership

5.a. UMSFP Member Group Council Description and Purpose (2013)

5.b. UMSFP Leadership Team Charter (2012-2013)

5.c. UMSFP Leadership Team List

5.d. University of Michigan Sustainable Food Program Advisory Board Charter

5.e. UMSFP Leadership Team Tasks

5.f. UMSFP Leadership Team Elections (2013)

5.g. 2012-2013 UMSFP Advisory Board Members

5.h. UMSFP Annual Report (2012)

5.i. UMSFP Infographics

5.j. Expectations for UMSFP Success

UMSFP Member Group Council Description and Purpose

UMSFP Member Group Council

Purpose

To empower member groups to work to their full potential individually and collectively by sharing a unified vision and voice, expertise and resources in learning, planning, and acting to advance sustainable food at UM

Sharing Expertise and Resources

Each member group brings a unique history, mission, and set of expertise to the table. In getting a representative from each group together in the same room, we magnify our ability to mobilize students, plan events, and impact change on campus. The Member Group Council exists to support the transfer of this knowledge from group to group during meetings, over informal communications, and through collaborative events. Regular meetings will ensure that groups are not re-inventing the wheel, struggling to learn skills, or lost in finding resources that fellow member groups already possess.

Expertise already embodied in UMSFP member groups:

- Student outreach: volunteer recruitment and engagement strategies
- Communications: newsletter templates, poster designs, listserv organization
- Funding: sources of funding, previous funding applications
- Event planning: ideas, key contacts, publicity
- Leadership training: plans for leadership succession, roles within organization
- Education: lesson plans, workshop templates
- Mission-specific knowledge: gardening, beekeeping, nutrition, etc.

Structure

Representation: The collective voice of each UMSFP member group is represented on this council through **one representative**. This representative acts as the liaison for their member group, bringing questions, concerns, and celebrations to the Council and reciprocating the same communication back to their group. Each group is responsible for maintaining representation on the Council, whether it means electing a single representative each semester/year, or rotating representation at each meeting. Member groups who are not present at a meeting are responsible for staying up-to-date and active within the Council until the next meeting.

Responsibilities: Communicating among member groups and within UMSFP leadership as needed, with bimonthly meetings to promote...

- Learning: sharing above-mentioned expertise and resources
- Planning: creating calendar of events each semester that gives diverse opportunities for student growth and involvement without competition between member groups
- Acting: coordinating UMSFP potlucks and one larger UMSFP event per semester

Leadership: To ease the time-commitment burdens of Member Group Council representatives, the Relations Coordinator from the UMSFP Leadership Team will coordinate meetings with input from representatives.

UMSFP Mission Statement: Fostering collaborative leadership that empowers students to create a sustainable food system at the University of Michigan while becoming change agents for a vibrant plan

UMSFP Leadership Team Charter

Year:

Team Members:

Purpose

To carry out the mission of UMSFP and grow the program through communication, outreach, and organizing

How to “be” UMSFP

In our speech and actions, we embody UMSFP. We model the UMSFP mindset to everyone we interact with—students, faculty, UM administration, and community members. We speak to the mission of UMSFP in everything we do. Our words and actions are grounded in this mission, and we make it a point to explicitly and implicitly make this known. What does this actually mean...?

- *We do a lot of listening.* UMSFP is here to serve the community, to connect people, to make things happen, so we listen first and respond accordingly.
- *We collaborate.* We foster a collaborative environment that encourages dialogue by making ourselves available and considering everyone’s needs before acting, and we actively seek new partnerships across the university and the community. We invite people to the table to talk, eat, organize, and collaborate.
 - Example: In facilitating meetings, we open up dialogue and make sure everyone’s concerns and ideas are heard.
 - Example: We actively reach out to groups or individuals who are both supportive and not supportive of our work, and we move towards mutually beneficial relationships.
 - Example: We support the work of other groups and strive to avoid redundancy within the food movement.
- *We spread the word.* We talk about UMSFP in a “big picture” way while giving tangible details. Our three goals—education, community, and food production—are woven into the narrative of what we do, how we do it, and for what purpose.
 - Example: Introducing the program to a person or group for the first time might sound little like this—“UMSFP is a program that brings together the work of students who are already working to build a more sustainable food system on campus. Building from the momentum that these groups and students who came before us, the UMSFP was founded to bring everyone together to magnify the voices of individual groups. UM is in a unique position to train future leaders in food systems in diverse disciplines, since food cuts across academic silos and into everyone’s lives. Formal and informal education paired with the on-the-ground work of students is moved forward through the collective efforts of everyone

involved in UMSFP, with the campus farm and on-campus gardens serving as a central hub or that learning.”

- *We eat good food.* We take every opportunity to model what it looks like to support sustainable food. Potlucks, snacks, meetings over dinner...
 - Example: We splurge for the homemade, organic, fair-trade chocolate chip cookies instead of the Oreos for meetings (when possible).
- *We dream big.* We’re grounded in the realities of our constraints, but we dream about our biggest potential to revolutionize the food system at UM and beyond. We consider all our possibilities as being serious possibilities someday, even while they seem completely unreachable at the moment.
- *We put education first.* Our 3 goals are in that order for a reason. The potential for education guides all our decisions, with an eye towards building community, and if we can produce food while doing, all the better. If not, no big deal.
- *We play the “institution game” but we don’t get bogged down by it.* We work within the bounds of the bureaucracy, respecting the standard channels of communication and action because we’re “not just another student group.” We legitimately earn the respect of UM...while pushing the boundaries of the status quo and creatively advancing sustainable food wherever possible. We don’t let UM squash our dreams; rather, we work with UM to make the goals of UMSFP the shared aspirations of the entire community.

Roles and Responsibilities

See “Leadership Team Tasks” document for detailed responsibilities.

Norms and Procedures

Meetings

- ...
- ...

Communication

- ...
- ...

Record Keeping

- ...
- ...

Conflict Resolution

- ...
- ...

UMSFP Leadership Team List

2012-2013

SNRE Masters Project Team—

- Liz Dengate (eedengate@gmail.com, Conservation Ecology, '13)
- Allyson Green (green.allyson@gmail.com, Environmental Justice & School of Public Health, '14)
- Lindsey MacDonald (lindsey.e.mac@gmail.com, Conservation Ecology '13)
- Jerry Tyrrell (geraldtyrrell@gmail.com, Conservation Ecology '13)

UMSFP Student Board Members (September to April) —

- Lauren Beriont (lberiont@umich.edu, Program in the Environment '13)
- John Graham (jbgraham@umich.edu, SNRE PhD)
- Izzy Morrison (imorris@umich.edu, Program in the Environment '13)
- Allison Sponseller (asponseller@gmail.com, Social Work MS '13)
- SNRE Masters Project Team

UMSFP Interns (hired Winter 2013 semester)—

- Sarah Schwimmer (sarah.i.schwimmer@gmail.com, Program in the Environment '13)
- Lauren Beriont (lberiont@umich.edu, Program in the Environment '13)

2013-2014

Academic Ambassadors—

- Mariel Borgman (marielbo@umich.edu)
- Sammie Levin (smlevin@umich.edu)

Communications Specialists—

- Dayani Waas (dayani@umich.edu)
- Rachael Gingerich (rcginger@umich.edu)

Relations Coordinators—

- Becca Liebschutz (rlieds@umich.edu)
- Oren Brandvain (oooren@umich.edu)

Program Caretakers—

- Allyson Green (aggreen@umich.edu)

Samantha Miller (samleigh@umich.edu)

University of Michigan Sustainable Food Program Advisory Board Charter

The purpose of the University of Michigan Sustainable Food Program (UMSFP) Advisory Board is to provide vision, guidance, advocacy, and support for the operations, programs, outcomes, and leadership of the UMSFP. Its goal will be to raise awareness about and support for sustainable food practices among students, faculty, staff, and alumni; and in partnership with related organizations regionally. Its efforts will include, for example, offering support and advice for farmers' markets, student groups, the Campus Farm, and events and programs that further the overall goals of the UMSFP.

Principles guiding the Advisory Board's work include the following:

- The Advisory Board will privilege student voice, while it balances this commitment with institutional capacity and resources.
- All student and non-student Advisory Board member respect each other's experiences and roles, and work together to support those responsible for aspects of the UMSFP.
- As part of the UMSFP, the Campus Farm is primarily experiential and educational, serving as a vehicle for studying and participating in food production, economics, health, ecology, public policy, design, and other related areas. Although the Campus Farm will grow and evolve over time, it developed from student vision and the Advisory Board seeks to honor that history through student participation.
- The UMSFP is a collaborative group with other University of Michigan sustainability-related efforts, and serves as a physical and programmatic hub for food-related campus groups.
- The Advisory Board operates with the best characteristics of the sustainability movement, including decision-making and behaviors which include the community at large, decisions which reflect an understanding of the impact on others, and which promote social, environmental, and financial health.

Initial Advisory Board efforts will include developing the UMSFP into a financially stable and socially sustainable operation. UMSFP leadership will decide future priorities, with support from the Campus Farm's administrative host(s), and with guidance from the Advisory Board.

The Advisory Board is student led, and is comprised of approximately 50% student membership. The Advisory Board's size is determined by the student leadership, but will be sized to create diversity and breadth of perspective and experience, and reasonable ability to manage efficiently. The Advisory Board may establish sub-committees as agreed upon by other members. Members will be invited to serve annually by the student leadership. All members of the Advisory Board should be committed to the continuous improvement of the UMSFP.

UMSFP Leadership Team Tasks

General Tasks for each leader

- Stay up to date on UMSFP and member group activity
- Attend and prepare for advisory board meetings (read and edit agenda)
- Prepare for leadership meetings (read and edit agenda)
- Update Project List
- Maintain records of work hours
- Update Facebook (as needed; member group reps help with this too)

Relations Coordinator

Your concentration will be in supporting UMSFP Member Groups and strengthening our entire organization's network with other units like the Graham Institute, the Office of Campus Sustainability and groups operating outside of UM, like Slow Food Huron Valley.

Specific responsibilities include

- Helping to coordinate activities among the UMSFP member groups and ensure their success
- Establishing ties to organizations in Ann Arbor, Michigan and around the US
- Coordination of the monthly Member Group Council meetings

Strong candidates will have

- Strong facilitation and conflict resolution and motivation skills
- The ability to identify partners in the community and maintain relationships with them

More details on role and responsibilities

- Diversify the reach of the UMSFP through partnering with other student groups and programs, community members and groups in Ann Arbor, Ypsilanti and Detroit (10 hours/semester)
- Coordinate communication between member groups as needed (e.g., initiate potluck planning, call and run member group council meetings until that council has formalized leadership structure, schedule blog-writing and newsletter updates from member groups) (5 hours/week)
- Help member groups be successful: tie them into professors or university officials as needed, help them coordinate photographers, encourage resource-sharing among groups (workshops, grant applications, help with each other's events)
- Review, and then accept or decline new applications from potential member groups, and orient those who are accepted
- Send Communications Specialists upcoming member group events for inclusion in weekly newsletter (and encourage groups to do send their own events as well)

Academic Ambassador

Your focus will be on maintaining existing collaborations with professors and their classes and developing new projects that will provide teaching opportunities for profs, education for students and the option for community improvements outside the classroom.

Specific responsibilities include

- Reaching out to professors to discuss possibilities for collaborations with their classes
- Maintaining existing relationships with professors and documenting positive partnerships

Strong candidates will

- Be comfortable talking in front of groups about the sustainable food program
- Be organized, punctual and creative as you begin relationships with new professors

More details on role and responsibilities

- Reach out to professors in relevant departments to inquire about class collaborations with UMSFP (30 hours/semester)
 - Keep running list of possible ways to collaborate with UMSFP (e.g., field trips, panel discussions, volunteer opportunities, design projects)
 - Email professors and departments at least 2 months prior to the beginning of each semester to explain UMSFP and outline collaboration possibilities
 - Follow up with interested professors to schedule collaborations through email and personal meetings
 - Enable the desired collaborations by scheduling and arranging the needed people and resources
 - Follow through with collaborations
- Keep running list of academic collaborations that have happened (10 hours/semester)
- Keep running list of potential collaborations (5 hours/semester)
- Reach out to academic departments with field placements, independent studies, and internship requirements (5 hours/semester)
- Identify possible research collaborations with professors (5 hours/semester)
- Keep up relationships with key UM administration (meetings as needed)
- Ensure that events, partnerships and volunteer opportunities are open to staff and faculty

Communications Specialist

You will be primarily responsible for spreading information about what the UMSFP and our member groups are doing as we improve our food system at UM and elsewhere using social media, our newsletter and other outlets.

Specifically your responsibilities will include

- Publicizing events using the weekly UMSFP newsletter, Facebook, and our website
- Responding to general questions by the public and interested students

Strong candidates will have

- Excellent written communication skills
- Experience writing for websites and a willingness to learn simple web coding

More details on role and responsibilities

- Publicize UMSFP and member group events/news and maintain strong web presence
 - Compile and send weekly newsletter and update calendar (2 hours/week)
 - Update website, including blog, pictures, media, member groups, contact info, resources, and press releases (2 hours/week)
 - Use media outlets (e.g. Michigan Daily, Record, AnnArbor.com, etc.) to promote events and gain publicity throughout the semester (5 hrs/month)
- Answer umich.comm@umich.edu (and umsfpsfp@umich.edu) emails (1 hour/week)

- Create and distribute relevant reports and outreach materials, including table-toppers, event flyers, and year-end annual report (20 hours/semester)
- Keep Standard Operating Procedures (SOPs) up-to-date (as needed; minimal)

Program Caretaker

You are responsible for maintaining the integrity of the UMSFP, keeping sight of the overarching mission to provide education, build community and grow food and ensuring that the organization as a whole can meet these goals by seeking funding and documenting successes.

Specific responsibilities include

- Identifying, and applying for, funding for the program
- Linking activities to the core mission and conveying that message to potential donors
- Ensuring documentation, transparency, and smooth transitioning of leadership

Strong candidates will

- Be flexible and able to assist other team members as needed on their specific projects
- Be able to sell this program to potential funders and strategic allies.
- Be visionary thinkers

More details on role and responsibilities

- Seek grants and fundraising opportunities (10 hours/semester)
- Plan and coordinate so that Advisory Board Meetings are scheduled and run monthly (5 hours/month)
- Ensure other workers are being effective and efficient
- Keep up relationships with key UM administration (meetings as needed)
- Take overall leadership of the Harvest Festival and document all activity for future leaders of the Festival, and act as liaison to MBGNA (at least 10 hrs/week, July-October each year)
- Form committee to take leadership of various aspects of the Harvest Festival in October
 - Food
 - Volunteers
 - Activities
 - Publicity
 - Signs and Site Design
 - Entertainment
 - Finances
 - Member Group participation
- Orchestrate other events as needed (e.g., Earth Week celebrations)

UMSFP Leadership Team Elections 2013

Student Advisory Board is made of 8 students (at least 3 undergrads and grads)

Election Timeline:

1. Release job descriptions on Monday, Feb 18
2. Have applicants submit applications, Feb 18 - Mar 1
3. Elections (voting) are held, Mar 1 - Mar 15

Rules:

1. All positions are up for re-election
2. We need 2 people to fill each of the 4 roles (We may not hit 4 and 4, so this should offer some flexibility, any better ideas?)
3. Winners will serve as leadership team and students on the advisory board
4. We should create a form for people to apply - what do we ask? (besides name, year, dept.)
 - Why are you interested in food systems?
 - What organizing experience do you have?
 - What skills do you possess? (ex: web design, grantwriting, etc.)
 - What has your involvement with the UMSFP been (involvement with Member groups counts!)

Job Descriptions:

- Used leadership team tasks and student projects document to come up with 4 positions.
- Wrote them up like internships, short for public consumption
- Eventually the Program Coordinator will offer leadership training to the unpaid leadership team

-How will people apply for these? Are they applying for specific roles? Are they submitting a single app and checking boxes for each position that interests them? -JT

-I think we should have people apply for specific roles and write their application specifically for those roles. But, if we have holes, we can ask people before the deadline to fit into other slots if need be. - LM

-I like that idea - JT

Notes for us ^^^^^^

 What gets sent to the public vvvvvvvv

Apply now to serve on the UMSFP Leadership Team

We are looking for students to act as the UMSFP Leadership Team, and fill 8 slots spread among 4 different leadership positions. Although these positions are unpaid, student leaders will gain leadership experience that will be valuable in future careers as they run and shape the UMSFP as a team. The existing Leadership Team will help and guide each successive team to ensure a smooth transition of leadership and offer training in specific roles as needed. The Leadership Team will always operate to improve the quality of food education, strengthen our community, and help in producing food sustainably.

Responsibilities of all UMSFP Leaders

All UMSFP Leaders will be responsible for keeping up to date on the food work going on around campus. Successful candidates may already be involved in this work and will be interested in the larger food movement in cities across the United States and globally.

Specifically the Leadership Team will

- » Spend around 5 hours per week working to further the UMSFP and Campus Farm
- » Meet once weekly as a group to discuss progress on specific projects and plan for the future
- » Represent the UMSFP at meetings with faculty, staff and community members
- » Represent the students that elect you by serving as their advisory board representatives at monthly meetings
- » Be self motivated and willing to work with diverse groups of people on a number of projects
- » Take part in publicizing the UMSFP's successes and work

Communications Specialist

You will be primarily responsible for spreading information about what the UMSFP and our member groups are doing as we improve our food system at UM and elsewhere using social media, our newsletter and other outlets.

Specifically your responsibilities will include

- » Publicizing events using the weekly UMSFP newsletter, Facebook and our website
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- » Identifying, and applying for, funding for the program
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- » Ensuring documentation, transparency, and smooth transitioning of leadership

Strong candidates will

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- » Be able to sell this program to potential funders and strategic allies.
- » Be visionary thinkers

2012-2013 UMSFP Advisory Board Members

UMSFP Advisory Board 2012-2013		
Liz Dengate	eedengate@gmail.com	SNRE MS
Allyson Green	green.allyson@gmail.com	SNRE MS
Lindsey MacDonald	lindsey.e.mac@gmail.com	SNRE MS
Jerry Tyrrell	geraldatyrrell@gmail.com	SNRE MS
John Graham	jbgraham@umich.edu	SNRE PhD
Allison Sponseller	asponz@umich.edu	Social Work MSW
Lauren Beriont	lberiont@umich.edu	PitE
Isabella Morrison	imorris@umich.edu	PitE
Catherine Badgley	cbadgley@umich.edu	EEB, LSA
Joe Trumpey	jtrumpey@umich.edu	ART/DESIGN
Phil D'Anieri	philipjd@umich.edu	Urban Planning, LSA
Ray DeYoung	rdeyoung@umich.edu	SNRE
Bob Grese	bgrese@umich.edu	SNRE; Director, Matthaei Botanical Gardens and Nichols Arboretum
Shannon Brines	sjbrines@umich.edu	SNRE, local farmer
Loren Rullman	lrullman@umich.edu	Associate Vice President for Student Affairs
Keith Soster	ksoster@umich.edu	Food Service Director, University Unions
Drew Horning	ahorning@umich.edu	Deputy Director, Graham Sustainability Institute



University of Michigan Sustainable Food Program

UMSFP Annual Report, 2012

As the inaugural year for the University of Michigan Sustainable Food Program (UMSFP), 2012 brought tremendous growth in our three core goal areas: furthering education, building community, and producing food. Before we journey through these recent successes, let's look back through the years to the key events that led to the creation of this program.

Pre-2012

As early as 2004 students demonstrated an interest in growing food and eating sustainably through organizations like Cultivating Community and the Michigan Sustainable Foods Initiative.

In 2011, a random survey of over 450 U-M students illustrated the demand for more focus on sustainable food:

- 83% of the respondents declared a moderate to high interest in having a campus farm
- 96% of the respondents said they would purchase produce grown at a campus farm.

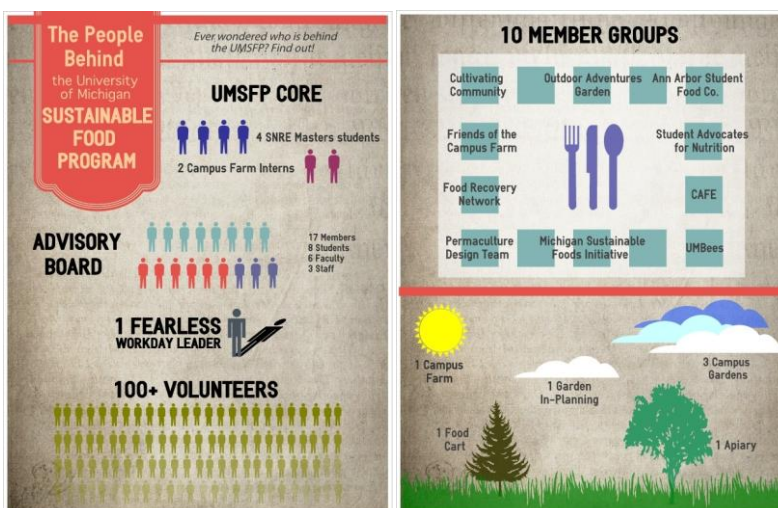
Between the winter and fall of 2012, several groups of students outlined the logistics of a potential campus farm during organized course projects through the School of Natural Resources and Environment, Program in the Environment, and the Taubman College of Architecture and Urban Planning.

The Ball Starts Rolling in 2012...

In January 2012, a team of determined

undergraduate and graduate students came together to build the Sustainable Food Program and Campus Farm, building from the momentum that had begun years before. As planning began for the Campus Farm, the University of Michigan Sustainable Food Program grew out of the need for greater educational opportunities and a unified community to support all of the sustainable food work on campus.

Together, we developed a mission to **foster collaborative leadership that empowers students to create a sustainable food system at the University of Michigan while becoming change agents for a vibrant planet.**



In February 2012, The Planet Blue Student Innovation Fund (PBSIF) **awarded \$42,000** to UMSFP to be used for capital investment for a farm and financial support for the program.

[»PBSIF announces 2011-12 Awardees](#)

By the end of May 2012, volunteers and the Masters Project working group broke ground at a pilot plot for the Campus Farm at Matthaei Botanical Gardens. The space, right next to expert gardeners at the Project Grow community garden, gave us a strong foundation to build from as trial and error taught us how to control pests, weeds, and moisture, skills we will improve on through the years.



The Cultivating Community Demonstration Garden still serves as the focal point of food activity on Central Campus with a diverse crop of student-grown herbs and vegetables each summer.



University of Michigan Sustainable Food Program



Students get their hands dirty breaking ground on the Pilot Garden at Matthaei Botanical Gardens in April 2012.

The Pilot Garden was a huge success with over 700 pounds of food grown in a 20' by 30' space during the summer of 2012. This success came from the hands of hard working volunteers. Seeing these results, Matthaei Botanical Gardens offered a 2-acre space to expand and continue the Campus Farm in 2013.

To celebrate these successes, UMSFP organized The Harvest Festival on October 4th at the new site for the Campus Farm, right across the fence from the Pilot Garden. Over 300 people attended the event and enjoyed live bands, pilot garden tours, and delicious food prepared by chefs from University Catering.

[»Read the Full Michigan Daily Article](#)

To allow the Campus Farm to grow food into the winter and learn about season extension, UMSFP began preparing and planting in an indoor greenhouse space in November. This space will allow us to grow greens and other vegetables for our volunteers to take home and to sell at the UM Student Food Co., one of the 10 UMSFP student member groups.

For 2013...

We will continue to work with professors and their classes and we're making plans to expand the disciplines we work with by partnering with a freshman engineering course and landscape architecture studios.

The Friends of the Campus Farm student group will be helping take charge of the generous 2-acre site and begin growing vegetables to sell to students through the Student Food Co. We hope to raise enough money to fund student internships to work on the Campus Farm and to help achieve our educational and community empowerment goals. We are also seeking funds for a full-time Program Coordinator to oversee the UMSFP.

We're working to secure a full time office to use as a Sustainable Food Resource Center that will aid students, faculty and staff on campus and connect them to many of the fantastic resources available in Michigan and across the US.



Dana rescuing food for Food Gatherers



University of Michigan Sustainable Food Program

UMSFP Member Group Report, 2012

Let's now look at the success of UMSFP's 10 Member Groups in 2012:

Ann Arbor Student Food Co.

After almost a year's worth of work, in 2012 the Student Food Co. started to sell fresh fruits and vegetables on campus — at Ingalls' Mall in warm weather and Haven Hall during the winter. Between market days, they worked to better understand Ann Arbor's "foodscape" by conducting research that found 45 percent of Michigan students live in food deserts, an issue they're working directly to address.

Consortium on Agriculture, Food and the Environment

CAFE's first annual Sustainable Food Careers Symposium, held February 10, 2012, was a resounding success. Over 130 people attended panel discussions on private sector innovation,



Cultivating Community members feed cows squash during a Raw Milk Tour in October.

international agricultural development, local approaches to sustainable agriculture, and food policy. A diversity of speakers doled out solid career advice and information for attendees interested in both the public and private jobs. Zingerman's Roadhouse cooked a yummy free lunch and Roos Roast provided some of their best local brew.

Cultivating Community

For a group established in 2004, 2012 showed the continued success and interest of small-scale organic gardening on campus. This year, Cultivating Community took several field trips to local farms and processing facilities and tried out some old and new crops in their garden, sharing expertise with the budding Campus Farm volunteers and produce with all who visited.



Staff members from the Taubman College of Architecture and Urban Planning helped stake tomatoes and make the garden groundhog-proof.

Food Recovery Network

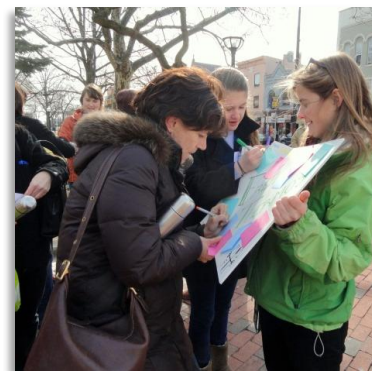
Food Recovery Network is a nationwide organization that was created to limit food waste in campuses across the country, and in 2012 a group of students formed a Michigan chapter of FRN. With the goal of feeding the hungry and reducing food waste, FRN set the stage to begin recovering un-served food from UM dining halls. With preparation done, they began salvaging hundreds of pounds of food from one dining hall and will expand into three more by Spring '13.

Friends of the Campus Farm

The Pilot Garden was a huge success with over 700 pounds of food grown in a 20' by 30' space during the summer of 2012. This success came from the hands of hard working volunteers who donated 353 hours of their time during summer workdays. Seeing these results, Matthaei Botanical Gardens offered a 2-acre space to expand and continue the Campus Farm in 2013.

Michigan Sustainable Foods Initiative

In the Winter of 2012, MSFI received \$800 to fund a Free Thermos Giveaway to promote using



MSFI Members hand out free thermoses and sign pledges with the Ann Arbor community



University of Michigan Sustainable Food Program

reusable drinks containers on campus and reduce waste from single-use coffee cups. They gave away over 70 thermoses and had over 40 people sign pledges for this initiative. Along with the thermos giveaway, MSFI had leadership elections at the end of 2012. They have a new group of excited and active leaders, including two underclassmen to grow potential in 2013.

Outdoor Adventures Garden

Throughout the past year, the Outdoor Adventures Organic Garden grew high quality, sustainable produce while providing students and community members with educational backgrounds in sustainable gardening practices. Fruits and vegetables such as onions, kale, tomatillos, broccoli, raspberries and tomatoes have been thriving in the raised beds, supplying beautiful crops throughout the spring, summer, and fall months. In the near future, they hope to implement further sustainable practices by using rain barrels exclusively to water the plots.



Volunteers for Outdoor Adventures working in their raised beds on the corner of Hill St and S Division

Permaculture Design Team

PDT was successfully established as a student organization and awarded a \$10,000 Planet Blue Student Innovation Fund (PBSIF) grant in December 2012 to support the creation of a satellite garden on campus using permaculture methodology: a venture that came to fruition through a project in the Environ 391 class, Sustainability and The Campus.



SAN members visit Dyer Family Farm on the northeast side of Ann Arbor to help plant over 1,000 bulbs of garlic

Student Advocates for Nutrition

SAN had a successful summer in their community garden at the School of Public Health (SPH). They also visited many local farms to learn from and assist the farmers and are working to expand their nutritional advocacy and know-how beyond SPH.

UMBees

UM Bees was founded in the Fall of 2012, but in these past few months have accomplished a lot, building their first hive boxes, planning a creative honey-themed Valentine's Day fundraiser and connecting with other local beekeeping groups in Ann Arbor and gearing up for the 2013 growing season.



UM Bees unveiled their first hive in December, 2012! This hive was built by UMBees Vice President Jesse Antuma and his dad.

The People Behind

the University of Michigan

SUSTAINABLE FOOD PROGRAM

Ever wondered who is behind the UMSFP? Find out!

UMSFP CORE



4 SNRE Masters students

2 Campus Farm Interns



ADVISORY BOARD



17 Members
8 Students
6 Faculty
3 Staff



**1 FEARLESS
WORKDAY LEADER**



100+ VOLUNTEERS



10 MEMBER GROUPS



UM CAMPUS FARM 2011-2013

Fall 2011

Students in ENV 391 survey 450 UM students, staff, and faculty...

83% had a moderate to high interest in a campus farm



Feb 2012

UMSFP wins

\$42,000 PBSIF Grant

Jan 2012

UMSFP Masters Project Forms



May 2012

Masters students & volunteers

break ground on a pilot garden

Fall 2012

700lbs of food grown

in a 20'x30' space



100+ volunteers

2,170 hours volunteered



The farm will continue to grow in a 2-acre plot at the Bot Gardens

2013



Hopefully, funding will be secured for a full-time farm manager to serve students, faculty, and staff

Expectations for UMSFP Success

This draft of expectations has been developed by the unpaid leadership team. In designing this, we have attempted to inspire the best in the entire leadership team, to be realistic in what we ask of paid employees, and to be open in communication throughout. Please read through the expectations and sign (electronic is fine) if you agree to do your best in fulfilling them. If any of the expectations is unclear, or if you disagree with one or more, please communicate that with the leadership team immediately so that we can make alterations that suit everyone. We want this to be a document in which we can all share ownership.

Documentation of Work

Please document your work, needs, and challenges in 30-minute increments. For example,

“Thursday, January 17th

3:00-3:30pm

-wrote the first page brainstorm of an SOP on how to facilitate a workday

3:30-4:00pm

-wrote a blog post documenting the first greenhouse workday of the semester

4:00-4:30pm

-called each member group representative to check in on their paragraph write-up for the annual report (left a message with everyone, except Parker, from UMBees, who is going to send me his paragraph tonight).

Needs: Jerry – posting of blog write-up by next Wednesday

Lindsey – need template for how to write an SOP

Challenges: I have not been at many workdays, so it was hard for me to write an SOP.”

Please submit this log to M+Box each week by Sunday at midnight. This will allow the leadership team to review work by the Monday meeting time.

Work Format

You may schedule your own time for doing UMSFP work, as long as you get work done by the deadlines agreed upon by the group. This means that you may take breaks to check personal e-mail, text, make a phone call, etc., but this time needs to be excluded from your hours that UMSFP is paying you for.

Project Task List

Within reason, work on projects listed as high priority in the project list sheet in M+Box before tackling others. Of course, feel free to take breaks on certain projects by working on something else, but please focus on priorities.

Communication outside of Leadership Team

As you interact with member groups, the advisory board, the community, and administration, remember that you are representing the UMSFP. Keep the UMSFP mission in mind as you proceed with these interactions. If anything is ever in question, please consult the leadership team.

Leadership Team Meeting

Add your bulleted updates to the meeting agenda by Sunday at midnight. Please plan to read other Leadership Team updates prior to the start of the meeting on Monday. At the meeting, we will all treat each other as equals.

Communication with the Leadership Team

Insights, concerns, and celebrations should be shared with the rest of the group. As a team, we are all trying to grow this program together. We have a big challenge in front of us that we can only tackle with a strong team. Strength comes from diversity, tough conversations, effective communication, and support. Help us make this a strong team.

I agree to do my best to fulfill the above expectations:

Name: _____

Date: _____

Appendix 6: Finances

- 6.a. UMSFP Business Plan (2013) (includes its own appendices)
- 6.b. Example PBSIF Funding Request Form (2013)
- 6.c. Original PBSIF Funding Proposal (2012)
- 6.d. Updated PBSIF Funding Proposal (2013)
- 6.e. UMSFP Program Coordinator Job Description (2013)
- 6.f. TLTC Funding Proposal (2013)
- 6.g. Bank of Ann Arbor Grant Application (2012)
- 6.h. Harvest Festival Zero-Waste Funding Proposal (2012)
- 6.i. Women's National Farm and Garden Association Grant Proposal (2012-2013)
- 6.j. UM Credit Union Sponsorship Proposal (2012)

University of Michigan Sustainable Food Program

April 22

Business
Plan

2013

Fostering collaborative leadership that empowers students to create a sustainable food system at the University of Michigan while becoming change agents for a vibrant planet



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Acknowledgements

Many thanks to the students, faculty, and staff, past and present, who have built the momentum through the years that this program has ridden to success. Your commitment to changing the world through growing, eating, sharing, and learning about sustainable food is what kept us working so hard to make this happen. Thank you for sharing your time, talents, and insights throughout this process! We would also like to thank our peer institutions who've provided valuable support and advice throughout the establishment of the UMSFP and especially our friends at the Duke Campus Farm for sharing their business plan to aid in writing our own.

To our advisor, Bob Grese, for guidance and support this past year, and the staff at Matthaei Botanical Gardens who embraced the new campus farm and the students working on it.

To the UMSFP Advisory Board and the students, faculty, and staff who demonstrated their commitment to furthering this program at each meeting and in their own circles of influence.

To our funders: Planet Blue Student Innovation Fund, Bank of Ann Arbor, Transforming Learning for a Third Century Quick Wins Program.

And to Lauren Beriont and Sarah Schwimmer for their dedication and hard work as the first set of UMSFP interns.

Grow Blue!

2012-2013 SNRE Masters Project Team

Liz Dengage

Allyson Green

Lindsey MacDonald

Jerry Tyrrell

Executive Summary

The mission of the UM Sustainable Food Program, a program at the University of Michigan in Ann Arbor formed in 2012, is to foster collaborative leadership that empowers students to create a sustainable food system at the University of Michigan while becoming change agents for a vibrant planet. Our work is focused around three central themes: 1) Developing responsible citizens and leaders by facilitating formal and informal education on sustainable food topics, 2) Strengthening communities through collaborative programming and outreach, and 3) Growing sustainable food that supports the well-being of people and the environment at the University of Michigan and beyond.

This mission and goals are accomplished through a variety of interlocking projects, the largest and most visible being the implementation and management of a two-acre campus farm space located at the university's Matthaei Botanical Gardens. The farm clearly furthers food production goals, but is also a space for experiential education, leadership development, and community gatherings and events. The farm began in the summer of 2012 as a small pilot project, and will move into a quarter-acre space during summer 2013. The outdoor space is supplemented by heated greenhouse space provided by the Botanical Gardens. Other UMSFP projects include class collaborations, student research collaborations, community events, member group collaborations, and "Kale to the Victors" T-shirt sales.

There are three primary measures of the UMSFP's impact, which can be furthered measured by more specific metrics:

1. The number of student hours logged at the farm represents site utilization and experiential value of the site.
2. The number of off-site student hours represents the experiential value of the Sustainable Food Program.
3. The number of subscribers to our weekly newsletter (written by students) represents the ability of the UMSFP to reach a wide audience and drive cultural shifts within the university and in the broader community.

The Farm and Program are currently managed by a Leadership Team (made up of eight graduate and undergraduate students); an Advisory Board (made up of students, faculty, staff, and community members); a Member Group Council (with representatives from each of ten separate member groups); and paid student farm interns. While this structure should serve to maintain the program in its existing state, a full-time paid program coordinator is required to enable the program and farm to grow in scope and impact.

The university has expressed an interest in buying produce from the Campus Farm, and coupled with educational value, the UMSFP will serve as a crucial part of UM's sustainability offerings on campus

Program Introduction

The implementation of the University of Michigan Sustainable Food Program (UMSFP) and Campus Farm is a project to: institutionalize the organization of and support for existing efforts related to food sustainability and leadership development at UM; to build a greater capacity to meet student, faculty and civic demand for these efforts now and in the future; to create a community that bridges disciplinary and institutional divides; and to create a 2+ acre educational farming facility at UM.

Validated Need for the UM Sustainable Food Program

There are problems and missed opportunities that the UMSFP seeks to solve at two scales:

Problems at the University of Michigan

1. Unsatisfied Student Desire: While student interest in sustainable food continued to grow, UM had an inability to adequately train and educate students to grow, eat, sell, and buy sustainable food. This is imperative for preparing graduates to solve hunger and food problems in their communities
2. Lack of Organization: In 2012, there were pockets of faculty, staff, and students addressing food issues, but they lacked central organization which could establish a shared vision to stitch this loose-knit community together, provide historical perspective and stability to student groups, disseminate work and ideas across disciplinary boundaries, and support resource sharing and collaboration
3. Unmet Potential: There is great potential at the university level to use food sustainability as a vehicle or theme to teach leadership, creativity, and entrepreneurship, and to use it as a kernel that groups can orbit around and establish a community of scholarship that will address large challenges that face society broadly

Sustainability Challenges of our Age

1. Industrial Agriculture: The industrial agriculture system cannot continue to rely heavily on environmental degradation and non-renewable resources, and leading research universities like UM can take on this challenge and explore creative solutions by leveraging the groups already tackling components of this problem and helping to nurture and establish new groups
2. Aging Farmers: Farmers are retiring faster than they are training replacements, and a new generation of farm workers must be shown that agriculture can create healthy food, healthy environments, and healthy people
3. Unique Perspective: By approaching agriculture and food from a non-traditional background, UM has the unique opportunity to share a fresh perspective on age-old problems and begin to meet student demand through the creative entrepreneurial spirit that lives on our campus

4. **Sustainability:** With a focus on training students to be leaders generally and equipping them with a mindset of sustainability, UM will offer graduates a skillset that is widely adaptable ensuring their success in any field and empowering them to be change agents in their communities

Problem Solution

Mission

In order to meet growing student demand for food education and experience the UM Sustainable Food Program was established in February 2012 with the following mission:

"Fostering collaborative leadership that empowers students to create a sustainable food system at the University of Michigan while becoming change agents for a vibrant planet."

Focus Areas

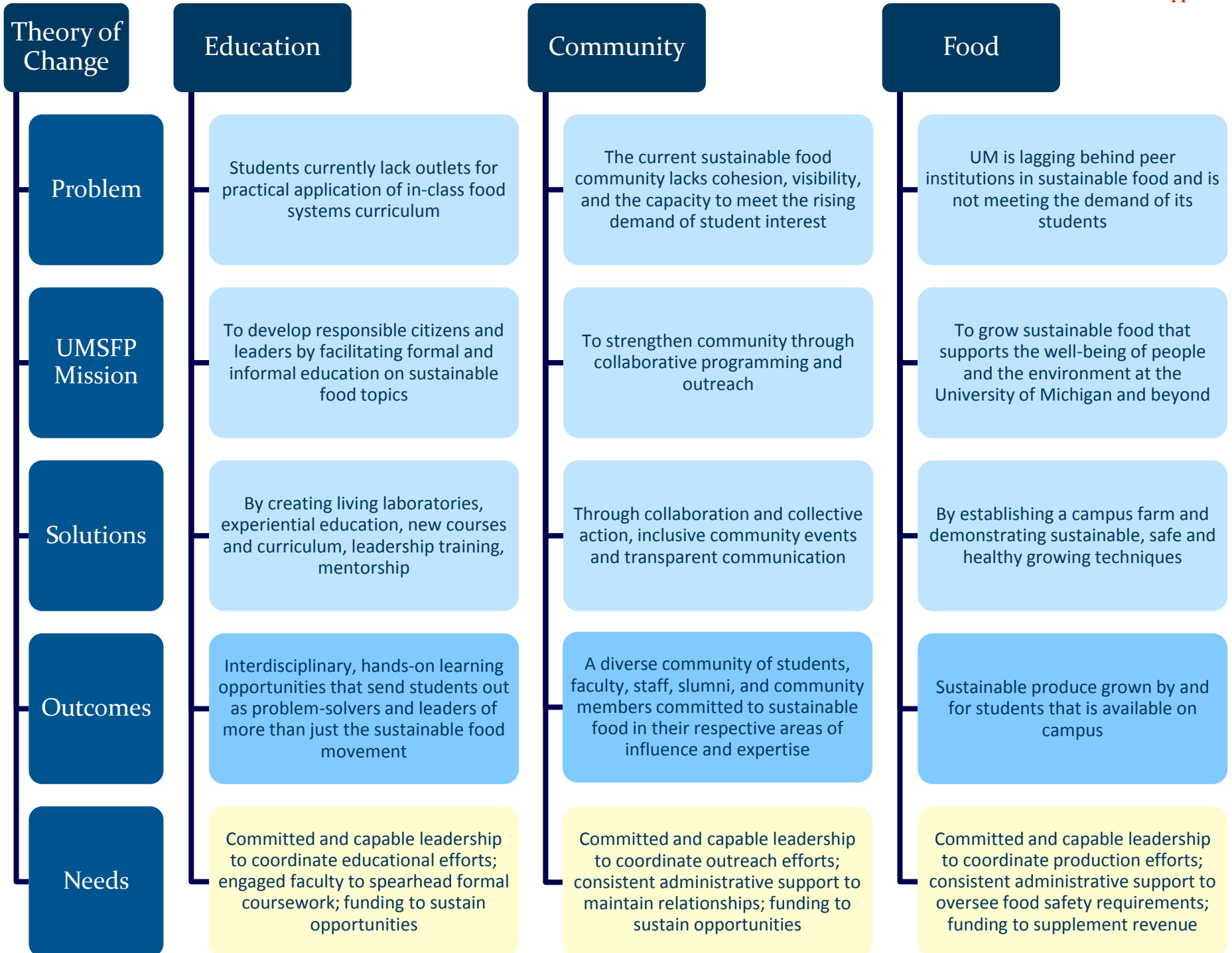
To further this mission and solve the problems outlined earlier, the UMSFP focuses effort in three theme areas:

1. **Education:** Developing responsible citizens and leaders by facilitating formal and informal education on sustainable food topics
2. **Community:** Strengthening communities through collaborative programming and outreach
3. **Food Production:** Growing sustainable food that supports the well-being of people and the environment at the University of Michigan and beyond

UMSFP strives to provide both formal education in classroom settings and informal or experiential education opportunities where students learn through action.

Theory of Change

The problems, mission, and focus areas have been formalized into a Theory of Change, which summarizes specific solutions that have been implemented, outcomes that are already resulting from those solutions, and components required to maintain the current level of success and expand to fully meet university demand for these programs and solutions. More details follow below.



UMSFP's Targeted Interventions

We will solve the problems and achieve the programmatic goals through the following specific interventions, which have been piloted and scaled up since March of 2012. See Appendix 1 for a detailed list, with time calculations, of targeted interventions that the UMSFP Leadership Team measured during the 2012-2013 inaugural year.

Task Details

^E = Relates to Education theme: Developing responsible citizens and leaders

^C = Relates to Community theme: Strengthening communities

^F = Relates to Food Production theme: Growing sustainable food

- Leadership Development
 - Student Mentorship^{EC}: One-on-one meetings about various topics, including classes, internships, ways to get involved, and strategies for organizing events; facilitation of student committee meetings; mentorship of new leaders for Friends of the Campus Farm
- Education
 - Classroom Contact^{EC}: Presentations, panel discussions in classes, and specialized consultation for individual students or groups working on food projects as part of their coursework
 - Faculty Communication^{EC}: Inquiries about class collaborations; meetings about class collaborations
- Community Building
 - Member Group Communication^{EC}: E-mails and meetings about how UMSFP can support member group activities; event planning and marketing; directing member groups to resources that support their activities (e.g., researching grant opportunities for member groups or connecting member groups with UM staff, UM faculty, other student groups, and Ann Arbor community members who can support their work)
 - Member Group Events^{EC}: Including time spent planning and holding meetings, organizing UMSFP events like Earth Week Food Day, and hosting potlucks
 - Harvest Festival Planning^{EC}: Includes organizing, marketing, hosting, and record-keeping for the event
 - Ann Arbor Community Networking^{EC}: Attending community events to show support and learn from other groups; meetings and e-mails about ways to collaborate and share experience
- Food Production
 - Farm Planning^{EF}: Creating seed list; ordering seeds; planning farm layout
 - Site Preparation^{ECF}: Tilling, leveling, and adding compost to site
 - Seed Starting^{ECF}: Starting seeds in the Matthaei Botanical Gardens greenhouses; transplanting seedlings until ready to plant outside

- Planting, Tending, and Harvesting^{ECF}: Planting, watering, weeding, harvesting, pest control, and maintenance of site
- Farm Education^{ECF}: Hosting weekly volunteer workdays as well as large groups from K-12 schools and UM including students, staff and faculty
- Farm Communications^{EC}: E-mails and meetings with Matthaei Botanical Gardens staff about farm logistics (e.g., site prep, equipment needs, and making sure farm workdays get on the right calendars and are communicated to staff); organizing and advertising farm workdays (e.g., coordinating schedules with interested students, sending weekly reminders and sign-up sheets for carpools)
- Administration
 - Stakeholder Meetings^{EC}: Meetings with UM staff, faculty, and administration to share updates, seek advice, explore collaborations, and plan events
 - Weekly Newsletter^{EC}: Collecting events and news to share; assembling newsletter; updating listserv e-mail addresses
 - Website and Social Media^{EC}: Updating blogs; keeping Resources page up-to-date; advertising events; posting news articles and other media attention about the UMSFP; sharing educational, entertaining, and otherwise valuable stories, resources, or events on Facebook; updating photos
 - Record Keeping^{EC}: Recording tasks completed, hours worked, volunteer hours, meeting notes and agendas, notes and feedback from events; compiling annual reports; creating and updating SOPs; working on GAP/GHP paperwork
 - Budgeting and Fundraising^E: Tracking and forecasting expenses; grant-writing; strategic funding meetings and events

Measurable Impact

We can measure impact in many ways (see goals and metrics for the full list). We see three primary measures of the UMSFP's impact:

4. The number of student hours logged at the farm represents site utilization and experiential value of the site.
5. The number of off-site student hours represents the experiential value of the Sustainable Food Program.
6. The number of subscribers to our weekly newsletter (written by students) represents the ability of the UMSFP to reach a wide audience and drive cultural shifts within the university and in the broader community.

Goals and Metrics

Goal Areas	Current Numbers (April 2012 to April 2013)	1-Year Goals	2-Year Goals	5-Year Goals
<u>Education</u> - Hours logged at Farm site*	700 hours	1,000 hours/yr	1,500 hours/yr	3,000 hours/yr
<u>Education</u> - Independent Projects Using Farm	9 projects	20 projects/yr	30 projects/yr	40 projects/yr
<u>Education</u> - Number of Course-Related Contact Hours with the UMSFP Leadership Team*	200 hours	600 hours/yr	800 hours/yr	>1,000 hours/yr
<u>Education</u> - Additional Organizing Hours Logged* (includes administrative and outreach activities)	2,075 hours	1,920 hours/yr (160 hrs per month for 12 months)	1,920 hours/yr	1,920 hours/yr
<u>Community</u> - Number of Community Partnerships	2 partnerships (Slow Food Huron Valley, Chiwara Permaculture Institute)	2 new partnerships/yr	2 new partnerships/yr	2 new partnerships/yr
<u>Community</u> - Number of Weekly Newsletter Subscribers	530 subscribers	700 subscribers	850 subscribers	1,000 subscribers
<u>Community</u> - UMSFP Leadership Team Hours and Support System	4 students working 10 hours*/wk each for full year, 2 working 7/wk for	8 students working 5 hours/wk each*	8 students working 5 hours/wk each*	8 students working 5 hours/wk each*

	January-April 2013			
<u>Community</u> - UMSFP Member Groups Support and Effectiveness	10 member groups (5 existed in 2012)	No loss of groups, increasing group membership (participation numbers within 10 existing member groups)	Seed new groups to fill gaps in existing food system topics	Provide leadership training to member groups and aid in developing educational materials
<u>Production</u> - Acres in Production	Complete pilot garden (600ft ²)	0.25 acres	0.5 acres	1 acre
<u>Production</u> - Earnings per Acre per Year	Unable to sell produce	\$4,000 (based on Duke numbers)	\$7,500 (based on Duke numbers)	\$15,000
<u>Production</u> - Number of Satellite Gardens	3 gardens	4 gardens with educational signage	6 gardens with accompanying classroom visits	10 gardens with food used by community
<u>Production</u> - Environmental Sustainability	Practice environmentally friendly methods; only inputs are water, compost, and organic or heirloom seeds	GAP/GHP certified	MAEAP environmental certification started	Add MAEAP certification, explore USDA Organic certification

<u>Funding</u> - Outside Funding Sources	\$4,900	+\$10,000 (including small-scale grants, personal donations and Harvest Festival revenue)	+\$20,000	+\$30,000
<u>Funding</u> - UM Funding Sources	\$71,000	+\$25,000	+50,000	+\$20,000
<u>Funding</u> - In Kind Donations (labor rates based on 2012 value of a Volunteer Hour, \$22.14, and actual volunteer hours logged)	\$71,438 (\$45,940 = organizing labor (1700 hours); \$15,498 = farm labor (700 hours); ~\$10,000 = land)	\$76,000 (\$44,280 = labor; \$22,140 = farm labor (1000 hours); ~\$10,000 = land)	\$87,000 (\$44,280 = labor; \$33,210 = farm labor (1500 hours); ~\$10,000 = land)	\$110,000/year (\$44,280 = labor; \$55,350 = farm labor (2500 hours); ~\$10,000 = land)

*Numbers do not include paid time.

Validated Need for a UMSFP Program Coordinator

John Kania & Mark Kramer identified five conditions necessary for collective action when working on large-scale change¹ Since this is what UMSFP strives to do by bringing together students, faculty, staff, and community members, we recognize the need for continued progress in these areas:

1. **Common Agenda:** “a shared vision for change, one that includes a common understanding of the problem and a joint approach to solving it through agreed upon actions.”
 - a. Progress to-date: Many key stakeholders have come together to form the common vision of the UMSFP, including students in member groups, faculty and staff in different departments, and community members.
 - b. Barriers: not all stakeholders are at the table quite yet, and student leaders do not have the time to fully initiate and sustain the conversations that lead to collective shared vision. This takes tremendous time to coordinate.
2. **Shared Measurement Systems:** “Collecting data and measuring results consistently on a short list of indicators at the community level and across all participating organizations not only ensures that all efforts remain aligned, it also enables the participants to hold each other accountable and learn from each other’s successes and failures.”
 - a. Progress to-date: Many metrics have been measured over the past year (e.g., volunteer hours at the campus farm, food produced at the farm, number of class collaborations, etc.)
 - b. Barriers: Student leaders could be more consistent in tracking important indicators of success across all UMSFP member groups and focus areas.
3. **Mutually Reinforcing Activities:** “Collective impact initiatives depend on a diverse group of stakeholders working together, not by requiring that all participants do the same thing, but by encouraging each participant to undertake the specific set of activities at which it excels in a way that supports and is coordinated with the actions of others.”
 - a. Progress to-date: Student member groups have come together for multiple meetings and events in which their own unique expertise has been utilized and shared.
 - b. Barriers: Student groups are not currently receiving the level of support they need to excel as the Leadership Team does not have the time nor expertise to support groups to the fullest extent possible.
4. **Continuous Communication:** “Participants need several years of regular meetings to build up enough experience with each other to recognize and appreciate the common motivation behind their different efforts. They need time to see that their own interests will be treated fairly, and that decisions will be made on the basis of objective evidence and the best possible solution to the problem, not to favor the priorities of one organization over another.”

¹ Kania, John, and Mark Kramer. "Collective Impact." *Stanford Social Innovation Review* Winter 2011: Web.

- a. Progress to-date: Regular meetings with diverse stakeholders have laid the groundwork for this kind of continued communication.
 - b. Barriers: Annual change-over of student leadership means these relationships and communications lines lose ground each year and have to be built back up with each new group of students.
5. **Backbone Support Organizations**: “The expectation that collaboration can occur without a supporting infrastructure is one of the most frequent reasons why it fails. The backbone organization requires a dedicated staff separate from the participating organizations who can plan, manage, and support the initiative through ongoing facilitation, technology and communications support, data collection and reporting, and handling the myriad logistical and administrative details needed for the initiative to function smoothly.”
- a. Progress to-date: The UMSFP has become the “backbone organization” for sustainable food on campus with the Leadership Team planning, managing, and supporting sustainable food initiatives across campus.
 - b. Barriers: The core “staff” of UMSFP will change yearly, disrupting the transfer of knowledge, the historical perspective, the ongoing communication, and the logistical details that need to be in place to keep the UMSFP in the supportive role it has taken on. Without staff whose primary focus is development and oversight of the UMSFP and Campus Farm, transient leaders will lose institutional knowledge, and navigation of the University landscape will be shortsighted. The UMSFP has benefitted from financial support by UM, but the student-run Leadership Team is largely unable to authorize the expenditures for which the money has been slated.

In analyzing options for maintaining the level of momentum for collective action towards sustainable food, the need for a Program Coordinator has emerged as a critical next step. The eight-person 2013-14 Leadership Team was elected to continue the work that was started by the 2012-13 team, but the outgoing team documented 80 hours per week during peak times throughout the year (Sept, Oct, Nov and March) because they were simultaneously receiving 6-credit hours for their effort. The incoming team (2013-14) is not expected to maintain this level of activity because they will not be receiving credit. This leaves a deficit of 40 hours per week that needs to be covered simply to maintain the program.

The need is too great and the barriers too strong to expect a solely student-run team to maintain and grow the level of impact the UMSFP has across campus. The following list summarizes UMSFP's need for a program coordinator:

Academic Collaborations and Research Support – The Program Coordinator would build on current academic collaborations. There is more faculty and student interest than the current leadership team can handle. There are students wanting to do research at the farm for their theses, faculty wanting to teach courses at the farm, and faculty wanting to incorporate the UMSFP into their current curriculum (not only in environmental sciences - 7 of 14 collaborations

have been outside of environmental science programs). Additionally, the Program in the Environment recently asked the UMSFP to co-host a food lecture series next academic year. Although the UMSFP would like to do so, we cannot say yes at this point, because we do not want to stretch the next leadership team beyond capacity. The leadership team has done 14 classroom visits over the last year, and this can and should be expanded moving forward. These collaborations and expansions will only be possible with a program coordinator.

University Unions Liaison (Dining Services in the future) – University Unions is interested in using food produced at the farm as soon as the farm is GAP/GHP certified. Coordinating food orders, transportation, and payment would be nearly impossible without a program coordinator. The transportation challenge is that students cannot drive a University vehicle unless employed by the University. It would be inappropriate for a student to use their own vehicle for transporting food crops to University food outlets. The challenge with payment is that students do not have access to Concur, the expense management tool used by the University, so the communication for coordinating payments would need to include staff with this kind of access. This would not be an efficient use of time. Lastly, this kind of partnership between the farm and University Unions would benefit from long-term planning. For example, from year to year, the Campus Farm could plant to satisfy the needs of University Unions. This kind of big picture planning is something that needs consistent oversight.

Food Safety PIC (Person in Charge) – It is inappropriate for a student to be responsible for maintaining and tracking food handling safety certification for the campus farm and serving as a primary contact between OSEH, temporary farm interns, and State of Michigan Agriculture Inspectors. The coordinator would be familiar with pre-harvest food safety, and take on this responsibility. This would include taking a course from MSU Extension Service or, another provider. The coordinator would be responsible for updating the food safety document and making sure that all requirements are up-to-date (monitoring farm workers' training activities and keeping proper records of this). Currently, there is a tremendous amount of communication facilitation between OSEH, students, and the Botanical Gardens. Transferring this knowledge from student to student is not a sustainable model.

Leadership Training – In line with the UMSFP mission, work is being done to foster leaders. Currently, there is capacity to build a small number of student leaders. Luckily, current leadership team members have experience with leadership development. Based on student interest, the UMSFP could support so much more, but we have reached program capacity due to time constraints of the leadership team (40 hours/week on average). Further, it would be difficult for Leadership Team students to provide effective mentorship to member groups and future food sustainability leaders unless they are receiving strong mentorship themselves.

Across Campus Point of Contact and navigation of University landscape – The leadership team has worked hard to build relationships all around the University over the last 2-years. Building these relationships takes building trust and creating shared understanding. This takes time. The

current leadership team spends a tremendous amount of time maintaining and building these relationships. The team, which happens to have members who have spent an uncharacteristically long time at the University (17 years for 4 people), has gained historical perspective, and learned how to navigate the University system due to this commitment of time. Without another masters project group to build the program (the new one will be focused on education components), it cannot be expected that leadership team students dedicate the time needed to effectively navigate all of the University systems involved in the smooth workings of the UMSFP.

Community Point of Contact – Farmers are interested in having interns on their farms, students are interested in engaging with the community, but there has not been a clear way to facilitate this in the past. The UMSFP has started to build understanding and trust between the University and the local food community, but this also takes time and consistency. More learning and more local food support could occur with strengthened relationships between these groups, creating a win-win situation. Field experience requirements, internships, and other experiential learning course compliments could be coordinated through a central point of contact within the University.

Website Oversight – Since the UMSFP has become such a visible demonstration of sustainable food at UM, and the website is a primary method for communication, the website needs to stay relevant, updated, and appropriate. In order to support the student voice, the Leadership Team would still do much of the content work on the website, but oversight would be the responsibility of the program coordinator (editing, formatting, assessing appropriateness). The current site is not hosted or supported by the University.

ADA Compliance and Aesthetic Requirements – All farm structures and satellite gardens need to be ADA compliant and fit with the Exterior Elements Design and Review Board requirements. The University Planner's Office provides oversight on this, but asks each owner of the garden space to make necessary changes for compliance. This should be staff work. For example, current leadership team members were contacted to make changes to the Outdoor Adventures garden. The new OA assistant director has agreed to take on this work, but he is not familiar with gardening, so would benefit from assistance. This kind of consistent assistance would benefit all satellite garden owners (especially the Permaculture Design Team as they work to develop a number of satellite gardens in the next couple of years).

Financial Manager – Long-term budgeting and fundraising cannot be sustained by short-term student volunteers or interns, who are also responsible for day-to-day operations of the program. At this point, the UMSFP does not have authority to use any of the available funds without consent from multiple parties. Although this makes sense for the nature of the grants received, it is an inefficient way to move a program forward.

Time – The outgoing Leadership Team was able to expend additional effort because they were compensated with academic credit. The incoming Leadership Team is not compensated and cannot be expected to maintain the same amount of effort.

Program Transition – The 2012 growing season represented proof of concept. The 2013 growing season represents scaling the program up with the addition of 1.5 summer farm interns. By adding a program coordinator during this crucial scaling period, this person would be better equipped with a foundation of understanding to help the program expand during the Fall 2013 semester.

Summary

The new Leadership Team is highly qualified and capable of maintaining the program to some extent, but they cannot be expected to grow the program enough to meet student demand. With coordinator support and mentorship, they would be equipped to propel the program with a flush of new growth, and would have the capacity to make striking change within the student body and Ann Arbor community.

2013/14 SNRE Masters Project Support

Although the 2012/13 SNRE Masters Project team evolved to fill the role of the first leadership team, the second project team (2013/14) will not be charged with maintaining the UMSFP as a part of their project. They have been brought in to develop educational programming for the program and the Campus Farm with the UMSFP serving as the client organization. They will work closely with the 2013/14 Leadership Team, who will serve an advisory role to the project team. See Appendix 3 for a detailed list of potential deliverables from the 2013/14 SNRE Masters Project Team.

Implementation Strategy

Phase	Name	Description	Status
1	Feasibility	Research into best practices from over 10 national campus farms and associated food programs where available. Schools were selected based on comparability to UM.	100% Complete as of October 2011 The Yale Sustainable Food Program and Duke Campus Farm are the best models for us to follow.
2	Site Selection	Three site options will be explored, 2 at Matthaei Botanical Gardens and 1 on North Campus by a project group from the ENVIRON 391 course.	100% Complete as of January 2012 Old nursery space at MBG was selected due to existing infrastructure and long term availability.
3	Pilot Project	A one year, 600 square foot pilot project for growing food at MBG will be conducted in 2012. During Fall 2012 and Winter 2013 we will pilot the education and community building aspects of the Sustainable Food Program including publishing weekly newsletters, hosting volunteer workdays, piloting a new class, establishing an advisory board, seeking funding, hosting a harvest festival and seeking to transition leadership.	90% Complete as of April 2013 Expected completion: May 2013 Progress to date: Food production was a success, though we still need to demonstrate financial success with sales which will begin in summer 2013. The program-side pilot has been a complete success as we've exceeded many of our projected goals.
4	Scaling	Scaling that will expand farm acreage to 2 acres, install permanent student internships, solidify classroom collaboration, integrate the new sustainable food systems cluster hire, and add a full time program coordinator.	30% Complete as of April 2013 Progress to date: 14 classroom collaborations are already underway and we've been working with Lesli Hoey, and only professor of the cluster hire who is on campus at this point
5	Continuous Improvement	Continuous improvement of farm production and performance against stated metrics. Expansion of the Sustainable Food Program to be a resource center on campus and in the community. Exploration of partnerships at other universities and with other successful organizations.	Ongoing Progress to date: We've already begun partnering with local organizations in Ann Arbor as well as sharing knowledge with partners at other Big 10 universities seeking to replicate some features of the UMSFP.

Financials and Earned Income

See Appendix 2 for a Market Validation of proposed goods

Funds Raised To-Date (see below for full budget)

Grants Received

Planet Blue Student Innovation Fund (November, 2011)_____ \$42,000

-Request that it be spent by April of 2014

Bank of Ann Arbor Project Help Grant (June 2012)_____ \$1,000

-Spent as of September 2012

Central Student Government (October 2012)_____ \$3,000

-Spent as of October 2012

Zero Waste Grant by Student Sustainability Initiative (October 2012)_____ \$1,000

-Spent as of October 2012

U of M Transforming Learning for a Third Century Quick Wins Program_____ \$25,000

-Must be spent by end of Sept 2014

U of M Social (E)mpact Pitch Competition by MPowered_____ \$500

-Spent as of April 2013

Revenue

Donations _____ \$1,500

Harvest Festival_____ \$2,300

T-shirt Sales_____ \$400

In Kind Donations To-Date

Based on calculations from the pilot period (April 2012-April 2013) UMSFP has received in-kind donations worth roughly \$71,000, and 85% of that was donated by student volunteers. This was calculated based on the 2012 rate of \$22.14 for the value of one hour of volunteer labor, and in the future we expect in-kind support to increase as the farm scales up and can accommodate more summer workers. We can also expect student volunteer hours off campus to increase with the benefit of a Program Coordinator, but for the purposes of this budget we will assume a constant yearly donation of student organizing labor.

Finance

Budget Key

KEY	TLTC	PBSIF	Unmade asks	Student volunteer hours	In-Kind
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Budget

2-YEAR UMSFP BUDGET	Fall, 2012	Winter, 2013	Summer, 2013	Fall, 2013	Winter, 2014	Summer, 2014	Fall, 2014	Winter, 2015	TOTALS
COSTS									
PERSONNEL									
UMSFP Intern (7hrs/week)	-	\$1,232	-	-	-	-	-	-	\$1,232
UMSFP Intern (8.5hrs/week)	-	\$1,496	-	-	-	-	-	-	\$1,496
Farm/CC Intern (20hrs/week)	-	-	MBGNA	-	-	MBGNA	-	-	\$0
Farm Intern (39.9hr/week)	-	-	\$8,000	-	-	\$8,000	-	-	\$16,000
TLTC Contribution to Full-time Program Coordinator	-	-	\$6,000	\$6,000	\$6,000	\$6,000	?	?	\$24,000
DSA Contribution to Full-time Coordinator	-	-	\$3,336	\$3,336	\$3,336	\$3,336	\$3,336	\$3,336	\$20,016
SNRE Contribution to Full-time Coordinator	-	-	\$1,668	\$1,668	\$1,668	\$1,668	\$1,668	\$1,668	\$10,008
Graham Institute Contribution to Full-time Coordinator	-	-	\$1,668	\$1,668	\$1,668	\$1,668	\$1,668	\$1,668	\$10,008
MBGNA Contribution to Full-time Coordinator	-	-	\$3,336	\$3,336	\$3,336	\$3,336	\$3,336	\$3,336	\$20,016
Farm Caretaker (10hrs/week)	-	-	-	Provost	Provost	Provost	Provost	Provost	-
Farm Caretaker (10hrs/week)	-	-	-	Provost	Provost	Provost	Provost	Provost	-
New MP Team (7 unpaid)	-	-	Students	Students	Students	-	-	-	-

Marketing Costs	-	-	-	\$300	\$300	\$300	\$300	\$300	\$1,500
Signage for Farm Space and Satellite Gardens	-	-	-	\$5,000	-	-	-	-	\$5,000

FUNDS REMAINING

PBSIF - \$42,000 (amount remaining after semester expenses)	-	\$25,864	\$17,364	\$12,064	\$9,963	\$1,463	\$1,163	\$863
TLTC - \$25,000 (amount remaining after semester expenses)	-	\$25,000	\$19,000	\$13,000	\$7,000	\$1,000	\$1,000	\$1,000

2-YEAR UMSFP BUDGET	Fall, 2012	Winter, 2013	Summer, 2013	Fall, 2013	Winter, 2014	Summer, 2014	Fall, 2014	Winter, 2015	TOTALS
REVENUE									
FROM FOOD									
Cobblestone Farmers Market	-	-	TBD	-	-	-	-	-	-
Student Food Co Weekly Cart Sales	-	-	Being negotiated	-	-	-	-	-	-
CSA - 15 Members	-	-	-	-	-	TBD	TBD	TBD	-
Residential Dining Services	-	-	-	-	-	TBD	TBD	TBD	-
FROM EVENTS									
Harvest Festival	\$3,000	-	-	\$3,000	-	-	\$3,000	-	-
Student Summer Orientation Trip	-	-	-	-	-	\$500 per person	-	-	-
Staff Retreats	-	-	TBD	-	-	TBD	-	-	-
MISCELLANEOUS									
T-shirt sales	\$200	\$200	\$50	\$200	\$200	\$50	\$200	\$200	-

DISTANT EXPENSES	
Hoophouse	\$10,000
Handwashing Station	Large range
Organic Certification	TBD
Refrigerator packaging and storage space	\$5,000
Funding of innovative Student Project ideas for the farm	TBD

Justified Budget Line Items

Personnel Costs

Intern (7hrs/week) – These are Lauren Beriont’s hours. She has worked a bit under 6hours/week on average, so this average was extended out through April, adding in a bit extra just in case she has more time to work extra hours. Lauren is being paid \$11/hour, although she was originally told she would be paid \$10/hour.

Intern (8.5hrs/week) – These are Sarah Schwimmer's hours. She has worked a bit over 7 hours/week on average, so this average was extended out through April, rounding up to 8.5. Sarah is being paid \$11/hour, although she was originally told she would be paid \$10/hour.

Farm Intern (39.9hrs/week) - This summer, the intern can only work 30hours/week due to another University job. So, this position will actually be split between a 30-hour person and a 10-hour person (the 10 hour person will primarily do manual labor on farm).

TLTC (Transforming Learning for a Third Century) Contribution to Full-time Program Coordinator - This uses more of the current funding early on, but provides an avenue for building the program over the next year and institutionalizing for the future. This also reduces tension with paid vs. unpaid student workers.

DSA (Division of Student Affairs) Contribution to full-time coordinator – These numbers are based on a potential agreement between DSA and the UMSFP in which produce from the Farm would be provided for units within DSA, like the MFarmers Market and University Unions. This would be similar to how restaurant CSAs work. DSA is aware that the UMSFP cannot guarantee a certain amount in the first year, because the farm leadership will be exploring what is possible, trying new things out in the first season. DSA would simply ask that the Campus Farm provide what it can. The funding would be reassessed after two pilot years. DSA has communicated that they do not currently have money to make this investment, but that they are interested in working to attain this money through creative avenues.

SNRE (School of Natural Resources and Environment) Contribution to Full-time Coordinator – These numbers are based on projected perceived value to SNRE. Having a full-time coordinator would be of direct benefit to SNRE, for drawing a more diverse and qualified pool of graduate students to the school and for providing research opportunities at the farm and satellite garden spaces. A program coordinator would legitimize the program, which would allow SNRE to market the School as a place for innovative sustainable food system research and

education. Further, a coordinator would work with SNRE students to arrange use of space and equipment within the farm and satellite garden spaces. This would be of great benefit, especially to SNRE thesis students looking for support in their research.

Graham Institute Contribution to Full-time Coordinator – These numbers are based on projected perceived value to the Graham Institute Planet Blue Ambassador Program, which works to engage students, faculty, and staff on culture change for sustainability. The UMSFP engages in this same work for sustainable food, daily. The UMSFP would work directly with the Planet Blue Ambassador Coordinator to co-host events and activities that would further both their mission and the mission of the UMSFP. An example of this includes the spring Planet Blue Ambassador event to be held at the farm this coming May. With this financial support to pay for part of the coordinator position, the UMSFP could commit to hosting an event or two each semester that would be available to Planet Blue Ambassadors. This relationship would strengthen the effectiveness of the Planet Blue Ambassador program.

MBGNA (Matthaei Botanical Gardens and Nichols Arboretum) Contribution to Full-time Coordinator – These numbers are based on projected perceived value to the Botanical Gardens. The relationship between the UMSFP and the Botanical Gardens is of great benefit to both parties. The Botanical Gardens has been incredibly generous in providing space, equipment, guidance, and expertise to the UMSFP as the Campus Farm has been developed. The UMSFP, in turn, has created great visibility for the Botanical Gardens, bringing students, faculty, and staff to the wonderful space who might not otherwise ever go. Further, the Campus Farm diversifies programming within the scope of the Botanical Gardens' mission in an attractive way. This being said, coordinating logistics with multiple staff people within the Botanical Gardens is currently time consuming and inefficient. For example, no UMSFP leadership team members have access to the Botanical Gardens calendar, so coordinating visits and workdays takes extra time. Further, use of equipment, like the tractor and even the leased van, is limited because volunteers are not allowed to operate. Incorporating a program coordinator would reduce the current above and beyond work from different Botanical Gardens staff people. This will help the Campus Farm grow to reach its full potential in a safe way.

2 Farm Caretakers (10hrs/week) – This item is based on a desire to obtain the rental house property across the service entrance road from the Campus Farm. If this house could be obtained from the University Real Estate Office, the UMSFP could operate a caretaker model similar to that of the Arboretum, and other locations around campus, in which student housing is provided for free in return for 10 hours of caretaker work/week. This request would have the highest leverage within the Real Estate Office, if made from the office of the Provost. Provost Phil Hanlon expressed interest in the success of the UMSFP when he attended the UMSFP presentation at the MBGNA 50th Anniversary Celebration. Although Provost Hanlon is leaving Michigan, it still seems like a realistic request, given the academic value of the program and the values of the Office of the Provost.

Farm Volunteer Hours (40/month) This is based on pilot garden and greenhouse averages/workday since last May, 2012. It is assumed that summer workdays will happen at least twice/week for 2 hours each.

Grant-writing Technical Assistance - Anya Dale has agreed to serve in this capacity (researching resource/opportunities, and document preparation and review). This is not a dedicated amount of time/month, but she is willing to help where she can (although she cannot actually help with writing).

Since the Graham Institute, Division of Student Affairs, and Matthaei Botanical Gardens have communicated a desire to see this program succeed, it is the hope of the UMSFP that these entities all work together, and in their own units, to find ways to make this program financially sustainable into the future.

Equipment Costs

Seeds - This is assuming that the same number of seeds is ordered every year. This is realistic if seeds can be saved, or if there is no plan for growth of planting space (currently 1/4 acre).

Fence - This is the current bid estimate, but this number is not finalized.

Workday Tools (10 shovels, 20 trowels, 5 rakes, 25 gloves, 5 weeding tools, 5 kneeling boards, 2 hand tillers) - shovel - \$12x10, trowel - \$7x20, rake \$8x5, gloves - \$2x25, weeding tools \$15x5, kneeling board - \$15x5, hand tiller - \$20x2. There will be replacement costs that are not accounted for here. Costs are estimates based on online averages (Botanical Gardens may have insights for wholesale prices on some of these items).

Drip Irrigation - Based on farmer conversations, philosophy of the UMSFP, interest in long-term investment, efficiency for summer interns, and ability to reuse, drip irrigation is the preferred method for watering. The second cost in May of 2014 would be for expansion to 1/2 acre.

Compost - This number assumes compost depth similar to what was used for the pilot garden (2 cubic yards for a 600 square foot space). This is scaled up for 1/4 of an acre. It is assumed that the space where compost is applied this summer will not need the same levels of compost, if anything spring of 2014.

Crop Cleaning Facility (simple) - This is an estimate for a simple grated structure that a hose can be run over at waist height (based on a station seen at UVM).

Miscellaneous Costs

GAP/GHP (Good Agriculture Practices/Good Handling Practices) Certification - The Office of Campus Sustainability has confirmed that OSEH will cover certification costs in the first year of growth.

Marketing Costs - this is for printed materials only.

Signage for Farm Space and Satellite Gardens - Professional signage at the Campus Farm and satellite gardens will improve visibility.

Revenue

Cobblestone Farmers Market - The Market managers would like to have the UMSFP at their market. It is just a matter of coordination with summer workers.

Student Food Co Weekly Cart Sales - This selling relationship has been piloted for one food stand sale day. The food crops from the farm were a hit, so this continued relationship should be no problem into the future. However, at this point in time, the Food Stand only operates during the academic year.

Appendices

Appendix 1 - Targeted interventions with hourly commitment that the UMSFP Leadership Team measured during 2012-2013

Notes on Hours

All numbers are based on actual hours logged during the time period of the current Leadership Team (March 2012 – February 2013).

- These numbers represent hours worked by the UMSFP Leadership Team
- Numbers in *italics* represent outside volunteer hours (ie: non-Leadership Team hours)
- Numbers in (parentheses) represent in-kind hours by Matthaei Botanical Gardens staff

Documented Hours/Month

Task	Mar 2012	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan 2013	Feb	March
Leadership Development													
Student mentorship	20	25	15	10	10	10	15	20	30	30	30	30	30
Education													
Classroom contact	0	0	0	0	0	0	5	1	0	0	2	1	0
Faculty communication	0	0	0	2	2	2	5	5	5	1	2	2	8
Student project consulting	4	4	0	0	0	0	4	8	4	0	4	8	12
Community Building													
Member group communication	0	5	5	5	10	10	10	10	10	10	15	15	10
Member group events	5	5	5	0	0	0	20 5	5	5	5	5 7	10 7	15 30
Harvest Festival organizing	0	0	0	0	10	10	30 110	50 130	0	0	0	0	0
Ann Arbor community networking	5	12	8	5	10	10	5	5	5	5	10	20	10 10
Food Production													
Farm planning	4	8 5	10 2	8	0	0	0	0	0	0	5	15	20 10

Site preparation	0	8 22 (4)	16 17	0	0	0	0	0	8 70 (4)	0	0	0	0
Seed starting	0	6 (4)	6 (4)	0	0	0	0	0	0	0	0	0	4 8 (4)
Planting, tending, and harvesting	0	0	20 16	22 52	24 35	24 32	12 18	8 31	0	0	0	0	0
Farm education		14	8	8	8	8	8	8					
Farm communications	0	4	10	10	10	10	10	10	8	6	6	6	6
Greenhouse work									16 78 (4)	10 34 (4)	10 17 (8)	10 43 (2)	10 116 (4)
Administration													
Stakeholder meetings	10	12	6	6	6	6	10	12	12	12	12	12	18
Weekly newsletter				4	8	8	20	8	10	10	12	12	12
Website and social media		8	20 10	20 16	16 8	14 10	10 10	16 10	12 10	8 10	8 12	6 12	6 12
Record keeping	16	16	16	20	20	20	24	24	24	30	40 2	40 2	30
Budgeting and fundraising	2	6	5	3	3	4	10	10	6 8	6	10 (10)	6 10	20 (10)
TOTAL	66	168	199	191	180	178	341	371	329	186	232	274	390

*Template based on Worksheet 4.18 in [Building a Sustainable Business: A guide to developing a business plan for farms and rural businesses](#) (Minnesota Institute for Sustainable Agriculture, 2003)

Estimated Hours/Month for Leadership Team, Campus Farm Interns, and Friends of the Campus Farm 2013-2014

Assumptions: Each leadership team member has committed up to 5 hours/week to work with UMSFP, making each position a 10 hour a week position (40 hours per month). Campus farm work exceeds the budgeted 1.5 full time interns, but the following estimates are for months with the heaviest workload. Workload will decrease during greenhouse production season, and interns will have support from Friends of the Campus Farm students and other volunteers.

Hourly Commitment for UMSFP and Campus Farm leaders (per month)	Relations Coordinator	Academic Ambassador	Communications Specialist	Program Caretaker	Farm Interns	FCF leaders + volunteers	Program Coordinator
Leadership Development*							
Student mentorship (2 hours/week of office hours)	2	2	2	2			40
Education							
Classroom contact		4					10
Faculty communication (in addition to work that masters project will be doing)		8					20
Student project consulting		4					8
Community Building							
Member group communication	8						20
Member group events	8						
Harvest Festival organizing (July-October)	6		8	20			
Ann Arbor community networking	2	2	8	2			
Food Production (based on scale-up from 600 to 8000 sq ft)							
Farm planning** (Jan. and Sept. for farm and greenhouse)					10	6	10
Site prep (Jan. and Sept. for farm and greenhouse)					10	10	
Seed starting (March-April, Sept.-Oct.)					24	24	
Planting, tending, and harvesting (with added time for distribution)					180	100	
Farm communications					4	4	10
Greenhouse work						10	

Administration							
Stakeholder meetings***	2	8	2	4			10
Weekly newsletter			8				4
Website and social media	8	2	8		2	2	8
Record keeping****	4	8	4	4	6	2	10
Budgeting and fundraising		2		8	4	2	10
Totals	40	40	40	40	240	160	160

*Leadership Development is a key piece of UMSFP’s mission. In addition to mentoring students themselves, Leadership Team members will need leadership development directed at their own growth through this year.

**Farm planning includes prep for the season, but also components like planning for construction of a new fence, a refrigerator on site, a central education gathering space. Although a farm intern could have the foresight to initiate work on these projects, the required bidding process is outside of the scope of intern or Leadership Team responsibilities.

***Stakeholder meetings will be difficult for transient students to navigate because relationships must be built, trust must be built, and one must be attuned to the ever-changing institutional landscape. This is fairly unrealistic for Leadership Team students to navigate unless they have a strong mentor for the group.

****As part of the campus farm record keeping, there needs to be a designated Person in Charge (PIC) for GAP/GHP requirements. This person will be in charge of oversight on food safety protocols. This person should be consistent from season to season.

Appendix 2 - Market Validation

Students have demonstrated demand for increased food issue-related academic and extra-curricular opportunities at the University of Michigan. In recent years, student activism with respect to food issues has become increasingly prevalent on campus. The launch of three on-campus vegetable gardens (the Cultivating Community garden, a garden in the School of Public Health, and a garden at Outdoor Adventures) and desire by various groups on campus to start more (the Permaculture Design Team and staff from the Taubman College of Architecture and Urban Planning) demonstrates growing desire for a space to grow and learn about food. This interest is validated by a survey of 446 UM students, where 64% of students responded that they were interested or very interested in having a campus farm. Further demonstrating an eagerness by students to learn has been the creation of 5 additional food-focused student groups in 2012 alone.

With respect to food sales, we have identified 5 potential markets that have expressed interest in selling UM Campus Farm produce.

Potential Produce Markets	Progress To-Date	Goals
Student Food Co.	<p>Confirmation from OSEH that produce does not need to be GAP certified</p> <p>Conversations started about what crops can be supplied, when, and how much</p> <p>One batch of greenhouse crops donated to pilot sales</p>	<p>April 2013: 2 greenhouse crops sold in small quantities as a trial run to spread awareness of the new partnership</p> <p>Summer/Fall 2013: Farm supplies half the weekly need for peppers, cucumbers, and greens</p> <p>Jan 2014: Greenhouse supplies total weekly need for kale + specialty crops when available</p>
Cobblestone Farm Market	<p>Market manager reached out to the UMSFP to invite us to participate this summer</p> <p>No commitments made yet (summer interns will make decision)</p>	<p>Summer 2013: Visit Market to form relationships with vendors; sell produce once as trial run to practice GAP procedures</p> <p>Summer 2014: Sell excess produce once/month and keep up relationship with Market and fellow vendors</p>
MFarmers Market	<p>Invitation from organizers to have UMSFP presence at Fall 2013 markets with hope of selling farm produce when possible</p>	<p>Fall 2013: UMSFP table with educational activities at each market</p> <p>Fall 2014: Sell at least greens at each market</p>
University Unions	<p>Invitation to sell produce once GAP certified</p>	<p>Fall 2014: Begin selling at least one crop based on which crop is of interest to University Unions staff</p>
CSA	<p>Research done on other campus farms—most have at least tried small CSA at some point with varying success. Other farms start with 10-15 shares, mostly targeting university students, faculty, and staff.</p>	<p>Summer 2013: Small 15 share student CSA piloted</p> <p>Summer 2014: Full 15 shares if successful in 2013</p>

Appendix 3 - Potential Deliverables from the 2013/14 SNRE Masters Project Team

UMSFP is serving as the client for the 2013 SNRE Masters Project team, a group of 7 students focusing on education at the campus farm. This group can be thought of as being contracted by the UMSFP to take on a specific project. They will provide some deliverables for the UMSFP, but are not and will not be in any way involved with leading or managing the program beyond what they are interested in volunteering. They will not be responsible for the tasks outlined above but will instead focus on separate deliverables that will advance education initiatives at the farm. One member of this team has been elected to the Academic Ambassador position for 2013-2014 and will serve as a crucial link between this team and the Leadership Team for communication purposes. Their work and final deliverables will undoubtedly support the Leadership Team and continued growth of the UMSFP, but since this team is just beginning work on their project, firm deliverables have not yet been decided upon. In their Interim Project Proposal submitted in March, the Masters Project team identified the following as possible deliverables:

Partnership Framework (Report): Because not much of the farm is in the ground yet, this generation of team members will focus on creating and maintaining partnerships with university, community, regional, and other partners. We will develop a framework that identifies (1) conceptual areas of interest, (2) partners of interest, (3) a set of “rules” for reaching out to potential partners and the act of officiating and maintaining partnerships. How is reaching out done? What is involved in officiating a partnership? What is done one time, and what is ongoing? What are the expectations of the UMSFP and the partner? How do you assess or evaluate the quality of partnership (e.g., to know how you can improve it, or know whether it’s worth maintaining)?

Education & Outreach Framework: After the meeting with our advisor and UMSFP team, we will create a framework for education and outreach to be done (1) by the farm and (2) at the farm. Since the campus farm is still fairly young, this generation of team members will likely focus primarily on building a strong, long term framework and focus secondarily on creating content to fill in that framework. If the educational content is the meat and potatoes, the framework will be the table, tablecloth, plate, cup, and silverware. We have to make sure the table is set before any food is served.

Education & Outreach Content (pamphlets, signs, booklets, website, social media, lesson plans, activities, curricula): As stated, this will be the meat and potatoes, and most will likely come after the groundwork has been laid. These deliverables will meet needs as they emerge and be custom-tailored for different purposes and audiences.

Note: Again, these deliverables will advance the mission of UMSFP and the campus farm, and the team will work with the Leadership Team to ensure deliverables have maximum impact. Because the team will focus on specific education and outreach projects, their efforts are being considered complementary to the work of the Leadership Team who will remain responsible for the maintenance of the UMSFP.

EXAMPLE - PBSIF Funding Request Form

Please email the below form to the PBSIF Review Board at pbsif-board@umich.edu. We will then send you back any necessary changes or approve the request prior to transferring funds.

Grantee Team: UMSFP SOAS/Departmental Shortcode: Bot
 Student Name: Lindsey MacDonald Gardens Campus Farm Account
 Student Email: lindsey.e.mac@gmail.com Total Amount Requested: \$667.10
 Date of Request: 3.27.13

1. Please list each expense for which you require funding or reimbursement. Please attach copies of receipts.

We are requesting seed money so that we can order seeds immediately.

Total amount requested: \$667.10

2. Please attach a spreadsheet detailing your incurred expenses up to this point. The only spending is for our two interns. I have not seen a report of money spent on this.

ORIGINAL PBSIF PROPOSAL

Grant Applicants:

Name: Lauren Beriont

Role in the project: Botanical Gardens Farm Organizer

University affiliation: PitE and Geology Student

Group Representation: Environment 391 Course Campus Farm Project, MSFI, Cultivating Community

Name: Lindsey MacDonald

Role in the project: Sustainable Food Program Development and Management

University affiliation: SNRE Graduate Student

Group Representation: U of M Sustainable Food Program SNRE Masters Project, Outdoor Adventures Garden Group

Supporting Student Groups:

-Vision and volunteer work: EnAct, MSFI, Cultivating Community, Outdoor Adventures Garden Group, Campus Farm Working Group

Administrative Support:

-Utilization of space: U of M Matthaei Botanical Gardens, North Campus Revitalization Initiative (North campus Northwood space)

-Mentors throughout process: Office of Campus Sustainability; faculty in SNRE, EEB, Art & Design, Urban Planning, PitE; local farmers from Sunseed Farm, Tillian, Brines Farm; Administrative support from the North Campus Revitalization Initiative, Botanical Gardens, Graham Institute

Supporting Academic Projects:

-Winter 2011, NRE 639 *Sustainable Food Systems*, 3 person class project on potential campus farm idea

-Fall 2011, Environment 391 *Sustainability and the Campus*, 7 person class project on development of a campus farm proposal

-Winter 2012, Urban Planning 505 *Fundamentals of Planning Practice*, 4 person class project on site analysis and garden implementation (likely on north campus)

-Anticipated Winter 2012-Winter 2013, SNRE Masters Project on UM Sustainable Food Program Development

Introduction:

Imagine if the University of Michigan could create a culture of eating local and sustainable food. Imagine if the University of Michigan could work toward its 20% local and sustainable food goal with food provided by its own students. Imagine being the leaders and best in cross-disciplinary and collaborative sustainable food system innovation. Right here on campus, as an institution, we can engage in

sustainable food ventures that create successful models for our institution and beyond.

In the following text, the long-term, big picture perspective will be fleshed out for making this possibility a reality. Following this framing, two proposals are laid out, addressing components of the vision (since \$50,000 is not enough money to implement the entire vision). This funding opportunity contributes as an imperative step in the process of implementation and in acquiring other funding.

Problem Statement:

The University of Michigan's decentralized structure supports innovation and leadership opportunities on a plethora of topics all around the campus. In the context of sustainable food, there is a student run garden at the Ginsberg Center (run by Cultivating Community), a program supported garden at Outdoor Adventures, the Michigan Sustainable Food Initiative student group, volunteer groups who do work on local farms, a garden run by students in the School of Public Health, a campus farmer's market, and much more. These projects, groups, and initiatives have emerged from strong leadership and innovative ideas. They share a vision for a world in which food is produced, distributed, and consumed in an environmentally sustainable and just way. The methods, scope, and minutia for this vision are exercised in different ways for each entity, but the big picture is nearly identical for each.

Although the decentralized nature of the University is fantastic in some regards, the next step for sustainable food at UM must be supported by a stronger unified voice on the topic. The current projects, initiatives, and groups need an avenue to come together to articulate their vision, to share resources, to work together, and to demonstrate the necessity for change. The University cannot afford to have this great work go unnoticed, the student groups cannot afford to repeat work of their peers due to poor sharing of information, and together as citizens of the world we cannot afford to ignore the connection between current food system techniques and the mounting climate change challenge.

Further, UM is lagging behind peer institutions (not just agricultural schools. ex: Yale, Harvard) on its progress in sustainable food initiatives. We do not currently have a food system or model in place that will move us from laggards to leaders on the topic, even though there is leadership and expertise at this institution that could lead the way, given the proper infrastructure and tools.

Objectives:

The objectives of this project are to facilitate cross-campus organization of sustainable food initiatives that support informal and formal experiential education, community building, food production, sustainability visibility, and creative exploration of food system alternatives. These objectives will be expressed in three separate, but linked initiatives: 1) The development and implementation of a UM

Sustainable Food Program, 2) The development and implementation of a campus farm, and 3) The development and implementation of satellite gardens.

1) Development and Implementation of a UM Sustainable Food Program

The UM Sustainable Food Program will oversee and support all sustainable food related projects and initiatives on campus. This program will serve as a resource center for students, faculty, and staff, with written resources, personnel expertise, and organized workshops (on leadership topics, growing techniques, community organizing, canning/drying of food, and much more). The Program will connect students, faculty, and staff across campus and between departments and divisions. The goal is that this program creates a community space that welcomes collaborative work and innovation (similar to the Spectrum Center).

The funding logistics for staffing of this program are in development, but the intention is that the farm manager will work in this program (focusing on farm management side of program) and that there will be another employee focused on communications (in close contact with OCS, departmental cluster hires, the Graham Institute, and Student groups). As the program develops and additional grants are acquired, there will need to be interim solutions for funding (part-time student oversight and volunteer positions).

The Director of the Botanical Gardens, Bob Grese, has indicated that the Botanical Gardens could house the Sustainable Food Program (motivations for this site discussed below in campus farm section). This option could be a permanent fixture at the Botanical Gardens, or could move if analysis determines that another site is more conducive.

2) Development and Implementation of a Campus Farm

As an entity of the Sustainable Food Program, a campus farm will serve as a primary focal point, or “hub” of activity. This farm will produce food for dining halls, unions, the campus farmers market, and a community supported agriculture program. It is acknowledged that setting up these systems for success will be a long process that involves consideration of health standards, business models, food transportation mechanisms, relationships with Residential Dining Services, mastery of the processes of growing food, food preservation techniques, and much more. A component of the work completed by the SNRE Masters project will be a 1, 2, 5, and 10 year plan, as it would be short-sighted to proceed without a strong plan and goals associated with the vision for the future.

The farm will be more focused on production than the satellite gardens described later. The Botanical Gardens will be the site for the farm for a number of reasons including: technical support in current staff, availability of land (more land than other potential sites), alignment with Botanical Gardens mission, potential for community/office/food prep space in adjacent barn, equipment availability, water availability potential, and support from Botanical Gardens Director Bob Grese. It is

anticipated that many of the workshops, volunteer days, and community organizing will happen here, despite the transportation challenge (not right on campus and no bus line currently). The transportation challenge has encouraged development of satellite gardens, which will be discussed below. Along with a farm manager overseeing this site, there will need to be a group of summer interns to assist with manual labor, organization, and community organizing.

3) Development and Implementation of Satellite Gardens

While there is reason to believe that the campus farm site will become a hub for activity, initiatives one and two have the potential to lack visibility components, especially for students, faculty, and staff not already interested in the topic of sustainable food. The development and implementation of satellite gardens, the final initiative, will provide an almost unavoidable increase in awareness on food topics, through their presence in highly populated campus areas (sites on South U Mall, North Campus, and Union areas have been assessed). Of course, aesthetic concerns will be addressed in collaboration with the Exterior Elements Design and Review Committee. These community gardens and demonstration plots will be volunteer run and incorporate informative signage for the general public.

Examples of these gardens have already started to pop up around campus. Cultivating Community, Outdoor Adventures, and the School of Public Health have demonstrated potential for this model. As student group leadership and departmental/programmatic initiative fluctuate from year to year, oversight by the Sustainable Food Program will be imperative for this initiative's success. This oversight will provide information, tools, and organized volunteer resources. This initiative will allow for creativity in tying smaller plot gardens to specific academic or programmatic focus. For example, the Public Health garden can focus on food health awareness and the Outdoor Adventures garden can focus on growing food for camping trips. This flexibility in focus has the potential to involve a more diverse range of students who might not otherwise be involved. Further, this highly visible initiative will demonstrate the University's commitment to sustainability.

In review, the above three initiatives will:

- Provide an avenue for formal and informal experiential education
- Foster community building/organizing experiences for students
- Increase access to local, sustainably grown foods
- Showcase the University's commitment to environmental sustainability
- Contribute to the University's local and sustainable food goal (20% by 2025)

Education:

Since people must eat every day, there is opportunity for individuals to make food consumption decisions that affect the sustainability of our food system in a significant way. As a world-class institution, in which students go all over the world to influence positive change when they graduate, the University should make students aware of these food opportunities. There is not one perfect solution for

raising awareness on this topic. Fortunately, education topics and venues are diverse for this project.

Educational topics include:

- Food production (from container gardening in the backyard to large-scale agriculture)
- distribution (from Community Supported Agriculture programs to dining hall collaborations with the chefs)
- consumption (choices related to sustainability and nutrition)
- waste (from reducing food waste to compost programs)

*Within each of these topics a wide range of disciplines could be incorporated (ex: business management for the sustainable food program and the farm/garden entities that sit within it, urban planning site design for any of the farm or garden sites, ecological study of biotic and abiotic interactions within the plots, public health study of foods produced and benefit of working on the farms/gardens).

Avenues for education:

Formal Education

In 2010 a series of interviews was performed by the Sustainable Agriculture Working Group (SNRE Sustainable food group, now known as CAFE) that asked faculty if they would use a campus farm in the courses they taught if such a facility were available, and if so how it would be used. Between these interviews and the interviews performed by the students in the farm group through *Sustainability and the Campus*, it is clear that there is overwhelming faculty support. Faculty support is only expected to increase, as the University Cluster Hire on Sustainable Food Systems has been approved, which means that five new faculty who study sustainable food systems will be hired in the next year or so. Ideally, through this cluster hire, or another interested party, a course focusing on the campus farm will be developed as a feeder for training summer interns for the farm.

Although, the UM Sustainable Food Program will not attempt to fill the same niche as MSU in food systems research, there will be opportunity for research at the Botanical Gardens site. Within the topic of food production, agroecological research topics could be explored (ex: studying biological controls, or yield of polyculture in combination with native species). Lessons in business management could be applied in any of the topics (ex: projections of how much food to produce based on market value and consumer demand). Lessons learned in all of these topics could be applied to the implementation and management of an urban garden in other settings, such as Detroit.

Informal Education

Although a tremendous amount of learning happens in formal settings here at UM, non-traditional, experiential forms of education create powerful learning moments and experiences for students as well. Further, co-curricular activities can provide a

practical application compliment to learning in the classroom. The initiatives in this project will provide a number of these opportunities. Volunteer workdays, workshops, and leadership development opportunities all fit within the realm of possibility for the immediate future. Down the road, there is the possibility of developing summer camps that students could facilitate for children as well as developing new student orientation programs for farm immersion experiences (similar to the NSOAT model used last summer at Outdoor Adventures).

Community building/Culture Development:

The community building and culture development of this project are imperative to success. The high level of interest in the student body indicates that there is great potential for high levels of student involvement, given there is the appropriate organizing and advertising. A farm manager and community organizer will not be able to oversee this project alone. The Behavior, Education, and Communications focused students in the SNRE Masters project will be investigating how to most effectively create a vibrant community of volunteers and how to create spaces/programming/leadership to facilitate in community development. Ideally, the satellite gardens will encourage increased engagement and the Sustainable Food Program will create a stronger unified voice to facilitate in this process.

Food Access:

This program has the potential to increase the amount of local and sustainable food at residential dining halls, University unions, and at the campus farmer's market. Further, the Community Supported Agriculture model will be put into place, in which students can get a weekly allotment of produce from the farm. This increase in access has nutritional benefits and environmental benefits.

One of the challenges with operating a sustainable food program in Michigan is that the climate is not favorable for providing food all year. This is why a hoop house (season extension mechanism) is incorporated into the budget model. This will help provide more food for the campus community when the most students are on campus.

University Commitment:

All of the initiatives in this project align with the UM sustainability goal of local and sustainable food production. They also speak to Integrated Assessment themes of healthy environments, climate action, waste prevention, and community awareness. The high visibility nature of this project demonstrates the commitment to sustainability to students, faculty, and staff as well as potential students, potential funders, and surrounding community members.

Methods:

The above initiatives have been developed through many student projects, many stakeholder interviews, and much research on similar campus food programs. There is, however, still a lot of work to be done by the UP505 students, the SNRE

Masters Project students, the campus farm working group, and volunteer student groups. The following is an outline of a plan for success moving forward:

Planning:

-Development of a farm advisory board that will include people with specialized knowledge in farming, University structure, University planning, and the UM Botanical Gardens

-Development of a board of trustees that will include an academic advisor, administrative officer, business manager, the farm manager, student coordinators, Residential Dining Services personnel, and a local farmer.

-SNRE Masters project consisting of a team of students, with diverse backgrounds and expertise, who will oversee the first stages of implementation of the sustainable food program (1.5 year project that starts this semester).

-Cluster hire of faculty in five different departments (School of Natural Resources and Environment, Ecology and Evolutionary Biology, Urban Planning, Business School, and School of Public Health).

-Funding: The funding available for PBSIF will not cover the costs for this project in its entirety. For this reason, other funding avenues are being considered. These potential funding opportunities are both from within the University and external to the University. External Funding possibilities include:

- Nature's Path
- Mott Foundation
- Kellogg Foundation
- National Science Education Fund
- NCR-SARE
- Annie's Homegrown- Grants for Gardens
- Sponsorship from private companies
- *Others, to be identified

Although, these are all great possible sources of funding, it is also important to note that, once the program gets set up and establishes itself, self-sufficiency is the goal. There are a number of opportunities for revenue generation, as listed below:

- Community Supported Agriculture shares
- Campus Farmers Market
- New Student Orientation Farm Experience
- Children's summer camp

Timeline:

Option 1 for funding:

By June 2012

- Establishment of North Campus Community Garden by UP505
- Preparation of space
- Acquisition of proper tools

- Written working agreement with land managers and North Campus Revitalization Initiative established
 - Working group interviews for a summer intern to work alongside Cultivating Community interns, but to get the program started on North Campus instead of working on the Ginsberg garden.
 - Branding of the sustainable food program with signage
 - Development of a website
 - By Winter of 2012
 - Development of the Sustainable Food Program
 - Development of Farm Manager Position and space (this person will be overseeing the establishment of the Botanical Gardens Farm- under the supervision of Botanical Gardens staff and campus sustainability officials)
 - Interviewing for early spring start date
 - By Spring 2013
 - Ground Breaking at the Botanical Gardens for Farm Pilot Year
- Option 2 for Funding:
- By June of 2012:
 - Working group interviews for two summer interns to work alongside Cultivating Community interns, but focus on development of the Sustainable Food Program for launch next year, as well as plant a couple of pilot crops on site at the Botanical Gardens. Oversight of interns by SNRE Masters Project and Botanical Gardens Collaboration.
 - Branding of the sustainable food program with signage
 - Development of a website
 - By Winter of 2012
 - Development of the Sustainable Food Program
 - Development of Farm Manager Position and space (this person will be overseeing the establishment of the Botanical Gardens Farm- under the supervision of Botanical Gardens staff and campus sustainability officials)
 - Interviewing for early spring start date
 - By Spring 2013
 - First full fledged planting of the Botanical Gardens.

Evaluation:

The project organizers (working group, SNRE students, and/or farm manager) will develop an annual report that outlines successes and room for improvement (for educational outcomes, community building, food access, and visibility). This report will be quantitative (participant numbers, monetary progress, etc.) and qualitative (anecdotal experiences shared, etc.). Further, there will be mid-year progress feedback for the project organizers. Although outcomes and vision are strong and omnipresent, it is understood that this venture will be a dynamic process that requires adaptation and further development. Constant evaluation will allow the project to make the necessary changes for continued success.

Budget:

The following budget was developed for the implementation of the campus farm in its entirety. As this cannot be developed in one year, and also exceeds the \$50,000 available through PBSIF, the items imperative to immediate success have been highlighted in red and then totaled at the bottom (all has been provided for your reference). The two options have different budgets that are both described below, but only option 2 is drawn out in the context of the entire project.

Costs and labor were estimated by interviews with Tomm Becker¹ of Sunseed Farm and former manager of the Michigan State University Student Organic Farm, Nate Lada² of Green Things Farm, the Department of Horticulture at Michigan State University, Elizabeth Matzen and Kerby Smithson's University of Michigan Campus Garden Initiative³, and the University of Vermont campus farm budget⁴.

Option 2:**I. Capital Budget**

List of Equipment	Cost
Tractor	\$6,000
Rototiller	\$5,000
Hand Tools	\$3,300
Refrigeration Cooler	\$5,000
Total Equipment	\$3,300

*Startup costs at Matthaei Botanical Gardens significantly lower; tractor and roto-tiller owned by Matthaei Botanical Gardens

Supply Items

Cost	
Drip Irrigation	\$2,000
3D Deer Fence	\$700
Seeds	\$1,000
Total Supplies	\$3,700

Other Description	Cost
Hoophouse	\$10,000
Drainage Tiles	\$1,200
Tool shed	\$1,000
Soil Preparation	\$3000
Marketing and Web Design	\$5,000
Electrical Installment	\$6,000
Liability Insurance	\$700
Addition of Well	\$10,000
Soil Testing	\$3,000
Signage	\$1000
Gravel for parking area	\$100

Storage Building
 Food Cleaning Facility
 Installment of infrastructure

Total Other **\$28,100**

List of Equipment Total **\$19,300**

Supply Items Total **\$3,700**

Other Descriptions Total **\$36,900**

Total Capital Budget **\$31,800**

II. Annual Budget

Income **Dollars**

Assumptions

Produce and Sales

 15 Membership, 24 wk CSA

 Farm stand

 Campus Dining and Unions

Outreach

 Grants

 Program Fees

Organic Farm Training Program

Carry Over

Total Income

<u>Personnel</u>	<u>Salary</u>	<u>Quantity</u>	<u>Cost</u>
Farm Manager	\$50,000	1	\$50,000
2 Summer 2012 Interns	\$10	1040	\$10,400
Intern 1	\$10	634 [†]	\$6,340
Intern 2	\$10	634 [†]	\$6,340
Intern 3	\$10	634 [†]	\$6,340
Total Personnel			\$10,400

Supply Items

Cost

Seeds \$3,300

Compost \$4,000

Organic Pest Controls \$1,000

Miscellaneous Mate \$15,000

Total Supplies **\$23,300**

Other Description Cost

Water Bill	
Electricity Bill	
Transportation for Students	
Unforeseen Repairs	\$800
GAP Certification (15 crops)	\$12,000
GHP Certification	
Total Other	\$12,800
Income Total	
Personnel Total	\$69,020
Supply Items Total	\$23,300
Other Descriptions Total	\$12,800
Total Annual Budget	\$10,400

† Total labor hours based on intensive production scenario and a common estimates of 30 hours per week per acre.²⁶

Laborer Hours

1.5	Acres
30	Hours/acre per week during high season
1	High season multiplier
.25	Low season multiplier
39	High Season Weeks
13	<u>Low season weeks</u>

1901 yearly laborer hours

3 Laborers
634 yearly hours per laborer

Option 1: This option has one intern and does not require that a well be drilled at the Botanical Gardens, so Capital + Annual Budget requested from PBSIF=\$26,800

Option 2: Capital + Annual Budget requested from PBSIF (includes drilling of well and 2 interns)= \$42,000

UPDATED PBSIF PROPOSAL

Rationale for changing the Campus Farm PBSIF Proposal

The original Campus Farm PBSIF applicants (Lauren Beriont and Lindsey MacDonald) along with the UM Sustainable Food Program (UMSFP) Leadership Team (Liz Dengate, Allyson Green, Lindsey MacDonald, and Jerry Tyrrell), would like to request a reallocation of funds for the original \$42,000 grant. The reasons for this request are based on:

- 1) The farm's location at Matthaei Botanical Gardens and Matthaei Botanical Gardens' long-term commitment to the UMSFP
- 2) Reprioritization of needs for human resources instead of capital and infrastructure
- 3) Demonstrated student interest

Initially, the rationale for restricting access to the original PBSIF grant until additional funding for a full-time farm manager was secured made sense. This was to ensure the continuity of the campus farm after its establishment. We understand that the PBSIF program wants to support projects that can ensure continuity beyond the tenure of the students who apply for the funding. Now that this project has been further developed in collaboration with Matthaei Botanical Gardens, and now that the UMSFP has been created to support the project, it is clear that this initiative will continue beyond the farm's establishment, both with or without the immediate hire of a full-time staff person. Below is justification for why we believe the initiative will continue:

- 1) The confirmed long-term commitment of Matthei Botanical Gardens is crucial. MBGNA is committed to providing farm (minimum of 2 acres) and greenhouse (at least 500 square feet) space and much of the other essential equipment and material (tractor, hand tools, shed, wheelbarrows, expertise) needed to establish and sustain the farm. The Botanical Gardens staff are proceeding in their support of the project assuming that it will continue for years into the future (for example, staff at the Botanical Gardens plowed and cover cropped the farm space for use without quizzing us about the future of the project).
- 2) Based on a pilot farm project this summer and research of peer institutions (including a number of site visits), it is clear that a funded leadership structure is needed to ensure the greatest impact of the campus farm. Reallocating PBSIF funds to support this need will be more impactful in both the short and the long-term as getting the program well-established now will mean more time devoted to making innovative sustainability improvements at UM into the future.

- 3) Demonstrated through volunteer hours (close to 1000) at the farm and in the number of UMSFP member groups doing sustainable food work (currently 10 member groups), it is clear that student interest for the UMSFP, including the Campus Farm, will not waver but only continue to grow. Further, a number of staff and faculty have demonstrated their commitment to supporting students in this work through their engagement in the UMSFP Advisory Board (9 staff and faculty), with a few even offering to advise projects, teach courses, and oversee independent study credits on this topic.

Unfortunately, the many students that are interested in engaging in this work and on these initiatives do not necessarily have all of the leadership skills, technical skills, or historical perspective to grow the program. With the momentum and the potential that this program has on campus right now, we agree with PBSIF feedback from last year that we cannot afford to put all of the responsibility on a new set of students to grow the program. Students will continue to drive the initiative, but there must be a paid staff person to support these students in this work. After all, the complexities of navigating food service partnerships, fulfilling OSEH standards, mentoring students, connecting academics and co-curriculars, and managing a revenue generating farm will be challenging, even for a single paid staff person. To support the staff person in their success, all masters project documents and experiences will be shared with the new hire.

The current Leadership Team could potentially grow leaders to fulfill roles for maintaining the current functioning of the program (website maintenance, UMSFP newsletters, advisory board facilitation, member group support, etc.), but while this solution could maintain the program, a full-time program coordinator would enable the program and farm to grow and build.

Current UMSFP Status

The above initiatives have been developed through many student projects, countless stakeholder interviews, and much research on similar campus food programs across the state and country. Starting in February 2012, the SNRE masters project group has been working a collective minimum of 40 hours/week to get this program off the ground. Based on this work, an initial UMSFP mission statement was developed (see Appendix III) which is guiding current activity and will serve as a framework for a business plan, which is currently in progress.

An advisory board for the UMSFP has been established, with 17 members including university faculty, staff, administrators, and students. A charter has been developed and the first monthly meeting was held in November 2012. Student members of this board are currently laying the groundwork for a transition of leadership during the Winter 2013 semester to continue the organizational growth and on-the-ground momentum initiated by current leadership. Further details of UMSFP activities are outlined in the following sections.

PBSIF updates and alterations

After securing a site for the campus farm (2-3 fenced acres), implementing a successful pilot garden operation in the summer of 2012, and establishing the structure of the UM Sustainable Food Program through the SNRE Masters Project group, a shift and allocation of PBSIF funds is necessary for continued success. The original grant was for \$42,000. Some of the funding in that model is now inappropriately allocated given that Matthaei Botanical Gardens has agreed to, and currently is, providing most of the equipment and materials requested in the original PBSIF budget. We propose a new budget which provides \$7,500 for infrastructure (i.e. fence additions, tools, irrigation, seeds, and soil testing) and uses the remaining \$34,500 to fund human resources in the form of a UMSFP Program Coordinator and student interns. The UMSFP Program Coordinator will work broadly with the UMSFP Student Leadership Team with a focus on managing the Campus Farm. Student interns will be housed within Matthaei Botanical Gardens and work at the Campus Farm.

To be successful, the Campus Farm needs consistent labor and a dedicated student presence (ie: Campus Farm interns and a coordinator to lead them), and the UMSFP needs leadership continuity (ie: UMSFP Program Coordinator) to facilitate education, support the Campus Farm, and manage resources and volunteers. This leadership structure and funding model will enable the UMSFP to leverage additional donations from other UM departments and units. Under this scenario we will pursue \$30,000 of outside funds in addition to the original \$42,000 from PBSIF. This change creates a staffing model to last indefinitely by requiring the Program Coordinator to raise funds to support their position beyond 2014 and to develop the Campus Farm as an economically secure program. With the original grant applicants and SNRE Masters Project students all graduating in spring of 2013, it is imperative that leadership is institutionalized in this way.

Detailed PBSIF Budget Reallocation

	Original Budget Option	Proposed New Budget	Notes
Interns	\$ 10,400	\$ -	Interns will be funded under the UMSFP
Well	\$ 10,000	\$ -	Not necessary
Hand Tools	\$ 3,000	\$ 500	Price reflects current estimates
Drip Irrigation	\$ 2,000	\$ 2,000	
Deer Fence	\$ 700	\$ 1,000	
Seeds	\$ 1,000	\$ 1,000	
Hoophouse	\$ 10,000	\$ -	Hoop is not imperative at this time
Tool Shed	\$ 1,000	\$ -	Shed is not imperative at this time
Soil Preparation	\$ 3,000	\$ -	Soil prep is not imperative
Soil Testing	\$ 3,000	\$ 3,000	
Signage	\$ 1,000	\$ -	Signage is not imperative at this time
Gravel for parking	\$ 100	\$ -	Not necessary (due to site change)

Total PBSIF Budget for the Campus Farm	\$ 45,200	\$ 7,500	This is the total sum of the PBSIF grant to be allocated directly to the campus farm
Remainder to funnel into Human Resources	\$ -	\$ 34,500	Remaining funds will be funneled into the UMSFP to finance this position, crucial for a successful project
Potential Match Provided by Other UM Departments, also for human resources	\$ -	\$ 30,000	By restructuring and releasing funds we can leverage donations by other departments and/or external grants
Social (E)mpact Pitch Competition	\$ -	\$ 500	Earned by the Friends of the Campus Farm student group to support a project in 2013
UMSFP Harvest Festival	\$ -	\$ 2,300	Funds raised during an event hosted by UMSFP volunteers during Fall 2012, will likely become an annual event

By restructuring the budget, we can leverage matching donations from other UM departments. This proposal can fund:

- Full-Time UMSFP Program Coordinator
 - Funding will initially support 1 position for 1 year
 - Valued at \$52,000, (earns ~\$40,000 and ~\$12,000 for benefits)
 - Works 40 hours per week for 1 year
 - This person will raise additional funds with the help of the UMSFP Advisory Board and Leadership Team to support the position and develop future sources of internship funding
- Full-Time Summer Interns
 - Funding will initially support 2 positions per year for 2 years
 - Valued at \$6,400 each, (earns \$10/hour) *This pay will need to be adjusted to \$12/hour to be consistent with other MBGNA intern position pay if graduate students serve as interns.
 - Works 40 hours per week for 16 weeks
 - Employed during Spring and Summer
- Work-Study Interns
 - Funding will initially support 4 positions per year for 2 years
 - Valued at \$600 (40% of \$1,500) each, earns \$10/hour
 - Works 10 hours per week for 15 weeks
 - Employed during Fall and Winter
 - Receives 60% of their pay from federal sources, leaving UM to fund only 40% of wages

Using PBSIF funds in order to gain human resources will enable this program to become sustainable. The work of the Program Coordinator and interns will enable

the generation of income at the Campus Farm, through produce sales (In order of priority: Community Supported Agriculture Model, MFarmers Market, selling to the Dining Halls) and other revenue streams (e.g., event admissions). In addition, the Program Coordinator will spend part of their time fundraising and grant writing in order to secure funds for the following year's salary, supplementing funding from the university. This management and employment model is used by other campus farms including Michigan State University, Yale University, and Green Mountain College. Further, all of these schools have highly successful campus farm and food programs.

Other Potential Sources of Funding

Because PBSIF funds were not available this past year, UMSFP pursued other funding avenues to support initial costs and to gain momentum to move forward with our goals. The following additional sources of funding have been secured in addition to PBISF, which does not cover the costs for this project in its entirety:

- \$1000 grant from the Bank of Ann Arbor (funded pilot garden costs this summer)
- \$500 from the Social (E)mpact (likely will go towards special project being developed by volunteers currently)
- \$2,300 Harvest Festival Profit to go toward furthering educational component of the mission

The following are being considered for the future. These potential funding opportunities are from both within the University and external to the University. External Funding possibilities include:

- Americana Foundation*
- Ann Arbor Chapter of National Women's Farm and Garden Network
Proposal for \$12,000 grant to support Program Coordinator and Interns - *in review**
- Annie's Homegrown- Grants for Gardens
- Compton Foundation*
- Kellogg Foundation*
- Mott Foundation
- National Science Education Fund
- Nature's Path
- NCR-SARE
- Sponsorship from private companies

*These are the current foci of the Masters Project group, but other foundations will likely be pursued by future UMSFP leaders.

Although these are all great possible sources of funding, it is also important to note that, once the program gets set up and establishes itself, self-sufficiency is the goal. There are a number of opportunities for revenue generation, including:

- Community Supported Agriculture shares
- MFarmers Market
- Children's summer camps
- Value-added products

Evaluation of the UMSFP and Campus Farm

The UMSFP leadership (SNRE students and Advisory Board currently, growing to include Program Coordinator) will develop an annual report that outlines successes and room for improvement in key areas of the UMSFP mission (educational outcomes, community building, food access, and visibility). This report will be quantitative (participant numbers, monetary progress, etc.) and qualitative (anecdotal experiences, etc.). Further, mid-year progress feedback sessions will be conducted with input from all UMSFP leadership. Although outcomes and vision are strong and omnipresent, it is understood that this venture will be a dynamic process that requires adaptation and further development. Constant evaluation will allow the project to make the necessary changes for continued success.

Revised Objectives for the PBSIF Grant

The objectives of this project are to facilitate cross-campus organization of sustainable food initiatives that support informal and formal experiential education, community building, food production, visibility in sustainability, and creative exploration of food system solutions. These objectives will be expressed in three separate, but linked objectives:

- 1) The development and implementation of a UM Sustainable Food Program
- 2) The development and implementation of a Campus Farm
- 3) The development and implementation of satellite gardens

1) Development and Implementation of a UM Sustainable Food Program

The UM Sustainable Food Program will organize and support all sustainable food related projects and initiatives on campus. This program will serve as a resource center for students, faculty, and staff, with written resources, personnel expertise, and organized workshops (on leadership topics, growing techniques, community organizing, food preservation, and much more). The Program will connect students, faculty, and staff across campus and between departments and divisions. The goal is that this program creates a community space that welcomes collaborative work and innovation (similar to the Spectrum Center).

The PBSIF grant will help fund a Program Coordinator responsible for program implementation and oversight starting in the spring of 2013. This person will work in the UMSFP resource center (currently in beginning stages of development with physical space procurement a priority and at the Botanical Gardens (as approved by Botanical Gardens Director, Bob Grese). This person will be in close contact with the Botanical Gardens, Division of Student Affairs, OCS, departmental Sustainable Food Systems cluster hires, the Graham Institute, and student groups. The UMSFP Program Coordinator will also be responsible for overseeing the success of the

Campus Farm (see below) and the UMSFP student Leadership Team as well as transitions in student leadership within these groups. See Appendix I for Program Coordinator job description.

The real power in partially funding the UMSFP Program Coordinator using the PBSIF is that it can help leverage matching funds to support the position. Additionally, the Program Coordinator can devote time and expertise to securing sustainable funding for future staff and student positions and to developing the Campus Farm into a self-funded operation.

2) Development and Implementation of a Campus Farm

As an entity of the UMSFP, a campus farm will serve as a primary focal point, or “hub” of activity for volunteers, interns, and visiting classes. The Campus Farm will produce food for dining halls, unions, the on-campus farmers markets and food carts, and a community supported agriculture program. Setting up these systems for success will be a long process that involves consideration of health standards, business models, food transportation mechanisms, relationships with Residential Dining Services, mastery of the processes of growing food, food preservation techniques, and much more. A component of the work completed by the SNRE Masters project will be a 1, 3, 5, and 10 year plan, as it would be short-sighted to proceed without a strong plan and goals associated with the vision for the future. The farm will be more focused on production than the satellite gardens described later. Matthaei Botanical Gardens is currently the site for the farm for a number of reasons including: technical support available from current staff, availability of land (2-3 acres are currently fenced in for farm use, one acre has been cover cropped for the winter), alignment with the mission of the botanical gardens, equipment availability, water availability, and support from Botanical Gardens Director, Bob Grese. It is anticipated that many of the workshops, volunteer days, and community organizing will happen at the Campus Farm, despite it being located a few miles from central campus. This location challenge has encouraged the development of satellite gardens, which will be discussed below.

The revised PBSIF proposal will still fund some Campus Farm infrastructure, and interns to work and manage the space. The interns are critical for maintaining high levels of volunteer support by hosting workdays at a variety of times throughout the year and facilitating educational programs. At Cultivating Community, interns have proved highly successful in their role managing the garden and educational programs, and the Campus Farm hopes to develop a similar model with the Program Coordinator guiding this growth.

3) Development and Implementation of Satellite Gardens

While there is reason to believe that the campus farm site will become a hub for activity, initiatives one and two have the potential to lack visibility, especially for students, faculty, and staff not already interested in sustainable food systems. The development and implementation of satellite gardens will provide an almost unavoidable increase in awareness on food topics through their presence in highly populated campus areas (sites on South U Mall, North Campus, and Union areas have been assessed). Of course, aesthetic concerns will be addressed in

collaboration with the Exterior Elements Design and Review Committee. These community gardens and demonstration plots will be volunteer run. Examples of these gardens have already started to pop up around campus. Cultivating Community, Outdoor Adventures, and the School of Public Health have demonstrated potential for this model. As student group leadership and departmental/programmatic initiative fluctuate from year to year, oversight by the UMSFP Program Coordinator will be imperative for this initiative's success. This oversight will provide information, tools, and organized volunteer resources. This initiative will allow for creativity in tying smaller plot gardens to specific academic or programmatic focus. For example, the Public Health garden can focus on food health awareness and the Outdoor Adventures garden can focus on growing food for camping trips. This flexibility in focus has the potential to involve a more diverse range of students who might not otherwise be interested. Further, this highly visible initiative will demonstrate the University's commitment to sustainability.

UMSFP Program Coordinator Job Description

Position Title

Program Coordinator, UM Sustainable Food Program

Reports To

MBGNA and the UMSFP Advisory Board

Summary

Directs the administration and management of student development, programming, and budgetary aspects of the UM Sustainable Food Program. This includes, but is not limited to, supervision and coaching of student interns on the campus farm; event planning for the campus farm, satellite gardens, and resource center; and development work for the sustained support of the program.

Student Supervision and Mentorship

- Guide and support a team of sustainable food program interns who will work on the farm (planting, weeding, harvesting, processing)
- Support student projects through information sharing, resource sharing, and publicity
- Connect diverse groups of students, faculty, staff, and community members using growing food as an avenue for collaboration, shared experience, and fun

Campus and Community Relations

- Participate in pertinent events to create visibility (on and off campus fairs like Festifall, Northfest, DSA Sustainability Fair, SNRE Club Fair, Local Food Summit, Tilian, Michigan State Student Organic Farm, etc.)
- Collaborate with the Office of Campus Sustainability, the Division of Student Affairs, and the Graham Institute to work toward shared University goals (eg: 20% local and sustainably sourced foods)

Programming

Plan, implement, and oversee programming to integrate a diversity of interests around campus (harvest festival, concerts at the farm, pizza baking workshops, educational field trips, etc.)

Development

Identify and apply for pertinent grants to support staff, including student interns, and projects

Budgeting

Manage the program budget

Strategic Planning and visioning

Work with students to do feasibility planning and visioning

Required Qualifications

- Experience coordinating volunteers
- Experience in leadership development work
- Experience grant writing
- Strong work ethic and positive attitude
- Willingness to put in long hours during certain times of the year
- Excellent communication skills, both verbal and written
- Experience working on a farm

Desired Qualifications

- Experience working in a university setting
- Degree in education, leadership, environmental science, and/or sustainable agriculture
- Master's Degree completed or in progress

Salary/Stipend

Commensurate with experience, likely \$40,000 (+\$12,000 for benefits)

Revised Problem Statement

The University of Michigan's decentralized structure supports innovation and leadership opportunities on a plethora of topics all around the campus. In the context of sustainable food, there is a student-run garden at the Ginsberg Center (run by Cultivating Community), a program-supported garden at Outdoor Adventures, the Michigan Sustainable Foods Initiative student group, volunteer groups who do work on local farms, a garden run by students in the School of Public Health, a campus farmer's market, and much more. These projects, groups, and initiatives have emerged from strong leadership and innovative ideas. They share a vision for a world in which food is produced, distributed, and consumed in an environmentally sustainable and just way. The methods, scope, and implementation details for this vision are exercised in different ways for each entity, but the big picture is nearly identical for each.

Although the decentralized nature of the University works very well in some regards, the next step for sustainable food at UM must be supported by a stronger unified voice on the topic. The current projects, initiatives, and groups need to come together to articulate their vision, to share resources, to work together, and to demonstrate the necessity for change. The University cannot afford to have this great work go unnoticed, the student groups cannot afford to repeat work of their peers due to poor sharing of information, and together as citizens of the world we cannot afford to ignore the connection between current food system techniques and the mounting climate change challenge.

Further, UM is lagging behind peer institutions (not just agricultural schools, but many others, including Yale, Harvard, and Duke) on its progress in sustainable food initiatives. We do not currently have a food system or model in place that will move us from laggards to leaders on the topic, even though there is leadership and expertise at this institution that could pave the way, given the proper infrastructure and tools. The UM Sustainable Food Program is solving these problems by following the following mission.

UMSFP Mission Statement

Fostering collaborative leadership that empowers students to create a sustainable food system at the University of Michigan while becoming change agents for a vibrant planet

To further this mission, the UMSFP focuses effort in three areas:

1. **Developing Responsible Citizens and Leaders** by facilitating formal and informal education on sustainable food topics
2. **Strengthening Communities** through collaborative programming and outreach
3. **Growing Sustainable Food** that supports the well-being of people and the environment at the University of Michigan and beyond

Developing Responsible Citizens and Leaders

Since people must eat every day, there is opportunity for individuals to make food consumption decisions that affect the sustainability of our food system in a significant way. As a world-class institution, in which graduates spread globally to influence positive change, the University should make students aware of these food opportunities. There is not one perfect solution for raising awareness on this topic. Fortunately, education topics and venues are diverse for this project.

Formal Education

In 2010 a series of interviews was performed by the Sustainable Agriculture Working Group (SNRE Sustainable food group, now known as CAFE) that asked faculty if they would use a campus farm in the courses they taught if such a facility were available, and if so how it would be used. Between these interviews, the interviews performed by the students in the farm group through *Sustainability and the Campus*, the SNRE Masters project work with eight courses in Fall 2012, and the new course that was inspired by campus farm work in Fall 2012, it is clear that there is overwhelming faculty support. Faculty support is only expected to increase, as the University Cluster Hire on Sustainable Food Systems is in the process of hiring five new faculty who will study food systems.

Although the UM Sustainable Food Program will not attempt to fill the same niche as MSU in food systems research, there will be opportunity for research at the Botanical Gardens site.

Informal Education

Non-traditional, experiential forms of education create powerful learning moments and experiences for students as well. Further, co-curricular activities can provide a practical application compliment to learning in the classroom. The initiatives in this project will provide a number of these opportunities. Volunteer workdays (722 hours logged by volunteers in the summer of 2012), workshops, and leadership development opportunities all fit within the realm of possibility for the immediate future. There is the possibility of developing summer camps that students could facilitate for children as well as developing new student orientation programs for farm immersion experiences (similar to the First Ascent model used last summer at Outdoor Adventures).

Strengthening Communities

The community building and culture development of this project are imperative to success. The high level of interest in the student body indicates that there is great potential for high levels of student involvement, given appropriate organizing and advertising. A Program Director and student interns will not be able to oversee this project alone. The Masters Project team toured Michigan State University, Yale, Green Mountain College, and the University of Vermont to serve as benchmarks and learning platforms to ensure the success of UMSFP and Campus Farm.

Research about similar programs and campus farm operations have led us to conclude that leadership is integral to success. Interns alone can manage campus farm operations and successfully grow food, but to impact students across the university, long-term leadership in the form of a Program Coordinator is necessary.

Growing Sustainable Food

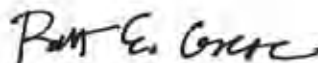
This program has the potential to increase the amount of local and sustainable food at residential dining halls, University Unions, and at the campus farmer's market. Further, the Community Supported Agriculture model will be put into place, in which students, faculty, and staff can get a weekly allotment of produce from the farm. This increase in access has nutritional health benefits and environmental benefits.

One of the challenges with operating a sustainable food program in Michigan is that the climate is not favorable for providing food all year. This is why the Friends of the Campus Farm student group has worked with UMSFP to secure and remediate soil beds in the Botanical Gardens greenhouse. This will help provide more food for the campus community when the most students are on campus.

*Transforming Learning for a Third Century: Quick Wins Grants Program***Project title: U-M Campus Farm/ Sustainable Food Systems Program**

Participants:

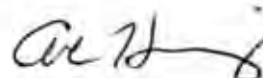
Robert E. Grese, Professor
School of Natural Resources and Environment



Ray DeYoung, Professor
School of Natural Resources and Environment



Andrew J. Horning, Deputy Director
Graham Environmental Sustainability Institute



S. Margot Finn, Lecturer
LSA, University Courses

Mike Shriberg, Lecturer
LSA, PitE; Graham Environmental Sustainability Institute

Student

Participants:

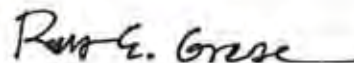
Elizabeth Dengate, SNRE—UM Sustainable Food Program
Allyson Greene, SNRE—UM Sustainable Food Program
Lindsey MacDonald, SNRE—UM Sustainable Food Program
Gerald Tyrell, SNRE—UM Sustainable Food Program
Lauren Beriont, LSA, PitE—UM Sustainable Food Program
Sarah Schwimmer—UM Sustainable Food Program
Stacey Matlan, LSA--Student Food Coop
Madeline Dunn, LSA--Permaculture Design Team
Dana Del Vecchio, LSA--Food Recovery Network
Parker Anderson, SNRE--UM Bees
James Den Uyl, LSA--Outdoor Adventures Garden

Deans/Directors:

Marie Lynn Miranda, Dean
School of Natural Resources and Environment



Robert E. Grese, Director
Matthaei Botanical Gardens and Nichols Arboretum



Budget request:

\$25,000
\$24,000 for the hiring of student interns from May 2013-April 2014
\$1000 in miscellaneous materials

Timeline:

May 2013-April 2014

TLTC Proposal:**U-M Campus Farm/ Sustainable Food Systems Program****Background**

The creation of a campus farm to provide hands-on learning about sustainable food production has long been a goal of a number of students and faculty at the University of Michigan. We seek funding to support the development of the U-M Campus Farm at Matthaei Botanical Gardens as a multi-disciplinary field classroom and demonstration project for hands-on learning in sustainable agriculture. The major part of this request would provide the salary costs of interns serving as program coordinators for the farm. A smaller part of the request would be used for materials and supplies. As program coordinators, these interns would manage the farm and student volunteers, engage classes and student organizations, oversee workshops and special programs related to the farm, and work with the student steering committee and faculty advisory group to plan for the farm's future.

The Campus Farm is a major project of the U-M Sustainable Food Systems Program (UMSFP) that has formed a network of students, faculty and staff at the University together with local food organizations and farmers. The Campus Farm is intended to serve as a living-learning laboratory focused on the growing of food and sustainable agricultural practices. Many students at the University have very little background knowledge and experience in farming, horticulture, and gardening, and the Campus Farm will provide them with a place to learn about food production first-hand. The Campus Farm will also serve as an important laboratory for individual students, classes and organizations to experiment with various techniques and environmentally sound practices and technology in the growing of food.

Record and promise of student engagement:

Increasing sustainable food use on campus was seen as a key goal in the Campus Sustainability Integrated Assessment completed in 2011, and the development of a campus farm has been seen as a key component to achieving that goal. As part of ENVIRON 391 (Sustainability and the Campus) in 2011, a student team conducted a broad survey of undergraduate and graduate students at the University and found that 83% of the respondents indicated moderate to high interest in starting a campus farm. In the survey, 56% indicated an interest in volunteering, while another 54% indicated an interest in participating for academic reasons (work-study, research or class labs).

In Winter semester 2012, a SNRE Masters Project formed to develop a broad U-M Sustainable Food Program as a way of bringing together diverse campus groups with interests in sustainable food systems and to foster collaborative relationships with similar groups in Southeast Michigan. The group readily adopted the creation of the U-M Campus Farm as a key initiative and successfully created a pilot garden plot at Matthaei Botanical Gardens during the summer of 2012. All of this has set the stage for the development of a robust campus farm initiative as a resource for formal and informal student learning, as a site for individual and class projects/demonstrations in sustainable agriculture, and as a step towards achieving the goals of sustainable food use on campus.

The project has drawn considerable interest among faculty and students and has engaged a growing number of classes and volunteers. These include the six students who worked on the "Campus Farm Site Assessment Project" in ENVIRON 391 under the direction of Mike Shriberg during the Fall of 2011. During Winter 2012, three courses were involved: ENVIRON 211 (taught by Michaela Zint) with four students involved in a "Campus farm participation project"; ENVIRON 361/PSYCH 385 Psychology of Environmental Stewardship (Jason Duvall) with over 100 students; and UP 505 with five students working on the project "Urban planning assessment of community garden/campus farm space." Class involvement during Fall 2012 included:

- ARTDES 398 Sustainable Food System Design (Joe Trumpey) –45 students
- ENVIRON 139 Environmental Literature (Virginia Murphy)—20 students
- ENVIRON 201 Ecological Issues (Shelie Miller)—approximately 100 students

- ENVIRON 222 Introduction to Environmental Justice (Dorceta Taylor)—75 students
- ENVIRON 391 Sustainability and the Campus (Mike Shriberg)—42 students (6 students were involved in a permaculture project related to the campus farm)
- NRE 662 The Localization Seminar (Ray DeYoung and Tom Princen) –12 students
- UC 254 Sophomore Interdisciplinary Seminar—20 students

In addition, over 100 students and staff members volunteered hours to work on the project's food plot at Matthaei, the Harvest Festival (which attracted approximately 300 participants), and the preparation of greenhouse space for use this winter. Instructors for at least three courses have expressed interest in using the U-M Campus Farm project in their courses during Winter 2013. These include ENVIRON 361/PSYCH 385 The Psychology of Environmental Stewardship (Ray DeYoung) with 140 students, ENVIRON 302 Environmental Activism (Virginia Murphy), and NRE 688 Site Planning (Stan Jones). We expect numbers to grow as the Campus Farm continues to evolve, and information about it is distributed.

During Fall 2012, the U-M Sustainable Food Program (UMSFP) was organized as an official student organization with the intention of providing leadership in developing sustainable food initiatives on campus and working with Matthaei Botanical Gardens and Nichols Arboretum on the development of the Campus Farm. A subgroup—the Friends of the Campus Farm—is specifically focused on the development of the farm. The goal of UMSFP is to promote both formal and informal education leveraged through the community to empower people to grow, buy, and eat in a socially and environmentally responsible way. It also seeks to provide a strong community network that links faculty, staff, administrators, and students at UM together with local farmers, organizers, and sustainable agriculture advocates in Ann Arbor, Detroit, and the broader US. Finally, the Campus Farm provides healthy, nourishing, sustainable food grown on campus that will serve as a tasty and visible commitment to sustainability by the University of Michigan.

UMSFP is organized with a steering committee composed of students and an advisory committee composed of faculty, staff and students. The three faculty and staff members who are participants in this project are members of the advisory committee, and the students listed are members of the steering committee. UMSFP has already attracted a variety of U-M organizational partners, including Cultivating Community, UM Bees, the Ann Arbor Student Food Coop, the Consortium on Agriculture, Food and the Environment, the Food Recovery Network, the Outdoor Adventures Garden, the Permaculture Design Team, and the Student Advocates for Nutrition.

Need for financial support

In December 2011, a team of students submitted a grant proposal to the Planet Blue Sustainability Initiative fund (PBSIF) for the development of the Campus Farm and were awarded a grant of \$42,000 with the caveat that separate funds be secured for hiring a farm manager. Many items in the original proposal have changed, including selection of a different site at Matthaei Botanical Gardens that will require much less investment and physical improvements to start up the outdoor portion of the farm. In lieu of purchasing hoop frame structures for the farm, we are currently using space within Matthaei's existing greenhouses to extend food production year-round. In discussions with Drew Horning (Graham Environmental Sustainability Institute and one of this proposal's participants) the funds from PBSIF can be made available in part for a farm manager/program coordinator, but we are still seeking other sources of funding to insure coverage of the farm's costs for at least the critical first two years.

For the expansion of the Campus Farm this spring and through next academic year, we will require a program coordinator. The coordinator would engage students in a variety of volunteer activities and workshops, insure that food crops are grown and properly maintained, and facilitate use of the farm by organizing class field trips, setting up research plots for classes, and connecting with professors who would consider utilizing the space. The coordinator would also assist the UMSFP organization with running the Harvest Festival and other key events. The four students currently involved in the SNRE masters project team have provided these roles during the spring, summer, and fall of 2012, but alternative leadership will be required for the Campus Farm to move forward. Beginning in winter 2013, some of the \$42,000 from the PBSIF grant will be used to hire a student intern to work as program coordinator through the end of

April. This position would be set at salary rates comparable for other internship positions at Matthaei Botanical Gardens. We are seeking funds from the TLTC program to extend this internship position or create a series of internship positions from May 2013 through April 2014. In addition, \$1000 in supplies and materials are requested. Funds from the PBSIF grant would be used to fund other start-up costs and a second year of the internship position. Matthaei-Nichols is committed to providing additional operational support, and the UMSFP/Campus Farm will continue to seek additional funding.

Proposed budget:

Sources of funding	TLTC-Quick Wins	PBSIF	MBGNA	Other
Hand Tools		\$500		
Drip irrigation		\$2000		
Deer fence		\$1000		
Seeds	\$500	\$500		
Soil testing		\$3000		
Miscellaneous supplies	\$500			
Shed/gathering space		\$5000		
Educational Signage		\$2000		
Prog. Coordinator (2013-2014)	\$24,000 (May-April)	\$4000 (Jan-May)		
Prog. Coordinator (2014-2015)		\$24,000 (May-April)		
Various support from Matthaei-Nichols staff Events (Harvest festival, etc.)			\$13,000	\$2500
Totals	\$25,000	\$42,000	\$13,000	\$2500

We expect to gain some income from the farm's produce as more of the acreage becomes operational, but we are unable to forecast that amount at this time. This grant from the TLTC program would help this innovative program in student engagement get off the ground.

Many other colleges and universities around the country have or are in the process of establishing campus farms. According to "Fields of Learning: The Student Farm Movement in North America," by 2009 at least 83 student farms had been established at various U.S. college campuses. Most of these are at land-grant universities. The establishment of a campus farm at a major research university such as U-M is more rare, and we believe the model being developed here that engages students from a wide variety of disciplines is unique. The Campus Farm will be closely tied to the emerging sustainable food systems interdisciplinary cluster that includes many existing faculty members and lecturers as well as new faculty hires in Urban Planning, Business, Ecology and Evolutionary Biology, Natural Resources and Environment, and Public Health. Emerging problems related to food security and health touch many units on campus, and providing hands-on experience in the production of food can only serve to enhance students' understanding of the complex issues around food production. In addition, the U-M Campus Farm promises to bolster University leadership in providing training in food production for volunteers associated with the Peace Corps and other programs working where involvement in sustainable food systems is essential.

Bank of Ann Arbor: Project Help Grant Application

Please provide a short description of your project (50 words or less):

The University of Michigan Sustainable Food Program was started by a group of students in May 2012. We want to develop a pilot garden this summer to help foster collaboration between Ann Arbor's food community and students, faculty, and staff on campus to improve health and empower our citizens.

How will your project help our local community?

By starting The Pilot Garden this summer, the University of Michigan Sustainable Food Program (UMSFP) will be making tangible improvements to our community and laying the foundation for a healthier more integrated future. The UMSFP, the pilot garden, and ultimately the farm that will succeed it will be a hub for food-minded folks on campus and off to work toward improving our communities health and wellbeing. The physical space will serve as a meeting spot where the UM community and the broader Ann Arbor community can come together to trade skills, labor, and information over a universal human need – to eat.

Since, most of UM's 40,000 students will never take a class focused on food sustainability, the garden and farm will give them an alternative option toward that vital piece of their education. The Ann Arbor food community is vibrant and extraordinarily knowledgeable, and could use university related food program and farm to pass practical lifelong skills and wisdom on to the students. Our hope is that networking and sharing information will create personal relationships that cross the city-campus gap and lead to other opportunities for students to engage beyond the university. Many of the students that benefit will leave Ann Arbor, but the skills they develop, and the values and the relationships will travel with them, benefitting communities across the country and around the world.

The Ann Arbor community will gain an opportunity to promote their food, farming, and gardening businesses and events to students who express a clear interest in the topic. Many students who've already committed to this program as volunteers are keen to get first hand farming experience, which is not something we can provide currently. There are also many local farmers who practice hands-on agriculture and have a need for volunteers or interns in the Spring and Fall. One of the primary objectives of the UMSFP is to connect students with a willingness to learn with teachers who can give them first-hand experience, and the Pilot Garden will be the best place to begin building that network. Beyond making educational connections, the garden and later the farm will produce food. In the first summer all produce from the Pilot Garden will be donated to student groups on campus and groups in the community, like food gathers, as a way to grow excitement for the project and demonstrate the commitment of the UMSFP toward building a strong community in campus and off.

In addition to trading skills, and growing relationships and food, this year's pilot garden will serve as an opportunity for students to work with staff at the university and community members to shape the full-scale farm for its inaugural year in 2013. The pilot garden will give the students driving the UM Sustainable Food Program a valuable opportunity to put many of their plans through a test-run, show

the university what this project is capable of, and help them garner support to make it an even bigger success in the future. At this stage the program is flexible enough that many in the community who've tackled many of the same challenges will be able to guide it to be resilient and successful for the future.

Detailed description of your project:

Our goal for students is ultimately to empower them with knowledge and experience in growing food and organizing communities, and to show them that producing food can be sustainable and improve environmental health, not just detract from it. Our goal for the community is to engage them and their expertise to help educate and mentor students. This won't be a one sided trade but a mutual exchange where the community trades expertise and skills for an opportunity to promote their values and businesses and make connections with potential volunteers and interns. Our goal for the Pilot Garden Project is that it will provide tangible benefits in the lives of students and community members but also serve as a catalyst and help build momentum toward starting a more complete farm on the same site in April 2013.

The pilot garden will offer practical education to our volunteers, by training them to grow their own food. It will allow them to be the teachers in the future when they train others. From a research perspective, it will give the core group working to establish the campus farm a golden opportunity to record how much effort was put into the garden and record the productivity of the volunteers. This will help the students to plan more accurately for the 2013 year when the farm will operate at full scale. The goal for the project is to have a minimal impact on the environment – by borrowing equipment and tools, and by revitalizing a space at the botanical gardens. We intend to show students that food is more than produce running through a checkout line, that there are decisions and ethics that go into growing and producing it, and that a small community can be vibrant and successful with local resources. We hope to change perceptions about what environmental stewardship can look like in our own communities.

On April 27 a group of thirteen student volunteers began preparing the site, generously offered by the staff at Matthaei Botanical Gardens. In May 2012, volunteers from the UMSFP student group will add compost to the soil and begin planting seeds and transplanting some crops that were started in the greenhouses on site; in addition to offering the outdoor space needed for this project and the tools, Matthaei also offers valuable indoor greenhouse space to start seedlings. Once the site is planted the volunteers will work through the summer to water the plants and pull weeds from the site, all while enjoying the company of the seasoned gardeners working on the Project Grow plots nearby and the staff at the botanical gardens who have expressed great interest in this project. While working on the garden, students will learn more about growing food and pick up tips throughout the summer, harvesting as needed. With few students in town much of the produce will be donated to the community through Food Gatherers. Toward the end of the growing season we will organize a Harvest Party, to celebrate the project and success so far, harvest produce, and prepare it for more donations. At the start of the Fall semester, we will begin donating food to student groups around campus to generate more interest among the university community, especially students. The volunteer group plans to send periodic updates to Project Help and the Bank of Ann Arbor, and to meet and present on the project once it is complete at the end of August.

The Pilot Garden Project is part of a larger initiative and will see benefits within the August 31 deadline and beyond. In 2013, the students who are involved this year will have the opportunity to serve as additional mentors for the next cohort of volunteers passing on the skills they've already learned and

helping to link community members with students using a better understanding of each groups' motivations and goals. Many of the students working on this project will continue to work through April 2013. Each member of the four-person core team will complete a research project exploring key topics related to starting the full farm in 2013. Topics will include methods to integrate education on the farm, possible leadership structures to oversee the program, profitability, non-traditional growing practices suited to a northern climate, safety protocols and certification, and food justice and healthy living. We will also work to secure funding to hire a full time farm manager who will provide a more stable backbone for the project. The farm manager will coordinate student volunteers, visits and tours, and be an established connection point to link the operations on the farm and in the UM Sustainable Food Program with the community.

Please provide an estimated project timeline and completion date:

(Projects must be able to be completed by August 31, 2012.)

Work completed so far

NRE 639 (Sustainable Food Systems) three person class project looking into the potential for a campus farm at UM	Jan-April 2011
ENVIRON 291 (Sustainability and the Campus) seven person class project developing a campus farm proposal	Sept-Dec 2011
Matthaei Botanical Gardens (MBG) offers two potential spaces to house the project	
Planet Blue Student Innovation Fund (PBSIF) grant proposal is completed and submitted by the Campus Farm Working Group	December 2011
Idea for a University of Michigan Sustainable Food Program (UMSFP) is developed to join food related projects and groups together under one organization with a combined vision	January 2012
UP 505 (Fundamentals of Planning and Practice) four person class project on site analysis, planning and strategies for moving forward and creating a network of gardens on campus	Jan-April 2012
PBSIF grant is awarded for future use to build structures and facilities at MBG if students can find a way to fund a full time farm manager	February 2012
UMSFP develops core mission to provide education about food and sustainability, build community around our local food system, and provide fresh healthy food on campus	
The Division of Student Affairs at UM offers to support the project as an official entity at the university	
Students decide to use the old nursery space at MBG instead of the barn site, to avoid disturbing a healthy population of Massasauga rattlesnakes	
UMSFP student group is formed with about 50 members from the Campus Farm Working Group	March 2012
Committees form within the student group to work on development, design a website, create an advisory board, develop strategies for communication, education and outreach, and plan social events	
At the HomeGrown Local Food Summit, the UMSFP was presented to the Ann Arbor community for the first time	
First seeds are planted in the greenhouses	
NRE 701 (School of Natural Resources Masters Project Opus) four person team submits full proposal to work on the project until April 2013	April 2012
UMSFP student group reaches 130 members	
The UMSFP held its first meeting with folks from the HomeGrown local food summit	
Volunteers pulled rocks from the site at MBG and leveled the soil, preparing to mix compost in early May	April 27, 2012

Work to be completed by August 31

First official outdoor planting at the MBG site	April 27, 2012
Coordinate volunteers to help pull weeds and harvest, and invite community members to share tips and advice	as needed

Donate food to volunteers, student groups on campus, and Food Gatherers	
Document progress through the summer, including volunteer hours consumed and the amount of food produced and donated	
Facilitate off-campus volunteers to help out at the farm at Saint Joseph's Hospital and other locations	
Continue meeting with participants from the HomeGrown local food summit	Monthly
Develop a website for the UMSFP to help share information across the community-campus gap	by August 31

Work continuing into April 2013

Secure funding to hire a full time farm manager to run the 2013 season	by March 2013
Develop an advisory board to help steer the UMSFP in the future	by March 2013
Explore key topics surrounding farm profitability, community engagement, educational opportunities, growing methods, leadership structures, safety and certification, food justice, and healthy living	by March 2013
Create plans to incorporate class tours and educational opportunities for UM students	by March 2013
Establish ties with the School of Public Health to include working on the campus farm as an option for Masters Student rotations	by March 2013
Write a business plan to outline the concrete and intangible benefits of including a farm at an educational institution	by March 2013
Write a management plan for the farm manager to use moving forward	by March 2013
Develop more concrete strategies to leverage the community's knowledge and facilitate volunteer efforts off-campus	by March 2013
Document progress to serve as a guide for others working on similar projects	by April 2013
Connect with UM food purchasers to establish food outlets for the future	by March 2013

Please provide a budget for your project (with as much detail as possible):**Seeds for a 250 square foot garden****\$200**

Beans, tomatoes, carrots, sweet corn, watermelons, kale, lettuce, etc.

Compost (\$15/yard x 5 yards) + delivery using a Matthaevi vehicle (\$20)**\$95**

In the future we will try to make our own compost, but for the first few years we will probably have to import it from other local sources.

Paint (\$20/gallon x 5) and boards (\$9 per 8 ft² piece x 5) for signs**\$145**

The signs will help to draw visitors already at the Botanical Gardens and to mark the plot and the plants that are growing. During the summer we will engage volunteers by painting these on site and developing a name for the farm.

Fruit trees (\$30 per apple tree x10)**\$300**

The trees will provide a much needed windbreak along the open south side of the garden, allowing us to water less and produce a fruit crop in future years which keeps well into the winter.

Fencing (\$31 per 50 feet x2)**\$62**

A low fence is necessary to keep groundhogs out of the garden, they've become a problem recently near the site.

Total \$802

University of Michigan Sustainable Food Program: Harvest Festival – Zero Waste Application

October 4, 2012 – 4:00-8:00pm

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Grant Applicants:

Name: Jerry Tyrrell

- Role in the project: UM Sustainable Food Program – Project Manager
- University affiliation: SNRE Graduate Student
- Group Representation: UMSFP

Name: Lauren Beriont

- Role in the project: Cultivating Community – Organizer
- University affiliation: PitE and Geology Student
- Group Representation: CC

Name: Lindsey MacDonald

- Role in the project: Friends of the Campus Farm – Officer
- University affiliation: SNRE Graduate Student
- Group Representation: FCF

Name: Liz Dengate

- Role in the project: Consortium on Agriculture, Food, and the Environment – Officer
- University affiliation: SNRE Graduate Student
- Group Representation: CAFÉ

Name: Lily Springsteen

- Role in the project: Michigan Sustainable Foods Initiative
- University affiliation: Residential College and Organizational Studies
- Group Representation: MSFI

Name: Stacey Matlen

- Role in the project: Brassica: The Ann Arbor Student Food Stand
- University affiliation: International Studies
- Group Representation: Brassica

Name: Peter Ward

- Role in the project: UM Outdoor Adventures –Liaison
- University affiliation: Political Science and PitE
- Group Representation: Outdoor Adventure

Supporting Student Groups:

- Vision and volunteer work: UMSFP (student group 330+ members), MSFI, CC, FCF, Brassica, CAFE

Administrative Support:

Matthaei Botanical Gardens and Nichols Arboretum, Division of Student Affairs, Office of Campus Sustainability, SNRE, EEB, Art & Design, Urban Planning, PitE, North Campus Revitalization Initiative, Graham Institute

Supporting Academic Projects:

- Winter 2011, NRE 639 *Sustainable Food Systems* – Potential for a campus farm
- Fall 2011, Environment 391 *Sustainability and the Campus* – Development of a campus farm proposal

- Winter 2012, Urban Planning 505 *Fundamentals of Planning Practice* – Site and management analysis
- Winter 2012 to Winter 2013 – SNRE Masters Project on UM Sustainable Food Program Development
- Fall 2012 – ARTDES 398/500 *Sustainable Food System Design* – Student driven independent projects

One-time Budget and Justification:

Rental of reusable dishes/flatware and cleaning	\$680
Recyclable trash cans and liners	\$90
Hauling costs	\$80
Zero-Waste Informational Signage	\$60
Rubber gloves	\$30
<i>Total</i>	<i>\$940</i>

Budget Justification:

- Detailed description of cost estimates (and how they were derived)
- Explanation of why expenditures are necessary
- Reasoning for soliciting support from the Graham Institute (how related)
- Student details (if applicable), e.g. name, nature of work, percentage of appointment, amount requested, proposed time period of support, etc.

a. Dish rental and cleaning is based on estimates by UM University Catering, who will be in charge of supplying and cleaning up all dishes and flatware. The estimate is based on a 20% charge added to the cost of food, which is estimated at \$3,000 plus the cost of cleaning (food is paid for by another source). Recyclable trash cans and liners have been estimated based on information from other organizations who've used similar receptacles during outdoor events. Hauling costs are estimated by University Unions and are based on expected number of trips to pick up and drop off supplies. Informational signage will generally focus on waste education and options for reducing landfill. Rubber gloves will be provided to staff and volunteers handling food and waste as a sanitary precaution.

b. The UM Sustainable Food Program is seeking funds to make its Harvest Festival a zero-waste event. This is critical because this program grew out of burgeoning student interest in food sustainability, and it would be a dis-service to support food sustainability while generating large quantities of landfill-destined trash. There are already many registered guests for this event, including students, faculty, staff, and leaders in the Ann Arbor community. By flexing our collective muscles we can demonstrate what UM's sustainable initiatives are capable of, which will be to host an exciting and entertaining event in a responsible and ethical manner. Guests will leave the event knowing that the Graham Institute, SSI and the UMSPF collaborated successfully across disciplines and that the evening was conducted responsibly and with complete attention to detail.

c. We are approaching the Graham Institute because this is an opportunity to engage a broad swath of the community and show what sustainability can look like at its finest. We will educate hundreds about the need to think through many aspects of our lives that could be handled with more thought and care. The Graham institute would be supporting its mission by helping to make this event zero-waste.

d. The people listed above are directly involved in planning and implementing the Harvest Festival. They are joined by numerous others who are also volunteering to ensure that the event is a success. Many professors have already publicized the event to their students in classes. The event is open to the public and we've specifically publicized in the UMSPF Newsletter (330+ students). The event will also be listed in the SSI newsletter and details will be sent to all LS&A students (16,000+ students). Once the event is over (on Oct 4) we will actively promote the success we had to generate support for all of the involved organizations moving forward.

Proposal Narrative:

- a. Describe the nature, goals and impact of the proposed research, educational, operation, or outreach initiative**
- b. Include detailed plans/schedule for accomplishing proposed goals**
- c. Convey the significance of the proposed activity, particularly how it enhances research, education, or practice in environmental sustainability**
- d. Designate if student support is requested and, if so, describe what tasks they will be completing**

a. As mentioned, the goal of this project is ultimately to empower students with knowledge that will guide and help them to live more sustainably, and to be change agents in the future.

b. The event will take place on October 4, 2012 from 4:00-8:00pm. It will be held at Matthaei Botanical Gardens. Meetings have been underway for the past month to plan the event, and we've been publicizing since early September, 2012. Our website already has many of the details listed, and we've been selling tickets since September 10, 2012. On the day of the event volunteers will coordinate with bus drivers to shuttle guests to the event, and others will lead a group of cyclists. University Unions' chefs have already committed to procure and cook all the food that will be served. Five bands are lined up to play from 4:00-8:00pm. Matthaei Botanical Gardens has promised space outdoors with tables, chairs, and tents, and indoor space is reserved if the weather is bad. Outdoor Adventures will be providing yard games for guests to enjoy. All facets of the event are planned and funded except for dishes and flatware, which has presented us with the opportunity to make this even zero-waste with SSI and GESI's support.

c. The Harvest Festival will demonstrate many of the tenets that we in the environmental community hold dear. We will show guests how to enjoy themselves in a wholly sustainable way by providing local healthy food and supporting zero-waste. We will also educate guests about environmental and sustainability initiatives at UM, and they will with a good sense of what student driven projects at UM can accomplish. Interest and support generated from this event will directly feed back to students by supporting their education, leadership training, and development in environmental and sustainability-related fields.

d. Student support is not requested. All student involvement is purely a volunteer effort.

Information About Initiative Leadership and Team:

a. Describe the capabilities and commitment of the person leading the initiative plus their resume

b. Describe the capabilities and commitment of other key players

a. There is a large group of individuals working to plan and implement this event including five SNRE masters students and 10-15 undergraduate students from across UM's various departments. Jerry Tyrrell will be coordinating actions related to making this event zero-waste.

b. Matthaei Botanical Gardens has offered outdoor and indoor (backup) space to house the event. They have also offered the use of their tables, chairs, tents, and electricity. A number of organizations within and without the university have already publicized the event. Various vendors in Ann Arbor have approached us offering to donate supplies and food. Students have committed to doing the necessary work to run the event on October 4. University Unions Chefs will be handling all of the food procurement, preparation, serving, and cleanup. A Blue Bus and UM van have already been rented to compliment guest transportation to and from the event. All of the UMSFP member groups have pledged volunteers to help support and staff the event. Central Student Government has agreed to supplement ticket sales to help purchase food (this does not include dishes or flatware).

2012-2013 Grant Application: Ann Arbor Branch, Woman's National Farm and Garden Association

Date of Submission: November 29, 2012

Name of Organization: Matthaei Botanical Gardens and Nichols Arboretum
1800 N. Dixboro Road
Ann Arbor, MI 48105

Grant Coordinator: Robert E. Grese

Signature: 

Phone: 734-763-0645

Email: bgrese@umich.edu

We are a 501(c)3 organization through the University of Michigan

Organization mission statement:

Matthaei Botanical Gardens and Nichols Arboretum

The mission of Matthaei Botanical Gardens and Nichols Arboretum is to promote environmental enjoyment, stewardship and sustainability through education, research, and interaction with the natural world.

Our purpose: provide a hands-on University and community laboratory for conserving, restoring, and celebrating the environment

Our business: develop citizens and leaders dedicated to appreciating, understanding and restoring our environment; promote environmental education, research and public outreach

Our values: inspire and enrich people's lives through contact with plants and nature; recognize the restorative value of nature and beautiful gardens; engage scientists and artists in research, teaching, and outreach activities; apply ecological principles in our horticulture and land stewardship; advance sustainable practices and the conservation of biodiversity, particularly that of the Great Lakes Region.

University of Michigan Sustainable Food Program (UMSFP)

The University of Michigan Sustainable Food Program (UMSFP) and campus farm intend to improve human and ecological wellbeing and empower people using food as a central guiding theme, and to begin to solve food-related issues on and off campus.

The UMSFP and farm will provide a strong **community** network that (1) links faculty, staff, administrators, and students at UM together with local farmers, organizers, and advocates in Ann Arbor, Detroit, and the broader US; that (2) promotes **education**, both academic and experiential, leveraged through the community to empower people to grow, buy, and eat in a socially and environmentally responsible way; and that (3) provides healthy, nourishing, **sustainable food**, grown on campus, that will serve as a tasty and visible commitment to sustainability by the University of Michigan.

Project Description:

University of Michigan Campus Farm Project

This project is a joint effort by Matthaei Botanical Gardens and Nichols Arboretum and the University of Michigan Sustainable Food Program to develop and a “Campus Farm” to be based out of Matthaei Botanical Gardens. This request is for financial support for that project.

The vision for the Campus Farm is to provide a living-learning laboratory around the growing of food. Many students at the University have very little background knowledge and experience in horticulture and gardens, and the Campus Farm will provide them a place to learn about gardening and food production while creating a network among students, faculty and staff at the University on the one hand and local food organizations and farmers on the other. The Campus Farm will also serve as an important laboratory for individual students, classes and organizations to experiment with various techniques and environmentally sound practices in the growing of food. Already student organizations in bee-keeping and permaculture are becoming involved in the Campus Farm.

During the summer of 2012, students created and managed a 600 square foot food plot in the Project Grow area at Matthaei Botanical Gardens, logging over 300 volunteer hours through the season. They organized a highly successful harvest festival this fall that attracted over 300 people from the University as well as the local community. The event provided an important showcase for many community-based food organizations as well as in building larger awareness of the Campus Farm project. This next summer, students will move into the fenced 2-3 acres next to the Project Grow site and are adopting a section of one of the greenhouses at Matthaei for year-round growing of vegetables and herbs. In the future, the hope is to expand the project to include additional garden sites around campus. A design class is being recruited to redesign a small existing shed on the campus farm site for use as a center for gathering, celebrating, and learning about food and gardening. A second design-build class next fall may be able to help with construction of an outdoor kitchen and other facilities.

The Campus Farm builds upon other successful student initiatives relating to food systems such as Cultivating Community, the Ann Arbor Student Food Coop, the Consortium on Agriculture, Food and the Environment, the Outdoor Adventures Garden, and others listed below under “partnering organizations.”

The Campus Farm will be the second student food/agriculture-based initiative to be affiliated with Matthaei Botanical Gardens and Nichols Arboretum. The first, Cultivating Community was

organized in 2004 as a demonstration project in sustainable agriculture at the University, composting food scraps from the dormitory cafeterias and producing food to be incorporated into the University Union's kitchens. Since that initial start, Cultivating Community has evolved into a broad-ranging effort to connect students from the University with many other local initiatives in sustainable food production. Students from Cultivating Community manage a garden space at the Ginsberg Center for Community Service Learning and volunteer time with other community-based food organizations. For the past three summers, students have worked with Focus Hope in Detroit to help manage their child-focused community garden. In addition, Cultivating Community has provided a wide variety of workshops for students in gardening techniques, food preparation and preserving as well as field trips to local specialty farms, orchards and food processing facilities. In the future, many of these activities will be coordinated with the larger campus farm and UMSFP.

Support from the Ann Arbor Branch of Woman's National Farm and Garden Association would be used to hire a manager for the project. Matthaei Botanical Gardens and Nichols Arboretum will continue to provide technical support, tools, and equipment for the farm's operations. The Campus Farm project has received an initial grant from the University towards start-up costs, but has been challenged to raise matching funds.

The campus farm site at Matthaei Botanical Gardens, the existing garden sites at the Ginsberg Center, the Outdoor Adventures Garden at *Outdoor Adventures*, and the Student Advocates for Nutrition garden at the School of Public Health will serve as the public face of the UMSFP for community members as well as students, faculty and staff from the University to learn about and become involved in the growing, harvesting and celebration of local food.

UM partnering organizations:

Matthaei Botanical Gardens and Nichols Arboretum
 University of Michigan Sustainable Food Program
 Cultivating Community
 UM Bees
 Ann Arbor Student Food Coop
 Consortium on Agriculture, Food and the Environment
 Food Recovery Network
 Michigan Sustainable Foods Initiative
 Friends of the Campus Farm
 Outdoor Adventures Garden
 Permaculture Design Team
 Student Advocates for Nutrition
 Planet Blue Student Innovation Fund

Budget detail and spending timeline:

Amount requested: \$12,000

UM Sustainable Food Program Coordinator (2013-2014)

\$12,000.00

Directs the administration and management of the UM Sustainable Food Program, including engaging students and community partners, developing programs and activities, and managing the program's budget. The coordinator will guide the team of interns and volunteers working on the campus farm and satellite gardens.

Internal support from Matthaei Botanical Gardens and Nichols Arboretum:

Summer intern (shared with Cultivating Community) during summer 2013	\$8,000.00
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Other in-kind support provided by Matthaei Botanical Gardens and Nichols Arboretum:

Plowing and disking farm site

Seed, materials and greenhouses for starting plants

Technical advice and support

Additional support from within the University of Michigan:

The University of Michigan Sustainable Food Program has been awarded a \$40,000 grant from the University's Planet Blue Student Innovation Fund to provide funding for additional start-up costs for the Campus Farm but requires a match from other sources. Funds from this grant would be added to the funds from the Ann Arbor Branch Woman's National Farm and Garden to support the staffing of the Campus Farm for the next two years as the initial start-up for the farm operation. Some of these funds will also be used for Campus Farm site improvements (costs yet to be determined).

Evaluating success?

Success will largely be measured by the successful establishment and growth of the campus farm and the entire UMSFP effort. Measures of success will include the amount of produce grown, the numbers of people engaged as volunteers, classes participating in the farm and other activities, and the number of University and community organizations involved directly or indirectly in the project.

People directly and indirectly impacted by project

Expected participants will include several hundred University of Michigan students, faculty and staff as well as community partners such as Project Grow, Food Gatherers, Growing Hope, Slow Food Huron Valley, the Homegrown Festival, etc. The Campus Farm could also be visited by a portion of the several thousand schoolchildren, families and adults visiting Matthaei Botanical Gardens each year.

Some of the food produced by the Campus Farm will be shared with Food Gatherers and other community organizations.

When do we expect to complete project

Project is not meant to end but rather will continue to grow over the next several years.

Support of WNF&G June Garden Walk

Matthaei Botanical Gardens and Nichols Arboretum have been pleased to be a past supporter of the Garden Walk and will continue to provide help in advertising the Garden Walk to our Friends, members and people linked to our social media. UMSFP will help in advertising the Garden Walk using their social media sites as well.

Harvest Festival Sponsorship Application: UM Credit Union (unfunded)



The University of Michigan Sustainable Food Program

Mission Statement

The UMSFP focuses effort in three areas:

1. **Developing Responsible Citizens and Future Leaders** by facilitating formal and informal education surrounding sustainable food
2. **Strengthening Communities** of teachers, students, and citizens through collaborative programming and outreach
3. **Growing Healthy Food** that supports the health and well-being of people and the environment at the University of Michigan and beyond

Proposal Summary

The UMSFP is seeking a sponsor for our Harvest Festival this fall that will bring together University of Michigan students, staff, and faculty as well as Ann Arbor community members to celebrate sustainable food. With the goal of gathering one hundred people from diverse cross-sections of the community, we envision local food champions and their families, UM students and faculty from across academic disciplines, our supporters and volunteers, and potential future collaborators all eating, learning, and celebrating the harvest season together. As UM Credit Union consistently supports events that enrich

community connections and is a strong supporter of Matthaei Botanical Gardens, this event would provide an opportunity to make a visible, valuable contribution to the growing sustainable food movement on campus.

Sponsorship Proposal

On October 4th, 2012, the University of Michigan Sustainable Food Program (UMSFP) is hosting its inaugural Harvest Festival at the UM Campus Farm plot at Matthaei Botanical Gardens. This event, featuring local food prepared by UM staff and students and live music, will be a celebration of sustainable food for both the UM and the Ann Arbor community, with people of all ages invited to participate. Through this event, UMSFP will spread the word about our new endeavors around campus while cultivating community relationships that will be integral to our success in the future; however, the goal is not just to promote UMSFP but also to recognize and celebrate other local food champions in Ann Arbor.

In order for this event to be appealing and accessible to students, families, and community members, we are seeking funding for the following:

Budget - UMSFP Fall Harvest Festival

Site preparation	\$100
Tent rental	\$1,200
Sound equipment rental (extension cords, speakers, platform)	\$800
Tables and chairs	In-kind: MBG
Table cloths	\$60
Decorations (pumpkins, corn stalks, hay bales, center pieces)	In-kind: farm partners
Dish and flatware rental	\$150
Compost waste hauling	\$25
Campus shuttle bus (incl. driver)	\$365
Volunteer Gifts	In-kind: community partners
* Printing (publicity and event signage)	\$300
*Tote bags	\$225
*Ticket printing	\$150
Ticket mailing	\$30
Catering	\$1,500
TOTAL	\$4,905

**UMCU featured as sponsor on these materials*

We will be marketing the Harvest Festival to a wide cross section of students and staff from the University as well as members from the Ann Arbor community. We would love to be able to feature the UM Credit Union as one of our sponsors. UMCU would be acknowledged on all publicity and printed materials. If you or another representative from UMCU would like to give remarks we would be glad to work that into the program. UMSFP would also feature UMCU on our website as a major supporter of the project. Event attendees from diverse sections of the community would leave this event knowing that UMCU made the evening possible.

Thank you for your time and consideration. We appreciate your commitment to making a difference and would be honored to discuss this possibility further.

Grow Blue,
 UMSFP Project Managers
 Liz Dengate, Allyson Green, Lindsey MacDonald, and Jerry Tyrrell

About UMSFP

The University of Michigan Sustainable Food Program, initiated in 2012, is a student-driven project to bring existing sustainable food initiatives together and to foster further collaboration towards new endeavors on campus. With a campus farm at Matthaei Botanical Gardens serving as the central hub of education, community building, and food production, the UMSFP unites student groups, academic departments, and community partners to work for a better future. Current leadership includes a team of Masters students from the School of Natural Resources and Environment with support from graduate and undergraduate student committee members and Matthaei Botanical Gardens staff. As the campus farm progresses, UMSFP is focusing on funding a full-time Farm Manager and creating long-term organizational structure to ensure growth and lasting impact throughout the UM campus and the broader Ann Arbor Community.

POTENTIAL GRANTS

All information provided by Anya Dale, at the Office of Campus Sustainability

<u>Grant/ Funder</u>	<u>Summary</u>	<u>\$</u>	<u>Timeline</u>	<u>Eligible?</u>	<u>Notes</u>	<u>contact</u>
Profits for the Planet, Stoneyfield Farm	help protect and restore the environment and generate measurable results. Focus on preserving habitat, stopping global warming, replacing pesticides with eco alternatives, promote sustainable farming, etc. http://www.stoneyfield.com/about-us/our-mission/profits-planet	undisclosed	Continuing funding of 2012 projects. If 2013 funds become available, will post on website in summer		2007: internship for SNRE students re:sustainable systems Funder for Center for sustainable Systems 2010 \$25K to Graham	
Environmental Education Regional Grants, EPA	Supports environmental education projects that increase awareness, promote environmental stewardship and develop knowledgeable students, teachers, and citizens. Project must design, demonstrate or be part of education practices, methods or techniques. Two rounds awarded per region. 20% success. http://www.epa.gov/enviroed	\$15-100K each region will fund 2 programs	May, Sept	Yes	focuses on staff time, program development, money can not be used for equipment, 25% match required	Megan Gavin gavin.megan@epa.gov 312-353-5282 spoke 7/26: funds might come around in winter, focus must be on education. Signed up to receive announcement. regional coordinator: http://www.epa.gov/enviroed/grants_contacts.html
Sustainable Ag Research & Education, USDA National Institute of Food and Ag.*	Funds research and extension activities to reduce chemical use in ag production, and facilitate research of ag production in systems with various characteristics that optimize conservation practices and promote partnerships among farmers, nonprofits, and public and private research institutes. www.sare.org and www.cfda.gov (Search on program 10.215/10.500)	\$10,000- \$200,000	August -call for Preproposals Nov: Preproposals due Late Feb: Preproposal Status April: Full proposals due August: notifications	Yes	we would focus on Research and Education program http://www.northcentralsare.org/Grants/Our-Grant-Programs/Research-and-Education - Needs some research component and talk about how it is built into curriculum. Push farmer involvement angle - how local farmers can share information with	Beth Nelson, Ph.D. Regional Coordinator Phone: 612-626-4436 Schre002@umn.edu

					students.	
Ag & Food Research Initiative: Ag and Nat Resources Science for Climate Variability & Change, USDA National Institute of Food and Ag.	Funds research, education and extension projects which demonstrate benefits of reducing energy and nutrient inputs and GHG outputs from practices. Our campus farm is less research based, but we could apply under "Climate Science Education and Extension" which increases the number of ag sciences, educators and ag professionals who have knowledge to address climate variability and impact on food systems. http://nifa.usda.gov/funding/rfas/pdfs/13_afri_climate_variability.pdf		4/15/2013 Next release: Oct 1, '13 Letter of Intent by Dec.	Yes		
James A and Faith Knight Foundation	Animals & the Natural World: invests in programs which protect diversity and integrity of ecosystems and educates citizens about the importance of ecological communities. http://www.knightfoundationmi.org/guidelines.htm			Yes		

*Grant in yellow is currently the best fit.

Appendix 7: Web and Communication

7.a. Member Group Liasons (2012-2013)

7.b. Other University and Community Contacts (2012-2013)

7.c. Publicity Lists (2012-2013)

7.d. Sample Newsletter (February 2013)

7.e. Publicity: Articles and Newsletter Appearances from
Various Media (2012-2013)

2012 Member Group Liaisons

Friends of the Campus Farm Leadership	farm.core@umich.edu	
Marissa Silverberg	mfsilver@umich.edu	undergrad, PitE
Peter Ward	phansw@umich.edu	undergrad, PitE
Amanda Gallaher	acgallah@umich.edu	grad student, SPH
Madeline Dunn	maddunn@umich.edu	undergrad, PitE
Cultivating Community	mbgna.cc@umich.edu	
Kat Curtis	kathrynlcurtis@gmail.com	Cultivating Community
Lauren Beriont	lberiont@umich.edu	PitE undergrad, worked original ENV 391 project, wrote PBSIF proposal
MSFI	msfi-board@umich.edu	
Lauren Beriont	lberiont@umich.edu	PitE undergrad, worked original ENV 391 project, wrote PBSIF proposal
Nadine Gilmer	nagilmer@umich.edu	Studied German, artsy (made the leafy UMSFP logo), Undergrad
Lily Springsteen	lmsp@umich.edu	Undergrad
Diana Bach	dcbach@umich.edu	
CAFE	cafe.core@umich.edu	
Liz Dengate	eedengate@gmail.com	SNRE--Conservation Ecology/BEC
AA Student Food Co	a2brassica@gmail.com	
Stacey Matlen	matlesta@umich.edu	Undergrad in International Studies and PitE, maybe pre-med track

Nikki Kasper	nmkasper@gmail	PhD in SPH studying food deserts, access and nutrition
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Mira Fishman	mirafishman@gmail.com	
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Katherine Armstrong	armstrok@umich.edu	Liaison 2013
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Outdoor Adventures Garden

John Den Uyl	denuyl@umich.edu	
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Permaculture Design Team

Madeline Dunn	maddunn@umich.edu	undergrad, PitE
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Student Advocates for Nutrition

students4nutrition@gmail.com		
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Kelly Osika	kellyosi@umich.edu	Liaison 2013
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UMBees

umichbeekeeping@gmail.com		
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Parker Anderson	parkerta@umich.edu	SNRE grad student, MLA
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Food Recovery Network

?		
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Dana Del Vecchio	danadel@umich.edu	Undergrad, PitE and PoliSci
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Christopher Hoef	cdhoef@umich.edu	Liaison 2013
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UM Research Projects

Naim Edwards		EEB Masters Student doing thesis work on ants
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Other University Contacts

MarieLynn Miranda	mlmiranda@umich.edu	SNRE Dean	Masters Project team met with her a few times for advice
Jennifer Nord	harrisjl@umich.edu	OSEH Senior Representative	Lindsey has been in touch with her regarding food safety with the farm
Don Scavia	scavia@umich.edu	Director, Graham Institute	Met with him in Fall 2012 to fill him in on progress and get guidance
Maureen Martin	martinms@umich.edu	Development	met in March 2012 to talk about approaching foundations
Barb Hagan	haganb@umich.edu	OCS, Food Team	Met in early 2012 at Local Food Summit
Gayle Steiner	gayles@umich.edu	MBGNA Director of Development	met in March 2012 to talk about approaching foundations
Joe Mooney	jfmooney@umich.edu	MBGNA, Marketing and Communications Manager	Met in 2012, Joe helps us promote events through MBGNA
Mike Palmer	mdpalmer@umich.edu	MBGNA, Horticulture Manager	Meet occasionally about activities in the greenhouses at MBG
Jeff Walters	jnw@umich.edu	MBGNA, Building and Facilities Equipment Manager	Met in 2012, helps coordinate tractor use at MBG
Joni Rosenthal	joaner@umich.edu	MBGNA Finance	Emailed in 2012, set up Campus Farm donation account (now used for UMSFP). When we spend from this account, receipts are turned in to Joni

Tom O'Dell	todell@umich.edu	MBGNA, Collections and Natural Areas Specialist	Met in 2012, haven't had much contact since
Catriona Mortell-Windecker	catriona@umich.edu	MBGNA, Education Program Manager, Runs Cultivating Community	Met in 2012, Oversees Cultivating Community
Adam Ferris-Smith	aff@umich.edu	MBGNA, Information Technology	Met in 2012, runs the MBGNA website, helps with newsletter and web advice
Erica Wald	ewald@umich.edu	Manager and Nutrition Weight Management Services, MHealthy	Met in 2012 to talk about partnering with MHealthy, supportive but nothing came out of it
Michael Cohen	miccohen@med.umich.edu	Researcher in the School of Nursing	doing research on safety/health of farmers and their families (this study on hearing loss) - looking for UM farmer contact information - we connected him with Keith

Other Community Contacts

Sandy	Perry Preschool	partnered to win Bank of Ann Arbor Project Help grant, summer 2012
Dan Calderone	Food Gatherers	met in May 2012 to tour farm and get advice
Dan Bair	carefulfarmer@gmail.com	manager of Farm at St. Joes, gave masters project team a tour and advice in April 2012
Kim Bayer	kimbayer@gmail.com	Local Food Summit, Slow Food Huron Valley, AnnArbor.com

Neil Matouka	neil.matouka@gmail.com	Runs Matouka Consulting (web design company) and helps maintain and host umsfpc.com
Rhonda Foxworth	rfoxworth@boaa.com	Bank of Ann Arbor, Vice President and Marketing Manager, Oversees the Project Help Grant
Janet Miller		Freelance Reporter, AnnArbor.com, Wrote 2012 article about campus farm
Shari Brown	shari@sevengenerationsahead.org	Seven Generations Ahead, UM graduate, Facilitated Fresh from the Farm (k-8) food curriculum training session
Bill Pioch	billpioch@aol.com (248) 259-3086	Growing Healthy Communities, Has seeds to give, experience running gardening programs for children
Rachel Chatterdon		Works at Fair Food Network
Liza Baker	lbaker@fairfoodnetwork.org	
Local Food Summit Participants (2012)	*These people attended a breakout session about UMSFP	
KT Tomey	ktea@umich.edu	
Ray De Young	rdeyoung@umich.edu	
John McCauley	jjppddmm@hotmail.com	
Judy Hendy	jhendy@umich.edu	

Emily Springfield	espringf@gmail.com	Curriculum designer for UM
Nicole Miller	nicolepiazz@gmail.com	
Jeremy Moghtader	moghtader@msu.edu	Farm manager at MSU
Nicole Waller	Nicolealycewaller@gmail.com	SPH student
Keith Soster	ksoster@umich.edu	Unions Food Services
Stacy Mates	sgmates@gmail.com	past student of Ivette Perfecto - did research on fruit trees in the local area for her thesis
Barb Hagan	haganb@umich.edu	
Jennifer Kangar	capellafarm@gmail.com	
Erika Earp	eearp@umich.edu	
Sasha Grove	evergreenaquaponics@yahoo.com	Someone way into aquaponics - she connected with Barb Hagan and they have been talking some, maybe?
Jill Sweetman	jill@greenthingsfarm.com	I believe this is one of the Tillian startups (she is partners with Nate ____ who did PitE, I think
Rich Pirog	rspirog@msu.edu	
Mike Levine	mlevine@umich.edu	
Oren Hesterman		Started the Santa Cruz Farm - and used to run Food First until some political stuff happened - definitely worth looking him up.

Amanda Gallaher	acgallaher@gmail.com	SPH student (put together food summit slideshow about local victories, great energy), UMSFP advisory board member
Margot Finn	smargot@gmail.com	UM lecturer, invited masters project students to her class in Fall 2012
Randy Burns	randybur@med.umich.edu	
Erica Kempter	erica@natureandnurture.org	teaches at WCC
Susan Aaronson	susaaro@umich.edu	teaches Nurtition at SPH, is really excited about this project and has great ideas for collaborations. Allyson met with her to follow- up in Summer 2012

Publicity Lists

UMSFP Member Groups

Cultivating Community	Mbgna.cc@umich.edu	One of the UMSFP member groups
Friends of the Campus Farm	Farm.core@umich.edu	One of the UMSFP member groups
Michigan Sustainable Foods Initiative	Msfi-board@umich.edu	One of the UMSFP member groups
Consortium on Agriculture Food and the Environment	Cafe.core@umich.edu	One of the UMSFP member groups
Ann Arbor Student Food Co.	A2brassica@gmail.com	One of the UMSFP member groups
Permaculture Design Team	maddunn@umich.edu	One of the UMSFP member groups
Student Advocates for Nutrition	Students4nutrition@gmail.com	One of the UMSFP member groups
UM Bees	umichbeekeeping@gmail.com	One of the UMSFP member groups
Food Recovery Network	frnatmichigan@gmail.com	One of the UMSFP member groups

UM Academic Units (Schools, Colleges, Departments etc.)

UM School of Natural Resources and Environment	snre.ms@umich.edu	About 400 Masters students in SNRE
	snre.phd@umich.edu	About 60 SNRE PhD students
	merrillk@umich.edu	Kevin Merrill has access to send messages to all of the SNRE faculty and staff, ask nicely!
UM Program in the Environment	mightpite@umich.edu	This list includes all PitE students
	Environment.program@umich.edu	Includes PitE administrators (who can forward your message along)
UM Taubman College of Architecture and Urban Planning	Caup.community@umich.edu	This list includes all students, faculty and staff
	Caup.students@umich.edu	About 1,000 CAUP students
UM Ecology and Evolutionary Biology	eeball@umich.edu	EEB staff, grad students, faculty and associates
	Eeb-concentrators@umich.edu	EEB undergrads

UM Social Work	Ssw.msw@umich.edu	Over 500 social work students, staff and faculty
UM School of Public Health	Umsph.open@umich.edu	900 SPH students
	Sph.staff@umich.edu	SPH staff
	Sph.research.faculty@umich.edu	SPH researchers
	Sph.faculty@umich.edu	SPH faculty (professors)
UM Anthropology Students	Anthropology.students@umich.edu	About 100 anthropology students
UM School of Education	Soe.grads@umich.edu	SOE grad students

Regional and Topical Email Listserves

UM Latin American and Caribbean Environmental Group	Laceg-listserv@umich.edu	Many food enthusiasts here, specifically related to issues related to Latin American's and immigrants
UM New World Agriculture and Ecology Group	Nwaeg.group@umich.edu	About 120 interested food folks at UM and scattered around the US including students and faculty
MSU Foodspeak	foodspeak@list.msu.edu	This list includes many of the leading community organizers from around Michigan. These people will help you publicize to those outside of UM
Michigan Young Farmers Coalition	myfc@googlegroups.com	This group is working to get more young people farming (millions more). You may have to join their google-group to send messages
Community Food Security Coalition	http://foodsecurity.org/category/home/ (register here for listserv)	This is a national listserv where people post sustainable food news from around the country. This is a good way to stay up-to-date on hot topics.

Professors and Teachers (Some are GSIs)

Often it is helpful to include a Powerpoint slide that they could use in their classes

Ray De Young	rdeyoung@umich.edu	Professor in SNRE, psychology and behavior change
Margot Finn	smargot@gmail.com	Professor who teaches about American culture and food
Joe Trumpey	jtrumpey@umich.edu	Professor in SNRE and Art & Design who taught Sustainable Food System Design
Bob Grese	bgrese@umich.edu	Professor of Landscape Architecture in SNRE and director of MBGNA
John Vandermeer	jvander@umich.edu	Professor in EEB who has done extensive food systems and ecology research

Ivette Perfecto	perfecto@umich.edu	Professor in SNRE who has done extensive food systems and ecology research
Catherine Badgley	cbadgley@umich.edu	Professor in EEB with strong food interests
Mike Shriberg	mshriber@umich.edu	Professor in PitE who teaches Sustainability and the Campus
John Graham	jbgraham@umich.edu	SNRE PhD student who GSIs courses most semesters
Stan Jones	stani@umich.edu	Professor of Landscape Architecture in SNRE who ran the farm design project
Leslie Hoey	lhoey@umich.edu	Professor in Urban Planning and part of the Food Cluster
Tom Princen	tprincen@umich.edu	SNRE professor with an interest in localization and food systems
Phil D'Anieri	philipjd@umich.edu	Professor with an interest in food and expertise as a grant writer and evaluator
Lorelle Meadows	lmeadows@umich.edu	Professor in Engineering with an interest in food projects
Dorceta Taylor	dorceta@umich.edu	SNRE professor with interests in food access and sovereignty
Virginia Murphy	vemu@umich.edu	Residential College professor with an interest in food
Shelie Miller	sheliem@umich.edu	SNRE professor who teaches some PitE classes

Community Leaders (Both within UM and broader in Ann Arbor and MI)

Reach out to them individually, it will likely make a difference

Mike Shriberg	mshriber@umich.edu	Mike is Education Director at the Graham Institute and may be able to help you pass information along to their Graham Sustainability Scholars and Planet Blue Ambassadors, which includes hundreds of students from all across the university.
Drew Horning	ahorning@umich.edu	Drew is the Deputy Director of the Graham Institute and can help us spread news through their staff to a large network of students.
Shannon Brines	sjbrines@umich.edu	Shannon owns a local farm in Dexter but is extremely well connected within the community. He has ties to the Ann Arbor Farmers Market as well as Slow Food Huron Valley
Kim Bayer	kimbayer@gmail.com	Kim is president of Slow Food Huron Valley and also writes for AnnArbor.com, she is an excellent person to help you publicize your event
Nate Ayers	Ayers.nathan@gmail.com	Nate is the director of Chiwara Permaculture in Ann Arbor, and is interested primarily in permaculture growing, but he also has access to a diverse group of interested food folks.
Terry Gallagher	terry@ecocenter.org	Terry is director of communications at the Ecology Center in Ann Arbor. They are well established and work broadly on environmental and sustainability issues in Ann Arbor
Liza Baker	lbaker@fairfoodnetwork.org	Liza and the Fair Food Network have many contacts in Michigan and can be amazing at spreading the word about things going on.

Joe Mooney	jfmooney@umich.edu	Joe is the communications coordinator for Matthaei Botanical Gardens and will often help push events into their newsletter as well as other outlets through UM
Rhonda Foxworth	rfoxworth@boaa.com	Rhonda was our contact during Project Help, which was a grant program offered by Bank of Ann Arbor. She would love to hear about our success and progress since they helped us get off the ground, and may use their considerable Facebook page to help publicize events to the Ann Arbor community.
SELMA Café	lisa@selmacafe.org	SELMA Café sends out a weekly newsletter and runs an awesome breakfast service, they are a great resource to publicize big events. Write the text that they would copy right into their newsletter.
Michigan Voices for Good Food Policy	lscalera@sustainableagriculture.net	Lindsey Scalera is associated with the Giving Garden at EMU as well as a number of other food organizations, and may be a good resource for “call to action” type events.
The Giving Garden at EMU	info@givinggardenemu.org	The Giving Garden is our EMU equivalent, they may be interested in public events.
Growing Hope	getintouch@growinghope.net	Based out of Ypsilanti, GH focuses on civic redevelopment by teaching people to grow food and offering them raised beds among other things to do it.
Food System Economic Partnership	greena@fsep-michigan.org	Alan Green is executive director of FSEP and may be interested to hear about upcoming events.
Michigan Daily	http://www.michigandaily.com/contact	The Michigan Daily is a good way to get press about your event, but you usually have to write most of the article yourself.
AnnArbor.com	calendar@annarbor.com	Fill out a form and you can have your event listed on their public events calendar.

Facebook Lists

People’s Food Co-op	https://www.facebook.com/peoplesfoodcoop
Tilian	https://www.facebook.com/tilianfarm
UM SOUP	https://www.facebook.com/pages/UM-SOUP/474391602620948
UM Bees	https://www.facebook.com/UMBees
Permaculture Design Team	https://www.facebook.com/UofMPermaculture
Food Recovery Network	https://www.facebook.com/pages/Food-Recovery-Network-U-of-M/240613049401386
Washtenaw Community College	https://www.facebook.com/WashtenawFood
Ann Arbor Student Food Co.	https://www.facebook.com/AASStudentFoodCo
Taubman College of Architecture and Urban Planning	https://www.facebook.com/pages/Taubman-College-of-Architecture-Urban-Planning/53813338074
UM Central Student Government	https://www.facebook.com/umcsg
Washtenaw Food Hub	https://www.facebook.com/washtenawfoodhub
School of Natural Resources and Environment	https://www.facebook.com/UMSNRE

Ann Arbor Farmers' Market	https://www.facebook.com/a2market
Chiwara Permaculture	https://www.facebook.com/pages/Chiwara-Permaculture-Research-Education/210088302398045
School of Public Health	https://www.facebook.com/UMSPH
Project Grow	https://www.facebook.com/ProjectGrowGardens
Rap For Food	https://www.facebook.com/RapForFood
Michigan Urban Farming Initiative	https://www.facebook.com/MichiganUrbanFarmingInitiative
Graham Environmental Sustainability Institute	https://www.facebook.com/pages/Graham-Environmental-Sustainability-Institute-University-of-Michigan/286829451694
The Ginsberg Center for Service Learning	https://www.facebook.com/ginsbergcenter
Matthaei Botanical Gardens	https://www.facebook.com/mbgna
University of Michigan	https://www.facebook.com/universityofmichigan

Miscellaneous Publicity Lists

- > SNRE will often post large events on their website (e-mail Kevin Merrill)
- > You can create an event on Maizepages (<http://maizepages.umich.edu/>)
- > You can add to the general UM Calendaer (<http://events.umich.edu/>)



Jerry Tyrrell <geraldatyrrell@gmail.com>

[UMSFP] Looking for a campus farm summer intern and student leaders!

1 message

UM Sustainable Food Program <umsfp.comm@umich.edu>
 Reply-To: UM Sustainable Food Program <umsfp.comm@umich.edu>
 To: galant@umich.edu

Sun, Feb 24, 2013 at 7:09 PM

Gear up and get ready for the first-of-its-kind Kale to the Victors t-shirt contest taking place during winter vacation, and apply now for Campus Farm summer internships!

Is this email not displaying correctly?
 View it in your browser.

UMSFP

 [Friend on Facebook](#)

 [Forward to a Friend](#)

Upcoming Events

Kale to the Victors: [Shirt Sale in the SPH lobby](#)
 (2/25, 10-1pm)

SSI: [Roundtable](#) (2/25 @ 7pm)

Student Food Co.: [Produce AND shirt sales in Haven Hall](#) (2/26, 11-5pm)

UM Bees: [Weekly colony meeting](#) (2/27 @ 4pm)

CAFE: [Weekly meeting](#) (2/27 @ 6pm)

PDT: [Site Evaluation at Kind Elem.](#) (2/28, 3:40-5:30pm)

UM Bees: [Worker bee days](#) (3/3, 3-5pm)

Good evening,

The Local Food Summit was awesome, thank you to all the organizers! We're excited to put what we learned to work and we could use your help! [We're looking for a new crop of students to serve on the UMSFP Leadership Team!](#) Applications are due by Friday!

Winter vacation nearly upon us (yehaw!), and if you plan on going somewhere amazing, doing something exciting, or just generally being awesome THEN THIS IS FOR YOU! Enter our first UMSFP:

Kale to the Victors photo contest:

Step 1: Buy a **Kale to the Victors t-shirt**. If you already own one, make sure it's clean.

Step 2: Pack your t-shirt if you'll be taking it on an adventure.

Step 3: Put your t-shirt on your beautiful bod.

Step 4: DO SOMETHING AWESOME. There will be prizes involved

Step 5: Have a friend take a picture of you wearing your t-shirt while doing aforementioned awesome thing.

Step 6: Post your photo on the UMSFP Facebook page by midnight, March 15th.

Shirts will be sold this week in the front lobby of the School of Public Health from 10-1pm on Monday (2/25),

and by the Student Food Co. in the Angell Hall lobby from 11-5:30pm on Tuesday (2/26)

On the Horizon

[Kale to the Victors Photo Contest](#): Mar 1-15

[Food and Farming Innovation Network Breakfast](#): Mar 4

[UM SOUP](#): Mar 24

[Sepp Holzer Permaculture in MI](#): Apr 2-4

Jobs and News

[2012 UMSFP Annual Report](#)

[Agrarian Adventures greenhouse coordinator](#)

[Amir Farmers looking for interns](#)

[Brines Farm internships in Dexter](#)

NEW: [UM Campus Farm Internship](#)

[DeLano Farms is hiring in KZoo](#)

NEW: [Five Borough Farm Fellows](#)

[FoodCorps is taking applications for 2013/14](#)

NEW: [Greater Lansing Food Bank Garden](#)

[Growing Hope Internships 2013](#)

[RFC Field Organizer Fellowships](#)

[SSI looking for 2013/14 board members](#)

Last, but not least (but in rapid succession!)

1. [We're on the way out, we need new leaders! Apply!](#)
2. [Apply now to for a paid Campus Farm internship!](#)
3. New jobs, new events and new news to the left.

Peas and lovage,
Your UMSFP Friendlies

PS: All smiles at the registration table from the SFCS!
> [Check out Liz's recap of the event!](#)



And sprouting veggies and flowers in the greenhouse



Lauren got creative weeding the middle of the beds!

[Thornapple CSA looking for farmer](#)



[Friend on Facebook](#) | [Forward to a friend](#)

The UM Sustainable Food Program fosters collaborative leadership that empowers students to create a sustainable food system at the University of Michigan while becoming change agents for a vibrant planet.



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We love to send our friends updates about our adventures!

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GROWING FOOD AND FUTURE LEADERS AT UM - BY ALLISON GREEN

Posted by Dieter Bouma in *Graduate Fellows* | Jul 23, 2012



While there are definitely some commands in the Bible that I try to live out literally, I never imagined following one quite so literally as I have this summer. In true Genesis 2:15 fashion, I have been “tilling and keeping” the gardens I have been placed in. This tilling and keeping has meant many days of dirty feet, wide-brimmed sun hats, and squished bug guts on my fingers as I’ve been working with students to care for two small organic gardens on the University of Michigan campus. One of these gardens, run by a student group called Cultivating Community, has been around since 2004, but another one is just starting with a small plot this summer before growing into a campus farm in the coming years.

Urban vegetable gardens are “cropping” up around the country in front lawns, at schools, in abandoned lots, and on rooftops, some out of necessity and some as a response to remedy a growing separation from our food. This desire to grow food is spreading at U of M as well, as evidenced

by the rising number of students calling for some way to learn more about the intricacies of the food system. For these students, it’s not enough to debate the ethics of eating, growing, transporting, and subsidizing food. They want to get out of the classroom and put more than their minds to work understanding what it takes to feed people well. Whether it comes from an economic, environmental, spiritual, or social need or conviction, even the most humble excursion into gardening can end up growing heaps more than just vegetables.

Gardening is truly a communal experience: critters hiding in the dirt (wanted or unwanted), squirrels and groundhogs waiting to snatch the first fruits, and passersby wondering what in the world could be worth so much time hunched over in the sun tending and admiring plants. The time I’ve spent with student volunteers and co-workers in my gardens this summer has been full of conversation as well as lots of teaching and learning. Like me, many of these students are driven to the garden by a serious sense of idealism. A desire to change the world through small actions. Or maybe a desire to escape the world as we know it through these actions. Maybe some just want to find the wonder in watching a plant grow from seed to flower to fruit, changing slowly, but every once in a while dramatically, noticeably. Others may want to eat healthier (or just get free food no matter how healthy it is!), learn a new skill, or meet new people. Whatever their reason for stopping by the garden, it’s my hope that they leave with more than just a handful of kale.

In order to facilitate this kind of learning and community building, a group of Masters students



at the School of Natural Resources and Environment (SNRE) and I are working to implement a Sustainable Food Program that will bring together food-related student initiatives (like Cultivating Community), professors, and community members in Ann Arbor and Detroit to share resources and wisdom. The central hub of activity will be a two acre campus farm, located just outside of town at Matthaei Botanical Gardens, with satellite gardens spread across the U of M campus. We know that the farm and gardens will scarcely make a dent in the food budget of the university, but it will make a small contribution to helping the university achieve its goal of purchasing 20% of food locally by 2025. More importantly, it will be a resource for education (both formal and informal through classes and service-learning) and community building (check out the discussion about local food and community from the blog this spring!).

Because U of M is not an agricultural school, we are in a unique position (along with the other universities ahead of us on this issue) to impact change. Students generally don't come to U of M to learn how to farm, and most of them won't leave campus looking for jobs in agriculture. My fellow



campus farm team members and I are working hard to foster a community where not just the hippie kids in the environmental studies program congregate. Everyone eats food, so every student has a connection to the farm already! Students and faculty from a range of departments, from art to zoology and everything in between, can connect food to the curriculum. Everyone from athletes to students in the Greek system will be able to get involved in volunteer projects, workshops, and garden parties. And while they are involved, we can channel that idealism or that spark of curiosity or maybe just that desire for free food into critical thinking that can turn into action when those students disperse to new communities and diverse professions, all with some kind of power to influence the food system through growing, eating, marketing, regulating, or researching some aspect of food.

The link between food, justice, health, and well-being is clear in my mind, but working on this project has allowed me to lay the groundwork for making those connections clearer for other students. While I've been weeding the gardens this summer, I have also been pulling insights from students about how they see food fitting into their lives and their communities, and each of these students is coming from a different perspective. If even a few students can leave U of M with at least a notion that food is connected to a myriad of other social, economic, and environmental issues, then all the sweat and sunburn that has led to sustainable food on campus through the years has been worth it. As my team members and I look forward to finishing up our work on this project next spring, we know we've got a lot of work to do yet, with the goal of long-term funding always looming overhead; however, we're also relishing the progress and the connections that have been made to date.

So, my "tilling and keeping" this summer has been more than just an exercise in organic pest control and fail-safe tomato-staking. I have been carefully tending the U of M food movement that has been handed down to me from previous generations of hopeful students while sowing the seeds of an even

greater movement that students to come will both enjoy the fruits of and will continue to grow when my care-taking term here has finished.

Allyson Green is working on a joint MS in Environmental Justice and MPH in Environmental Health at the University of Michigan. Her love for nature and interest in environmental justice stems from growing up in Baraboo, WI, a town rooted in a strong conservation history yet facing controversies over land use and environmental health issues. Her Master's Project to create community gardening at the UM botanical gardens will be completed over the course of the next school year.

OFFICE OF THE VICE PRESIDENT FOR GLOBAL COMMUNICATIONS

TUESDAY, APRIL 17, 2012

New Planet Blue Student Innovation Fund backs four student-driven campus sustainability projects

By Lisa Pappas
Graham Sustainability Institute

Four substantial, student-led sustainability projects are gaining momentum on campus, thanks to financial support from the new Planet Blue Student Innovation Fund.

Announced by President Mary Sue Coleman last fall as part of her larger campus sustainability address, the Planet Blue Student Innovation Fund offers grants of up to \$50,000 annually for projects that reduce the university's environmental footprint and/or promote a culture of sustainability on campus.



Out of 22 concept proposals submitted for consideration late in the winter term, the following four were recently selected for Planet Blue Student Innovation Fund awards:

- **Reusable Containers Program** — Expected to launch this fall, this pilot program will offer a reusable alternative to disposable takeout containers at the U-Club of the Michigan Union. After use, containers will be dropped off and washed at the union, cutting down significantly on the waste produced from takeout containers. The team consists of Erb Institute for Global Sustainable Enterprise master's students Phel Meyer, Rich Grousset and David Yang.
- **Bike Air Pumps and Fix-It Station** — Also with a projected fall launch date, this project aims to enhance the accessibility of biking on campus through the installation of public air pumps on both the Central and North campuses, the installation of a fix-it station with bike repair tools, and the development of repair workshops in collaboration with Common Cycle. The project leader is Arielle Fleisher, a master's student in the School of Public Health.
- **Sustainable Food Kiosk** — This student team, which introduced a pilot food cart in the Chemistry Building on April 13, hopes to increase access to sustainable food on campus by running a food kiosk offering locally grown or sourced produce and grocery staples on a weekly basis. The long-term goal is to be financially self-sufficient from food sales and to eventually transition into a permanent, student owned and operated food co-op. Team leaders include master's students Cynthia Shih of the Erb Institute and Alex Green of the Steven M. Ross School of Business, undergraduate student Stacy Matlen of the Program in the Environment, and Ph.D. candidate Nicole Kasper from the School of Public Health. Additional student committee members include John Graham, Cassandra Malis and Alicia Chiaravalli.
- **U-M Campus Farm** — This proposed student-run campus farm would be located at the Matthaei Botanical Gardens, where participating students would learn about agriculture and food systems and, long term, possibly harvest fruits and vegetables for campus residence halls or the food kiosk mentioned above. The award is for startup money only and is dependent on development of a long-term operational model that is financially viable. This team is led by Lindsey MacDonald, a master's student in the School of Natural Resources and Environment, and Program in the Environment undergraduate Lauren Beriont.

"We received high-impact proposals from some real sustainability superheroes at the university, and they covered a wide range of sustainability improvements for the campus," says physics undergraduate Sam Schiebold, who sits on the Planet Blue Student Innovation Fund Review Board, which selects the awardees. "In the end, priority went to projects that were deemed most innovative, visible and transformative in nature."

Other criteria for receiving monetary support from the Planet Blue Student Innovation Fund, which Coleman has committed to fund for three consecutive years, include factors such as student involvement and interest, economic payback, and partnerships facilitated within the U-M community of students, staff and faculty.

The fund itself was the result of a project idea from the undergraduate Sustainability and the Campus class, further emphasizing the student-driven nature of the initiative.

"It is so important that students have a voice as to what they want their campus to look like," Schiebold says. "And students want it to look and be green!"

Abby Krumbein, a fellow Planet Blue Student Innovation Fund Review Board member and Program in the Environment student, concurs.

"The Planet Blue Student Innovation Fund is an incredible opportunity to advance the conversation of sustainability on campus — and to empower students to create the sustainable campus they envision."

On the grow: University of Michigan graduate students work to establish a campus farm

By [JANET MILLER](#) Freelance reporter

26 Comments

Posted on Mon, Apr 23, 2012 : 5:57 a.m.

Lindsey MacDonald wants to give **University of Michigan** students, faculty and staff a chance to get their hands dirty.

MacDonald is one of four [School of Natural Resources and Environment](#) graduate students working to establish a campus farm on the grounds of **Matthaei Botanical Gardens**. The farm would bring people from a number of academic disciplines together to plan, implement and work on a small farm while also creating a centralized sustainable food program at the university.

Lindsey MacDonald, University of Michigan masters student in the School of Natural Resources and Environment, is working to establish a campus farm at the botanical gardens. She is standing on the land, an old nursery for the botanical gardens, which would be used for the farm.

At the same time, a campus farm would increase the amount of locally grown food served in the dining halls across campus and could allow students to purchase CSA (community supported agriculture)



shares or even supply a new student food cooperative taking root on campus, said MacDonald.

As a first step, a pilot farm - a 250-square-foot plot - is being established this spring at the botanical gardens, on land adjacent to the proposed farm, which currently is unplowed. It will be used to test crops and the harvest will be donated. "It will allow us to get our hands dirty," MacDonald said.

Eventually, MacDonald said, plans include establishing a one- to two-acre farm on the botanical gardens grounds, on land that at one time served as a nursery for the gardens. A farm manager would be hired to run and coordinate the operation, MacDonald said. That could happen as early as next year if funding can be found, she said.

But that's the hitch. MacDonald and the other graduate students won a \$42,000 grant that can be used to fund the farm - buy equipment and fund interns to work the farm. But the grant hinges on first hiring a farm manager, a move that could cost between \$60,000 and \$70,000 a year. MacDonald said they are looking to foundations, alumni and a number of university departments for help with funding.

While the local food movement has been growing in Washtenaw County, U-M has not moved forward on the idea of a campus farm. The idea of a campus farm has been discussed for at least the past six or seven years, said Bob Grese, director of the botanical gardens and **Nichols Arboretum**.

Many other college campuses support farm operations, from Oberlin College to Yale University to the University of Wisconsin at Madison. Dickinson College in Pennsylvania has a 50-acre organic farm and some schools are turning their campus farms in to profit centers. Of course, Michigan State University, a land-grant school with a strong agriculture program, has a student organic farm. "We're really behind peer institutions," MacDonald said. A campus farm could be used as a recruiting tool for students, she said.

It would be the first campus farm at U-M, at least in the 26 years Grese has been at the university, he said. There have been a few plots on campus that, over the years, have supported small gardens, such as a small plot run by the student organization [Cultivating Community](#), at the Ginsberg Center. Students in the U-M's Outdoor Adventures

program last summer had a small garden that produced locally grown food to take on their adventure trips.

But there's never been anything that goes beyond a small garden, despite growing interest over the past decade. "It's been hard to fit it into and campus landscape, and area that has a large amount of flat land," Grese said.

But the botanical gardens has both.

The farm could serve as a focal point for issues studied across campus, from how food is grown to land use impact to urban food issues. "Food is an evolving issue, and a farm could be integrated across different fields," Grese said. "Having a hands on experience can make all the difference in the world." Areas such as public health, natural resources, business, ecology and urban planning could use the campus farm.

A campus farm would also serve as a hub for other food organizations and issues, supporting films, lectures and other educational events, MacDonald said.

Understanding food issues and a small farm operation would also help students preparing to enter the Peace Corps, Grese said. "U-M is one of the biggest suppliers for the Peace Corps."



Planting seeds of sustainability

By Cassie Balfour

Daily Arts Writer On September 13th, 2012

In summer months, countless people cradle comically large watermelons without ever considering the fruit's formative days. When Natural Resources & Environment masters student Allyson Green described the process of watching a watermelon develop, she unconsciously spread her arms out like the tendrils of a watermelon's vines.

"I had no idea what a watermelon looked like growing," Green said. "To watch this little, tiny plant go from looking like it was about to die, and all of a sudden you had these beautiful flowers and this tiny little watermelon growing on it.

"A little bit of hard work and some great things that have nothing to do with us are happening to make that little watermelon grow."

Many students may think of gardening as an activity reserved for the elderly, whittling away their twilight years, which compels the question: Do University students see the merit of diving into the dirt; shovel and watering can in hand?

Business junior Yahya Syed takes classes right across from the University's Cultivating Community garden, but says he's never heard of it before.

"I wouldn't say I notice anything at school," Syed said. "If there are flowers, it makes the place look nice but that's about it."

Syed described the Nichols Arboretum as "amazing" and said he's always enjoyed his mother's garden. Yet he added that federal money shouldn't be used to fund gardening unless it's research related, referring to federal funds that went toward sustaining heirloom peonies at the [Arboretum and Botanical Gardens](#) in the summer of 2011. He added that the University shouldn't be investing a significant amount of money on gardening for "aesthetics" alone.

But according to some, gardening can have artistic and practical merits that might justify why the 'U' allots resources to gardening and researching horticulture.

LSA junior Ali Imam says he believes urban farming is an important initiative that the University should continue to focus on in order to create a more sustainable food system.

"Green is good," he said.

No matter what perceivable benefits might come from gardening, several students agreed that there is natural artistry inherent to gardening. With some nurturing, a garden can become a tangible work

of public art.

Cultivating Community

Located between the apocalyptic sounds of East Quad's renovation and frat houses littered with post-game Solo cups is the Cultivating Community garden, a patch of land outside of the Ginsberg Center. It overflows with sunflowers and greenery as tall as the students who likely walk past every day without giving it a second glance.

Yet students dedicated to Cultivating Community, a student organization on campus, are willing to get their hands a little dirty. They maintain a seemingly constant burst of color and natural artistry.

The group fosters a public space that beautifies a little corner of Ann Arbor while also demonstrating and supporting local gardening efforts that have tangible benefits for individuals and the collective public space.

A recent addition to the Cultivating Community family, Green spent the summer as an intern at the Arb, where as a program coordinator, she helped oversee all activities around the gardens. She organized workshops and field trips for those who were curious about gardening and growing their own food.

As the name suggests, Cultivating Community doesn't just produce vegetables and flowers. Students from across the University come together to create their garden, a process that begets the group's other main goal: outreach in Ann Arbor.

"We organized workshops and fieldtrips for people who just wanted to learn more about how to garden, how to eat locally, what to do with food from the garden," Green said.

Cultivating Community hosts open workdays where Ann Arbor residents can cultivate gardening skills, such as composting, on a micro level. And, if traditional gardening doesn't suit your fancy, Green said everyone is encouraged to try some fresh raspberries straight from the vine.

In addition to their work in Ann Arbor, Cultivating Community has partnerships with the Detroit non-profit Focus Hope and the Summer in the City's community service program, which brings children from the metro Detroit suburbs to volunteer in the city.

Last summer, Cultivating Community helped run a community garden in Detroit that allowed local kids to tend their own garden plots. Green explained that for many of these kids, fresh produce isn't readily affordable. Cultivating their own gardens and growing produce helped teach participants the benefits of fresh food.

"By having this garden . . . the kids can learn where this food comes from and why (they) should eat it, why (they) should want to grow it," Green said.

Though Green said she wasn't sure if the plants are still being cared for since the summer ended, she recalled one boy who carefully monitored his creation.

"There are a few who were keen on having their own plant," Green said. "One kid had some, I

think it was okra, that he was watching grow, and maybe some pumpkins. So every week he'd come back and just look at his plants and take care of them."

Growing Hope in Ypsilanti

LSA sophomore Shaina Shetty says gardening can change lives. As a researcher at Growing Hope in Ypsilanti last summer — a non-profit devoted to spreading awareness about gardening and healthy food — she documented how gardens can elevate a neighborhood's aesthetic and help generate an interest in nutrition.

"It starts spreading through observation, when you see someone in your neighborhood gardening," Shetty said. "We'd plant a garden in one house and the house next door would see it and say, 'Hey, this is interesting, let's do this.'"

If families qualify for the program, Growing Hope volunteers help them set up a personal garden. For the first year families are required to produce certain food, but after a year, what they grow is up to them. Gardens that began as one raised-produce bed would soon turn into full-blown gardens that families could tend to until their entire lawn was covered in food and flowers.

"Some of these gardens are gorgeous ... they are definitely pieces of art in some cases," Shetty said.

Not only could families that wouldn't ordinarily have access to fresh food now grow their own, but according to Shetty, the artistic beauty of the gardens makes neighbors more likely to invest in their neighborhoods.

"Community gardening works as a whole, everyone in the neighborhood is working on it. If you're not working on it your mom is working on it, or your friend and so there's a lot of potential," Shetty said. "It's been a community building effort ... people are less likely to destroy something that's already so beautiful."

Growing Hope pulls many volunteers and interns from the community in which they work. Shetty saw how children who began by helping out in their family gardens would soon commit to helping their neighbors start their own sustainable gardens with the aid of Growing Hope.

She discussed one woman she knew who, before starting her garden, said she had a low iron count. By the end of the summer she attributed her normal iron count to the food she'd been eating from her garden.

"I've always just seen eating food as a thing you do, I've never really given thought to it," she said. "Like eating fruits and vegetables, I took it for granted in my household, and for some people that's not normal," Shetty said.

An ever-changing landscape

Though students like Syed may denounce the craft of gardening, those who are in groups such as Growing Hope and Cultivating Community work throughout the year to educate people on how practical and fruitful the practice can be.

“Yes, we have a lot of peonies because they look cool, but there’s also just a lot of research that goes into that and there’s a heritage behind it too,” Green said of the peonies that annually blanket the Arb in a sea of purple and pink. “It’s more than just looking at flowers. It’s education, and community outreach, and just giving people a place to rest and re-collect themselves and find peace.”

From using deconstructed milk cartons to grow plants in Ann Arbor, to watching children become invested in their health in Detroit, to creating beautiful landscapes and neighborhoods in Ypsilanti through gardening, it appears that gardening has multiple functions.

“Landscapes change overtime,” Green said. “Humans change them, they change on their own. Here’s a chance to see it happening.”

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Harvest Fest celebrates locally-sourced food

By Kasey Cox

For the Daily On October 5th, 2012

With a spread of fall-themed delicacies — including gourmet goat-cheese and kale salads, apple butternut squash soup and roasted oil-drizzled baguette slices — attendees of Thursday night's Harvest Fest got a taste of the value of sustainable food sources.

The event, held at the Matthaei Botanical Gardens, was designed to encourage attendees to appreciate harvesting, eating and supporting locally-grown food. The University of Michigan Sustainable Food Program, a student organization started and managed by master's students in the School of Natural Resources and Environment, hosted the well-attended festival.

Attendees included Slow Food Huron Valley, a local organization committed to educating about food, the student-developed food stand Brassica, and Cultivating Community — a student group that grows a garden on campus.

UMSFP oversees a number of other sustainable food initiatives, and it utilizes the Student Campus Farm as its master's project. Rackham student Lindsey MacDonald, program manager of UMSFP, said the idea for a campus farm spurred from the Campus Sustainability Integrated Assessment, an organization where students report and make recommendations on a number of sustainability issues.

University administrators initially dismissed the idea of a student farm due to the amount of work it would entail, but MacDonald said their persistence eventually led to the establishment of a farm that educates students and provides food for campus dining halls.

LSA senior Lauren Bariont, a participant in the class project that initiated the farm's development, worked with MacDonald to write a grant proposal for the Planet Blue Student Innovation Fund, which resulted in \$42,000 to open the farm. The money was contingent on receiving additional funding for a full-time farm manager, according to MacDonald.

If the grant money comes through, it will cover costs like a hoophouse, equipment and sheds, but UMSFP is still looking for a farm manager to begin by next spring.

UMSFP has also reached out to University departments and faculty members who might be willing to integrate food system education into their classes, like Joe Trumpey, an associate professor of natural resources, who is teaching a class this semester on sustainable food design through the Penny W. Stamps School of Art & Design.

MacDonald said the energy she and her peers experiences inspired her to collaborate with existing food groups on campus.

“The second someone learns about what is happening with sustainable food on campus they are excited about it and they want to get involved,” Macdonald said. “But so many people still haven’t heard.”

MacDonald added it’s important to emphasize the difference between “hippies” and those participating in farming and environmental work.

“Everybody makes decisions about what they eat every day,” MacDonald said. “I think it’s a social thing too. I’m trying to figure out how to get people engaged that aren’t engaged just based on their interest in dirt.”

LSA junior Claire Jaffe attended the event said she is in supportive of a UMSFP’s efforts.

“This campus farm is a really important addition to our University,” Jaffe said. “I think it’s a long time coming, I think it should have happened a long time ago.

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Viewpoint: Cultivating our sustainability

By Elizabeth Dengate On March 11th, 2013

Last Friday, I walked through a greenhouse. It was full of students laughing and talking as they buried seeds into rich soil and watered tiny green seedlings. I heard students introducing themselves to fellow classmates they would have otherwise never met as they learned what tiny pepper plants look like and how many different kinds of lettuce there are.

Until very recently, this scene would have only been found at Yale University, at Michigan State University, at Duke University, but not at the University of Michigan. Here at Michigan, there was no large university-wide option for students to come together over growing food, to bond over pepper plants, or to learn what produce looks like before it's bound up under the lights at the supermarket or on the buffet line in their dining hall. If students learned about food at all — food, the stuff we enjoy and talk over and depend on for our survival every day, the topic that creates a common thread between all peoples, communities and our environment — it was in a theoretical sense, such as a classroom or outside of school entirely in a student group. Those student groups, I hasten to add, such as Cultivating Community, Outdoor Adventures Garden Project and many others are doing outstanding and inspiring work.

But this is changing. Until last year, we were one of very few of our peer schools without a campus farm. That scene I described took place in the greenhouse that is here on University property on a workday for the new campus farm. This is a new era, and there is real potential for the University to become a victor in the field of sustainable food. So many things are pushing us in that direction, such as the clear goals for food sustainability set out in the University's Integrated Assessment, the new Food Systems faculty cluster hire in progress, the nearly-a-dozen graduate and undergraduate student groups working on issues related to food and agriculture and the new courses with food components springing up every semester.

Created last year, the UM Sustainable Food Program seeks to harness and organize that energy and the campus farm to create a place where theory and talk can find physical outlet in the hands-on and community-building work of actually growing food. These programs have come far in the past year. Our goals of creating a community around food, of providing a new kind of experiential education for students and of providing fresh, healthy, local produce are already being realized in many ways.

But momentum is lost when it's not supported. The ball stops rolling when it has no clear path. And programs falter when there is no clear leadership. Until now, this initiative has been student-led, with advice and support from faculty and staff. In order for the UM Sustainable Food Program and campus farm to endure, to bring real food, true sustainability, fresh community and creative education to the University, we need to institutionalize this program. The University can prove itself in the field of sustainability, but it needs to do so by putting its money where its mouth is and

devoting a full-time staff member to the management of this program and farm. Let's meet the challenge of our peer schools. Let's go beyond talk. Let's bring sustainable food to campus and create a future where our dining halls boast sourcing from our own campus farm, where students make new friends over harvesting their own lunch, and where students, faculty, staff and members of the community can come together over one thing we all love to talk about: food.

The time is now. If we wait to act, the momentum dies. Let's do what it takes to make this future a reality.

Elizabeth Dengate is a Rackham student.

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THE FARMERS MARKETER

FOOD & GROCERY: University of Michigan Sustainable Food Program hosts first Harvest Festival Oct. 4

By KIM BAYER (/USERS/PROFILE/?UID=108) AnnArbor.com Freelance Journalist

Posted on Tue, Oct 2, 2012 : 10:32 a.m.



Logo designed by Liz Dengage for the UM Sustainable Food Program

courtesy UM Sustainable Food Program

Editor's note: The logo attribution has been corrected.

Five years ago I was considering a career change and made an appointment with an admissions counselor at the University of Michigan's Ford School of Public Policy. When I asked him to tell me about the classes and research opportunities they could offer in the area of food policy, he gave me a quizzical look and said he had never heard of it. He assured me they had nothing whatsoever to offer in the area of **food policy** and food systems.

When I asked for guidance in finding something like that at the University, he told me that it didn't exist but I could check the faculty directory. This Thursday, Oct. 4, as the University of Michigan's Sustainable Food Program (<http://www.umsfp.com>) embarks on its first Harvest Festival (<http://umsfp.com/index.php/harvest-festival>) held at the UM Student Farm (<http://www.annarbor.com/news/on-the-grow-university-of-michigan-graduate-students-work-to-establish-a-campus-farm/#.UGr6MbQat8s>), I see what a difference five years can make.

Driven in large part by students, food and sustainability have become important issues on campus. Lindsey MacDonald, a master's student at SNRE, is one of four program managers for UM's **Sustainable Food Program**. She describes UMFSP as " an umbrella organization for student groups addressing food-related issues across campus. By bringing together students, faculty, staff, and community members, we are fostering collaborative leadership that empowers students to create a sustainable food system at the University of Michigan while becoming change agents for a vibrant planet."

MacDonald outlines three main priorities for the group:

1. Developing Responsible Citizens and Leaders by facilitating formal and informal education on sustainable food topics
2. Strengthening Communities through collaborative programming and outreach
3. Growing Sustainable Foods that support the well-being of people and the environment at the University of Michigan and beyond

I had the opportunity to ask MacDonald more about the Harvest Festival taking place at Matthaei Botanical Gardens from 4-8 p.m. Oct. 4 and about the role of students in food and sustainability at the University in general.

KB: What is the goal of the Harvest Festival?

LM: The Harvest Festival will bring together University of Michigan students, staff, and faculty as well as Ann Arbor community members to celebrate sustainable food. With the goal of gathering people from diverse cross-sections of the community, we envision local food champions and their families, UM students and faculty from across academic disciplines, our supporters and volunteers, and potential future collaborators all eating, learning, and celebrating the harvest season together.

Through this event, UMSFP will spread the word about our new endeavors, aspirations, and challenges around campus while cultivating community relationships that will be integral to our success in the future. However, the goal is not just to promote UMSFP but also to recognize and celebrate other local food champions in Ann Arbor.

KB: Who else is involved in putting the fest together?

LM: Matthaei Botanical Gardens is hosting the event and has been an invaluable resource for logistics and publicity. Our UMSFP member groups, student groups who have joined the program, have been donating time, effort, and volunteers as well. These groups include Cultivating Community, the Michigan Sustainable Food Initiative, Brassica—the Ann Arbor Student Food Stand, Friends of the Campus Farm, UM Bees, and the Outdoor Adventures Garden Crew.

The University Unions will be serving up their own seasonal dishes using produce from their local farm partners. Lastly, the event wouldn't be possible without the sponsorship of U of M's Central Student Government and donations from U of M and Ann Arbor community members.

KB: Why are these food programs important UM initiatives?

LM: The University of Michigan creates leaders that go on to make powerful impacts all over the world. If these leaders can learn just a little bit about sustainable food and take that with them to their leadership positions, we could make tremendous positive change for food sustainability. In order to provide students with this knowledge, there is much work to do. We must step up to the challenge by building a farm for experiential learning, by creating the organizational structure for faculty, staff, students, and community to come together on this topic, and by converting student visions into action.

Students are stepping up to make this happen. Students have great energy and come from diverse places, which contributes to the interdisciplinary fabric of this program. The Harvest Festival and UMSFP are trying to harness that energy to make positive change at UM. These initiatives are important because they allow students to creatively tackle problems that occur in our broader society.

KB: What are other food-related initiatives that are happening at UM?

LM: The Central Student Government has taken an active interest in food and now hosts MFarmers' markets selling fresh produce and prepared food straight to students and staff. MHealthy is also working to set up food kiosks in buildings across campus. Classes are forming to discuss hot food topics and really start to increase the breadth and depth of food education on campus. There is also a cluster hire of faculty focused on sustainable food (http://sitemaker.umich.edu/sustainablefoodsystems/cluster_hires_in_sustainable_food_systems) in five different departments in progress. There are student groups focused on community gardens, food labeling in dining halls, and fresh food access, just to name a few.

KB: Why do you think these are happening now?

LM: The momentum is strong right now. Between the discussions of climate change, the Universities Integrated Assessment results, the tremendous success stories in the surrounding community, President Coleman's acknowledgement of the importance of sustainability, and strong student leadership to get this program off of the ground, this topic will continue to explode with interest.

KB: How much of a difference does the food and sustainability landscape at a university make in choosing which one to attend?

LM: Sustainability matters for this generation of students. Different studies say different things specifically about how much it matters, but

I can say with certainty that campus farms are popping up in universities and colleges all over the country, and I don't just mean small schools, and I don't just mean agriculture schools. Many of our peer institutions are already growing food that is provided to students, faculty, and staff right on campus.

KB: What do you hope UM will be doing five years from now that it is not currently doing?

LM: Our number one priority is securing funding for a full-time program/farm manager, but we hope to have that completed by the end of the year. In five years, we hope to have a community supported agriculture system set-up, a hoop house, satellite gardens in visible places around campus, internship opportunities for students, leadership development programming associated with the farm, strong partnerships with community groups, and formalized cross-disciplinary learning.

KB: Why are students getting involved with food initiatives?

LM: Students want to make a tangible difference, they want to contribute to something bigger than themselves, they appreciate the community that forms around food, they know that the current industrial system cannot continue like it is, and they *love* potlucks

NOTE: Tickets to the Harvest Festival (<http://www.umsfp.com/index.php/harvest-festival>) are available in advance and at the door. The event features music from Dragon Wagon, Magdelene Fossum, and the Crane Wives, along with fun and educational activities and a lovely meal that University Catering is sourcing from three local farms, including Goetz, Lesser and Todisciuk farms.

Tags: [local food \(/tag/local food/\)](/tag/local%20food/), [local food news \(/tag/local food news/\)](/tag/local%20food%20news/)



Kim Bayer is a freelance writer and culinary researcher. Email her at [kimbayer at gmail dot com](mailto:kimbayer@gmail.com).

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Sustainable Food Program Releases Annual Report, Shows Efforts Toward Goals

By:

Ranah Farkhondeh, Public Affairs Intern

Release Date:

03/15/2013

The recently released [annual report](#) by the [University of Michigan Sustainable Food Program](#) highlights the efforts made by its members toward the group's three core goals: producing food, furthering education, and building community.

A key accomplishment of the group was the development of a sustainable foods farm at the Matthaei Botanical Gardens. With the help of volunteers and a \$42,000 grant from the [Planet Blue Student Innovation Fund](#), UMSFP cultivated more than 700 pounds of food last summer. Following the success of the farm's first year, the Matthaei Botanical Gardens offered the group two additional acres to expand their Campus Farm in 2013.

Other achievements made by UMSFP's 10 member groups that further support the program's goals include:

- The [Ann Arbor Student Food Co.](#)'s initiated a program to sell fresh fruits and vegetables to students on campus.
- The [Consortium on Agriculture, Food and the Environment](#) held its first annual Sustainable Food Careers Symposium, complete with panel discussions, guest speakers and audience of more than 130 people.
- The [Permaculture Design Team](#) developed a satellite garden on campus using permaculture methodology, a branch of sustainable architecture modeled after natural ecosystems. This was achieved through a project for ENVIRON 391 course "Sustainability and The Campus."
- The [Michigan Sustainable Foods Initiative](#) promoted using reusable drink containers on campus through their Free Thermos Giveaway initiative.

To further educate and build community in 2013, UMSFP plans to expand the classes it works with by partnering with a freshman engineering course and landscape architecture studios. The program is also working to connect students and staff to sustainability resources across the U.S. by securing space for its Sustainable Food Resource Center.

Read full annual report here: http://www.umsfp.com/images/2012_annualreport.pdf.



Student-led program to host sustainable food event at Matthaei

By Brienne Prusak
Public Affairs intern

As autumn rolls in, the U-M Sustainable Food Program will be promoting sustainability by dishing out locally grown foods at Harvest Festival.

The festival is scheduled for 4 p.m. Thursday at the Matthaei Botanical Gardens. It will feature dishes of locally grown food, local musicians and various games and activities to promote awareness about local food options and the university's sustainability initiatives.



The U-M Sustainable Food Program is requesting attendees make a suggested donation of \$12 for general admission and \$10 for student entry to support sustainability education and outreach across campus. Lindsey MacDonald, the project manager of Sustainable Food Program, said Central Student Government also is supporting the event by donating \$3,000 to cover catering and other costs.

The food at Harvest Festival was grown on a two-acre parcel at the Matthaei Botanical Gardens, MacDonald said. Along with the four graduate students who started the Sustainable Food Program, student volunteers from all across campus work together to tend the garden and promote education, hands-on learning and community building.

"Food and growing food is an avenue to bring people together and share ideas that are sustainable," MacDonald said. "There's tons of student interest on this topic now. There were people having the same conversations all over campus but weren't aware of each other (before this program began)."

One year after the announcement of the university's 2025 Campus Sustainability goals of climate action, waste prevention, healthy environments and community awareness, the Sustainable Food Program aims to help the university meet its goals by providing sustainable food to the campus community.

MacDonald said the program has received support from various departments within the university, like the Division of Student Affairs, the DSA Student Advisory Board and University Catering.

"We all have our own projects, but we have a similar mission," she explained.

MacDonald added that the farm and the event are at Matthaei Botanical Gardens because, despite its distance from Central Campus, the knowledge, equipment and expertise there is invaluable. She added that the location does not fit perfectly with the program's goals, but they hope to implement satellite gardens across campus and get locally grown food into the University Unions and dining halls to bring their message closer to the students.

This program was started as a master's student project in January and will begin receiving money from the Planet Blue Student Innovation Fund once the group secures a separate form of funding for a full-time project manager.

The Sustainable Food Program also offers sustainable methods of transportation to and from Harvest Festival, including a free bus from Central Campus and a group bike ride, which will meet at the Ginsberg Center at 3:30 p.m.

Matthaei Botanical gardens
and Nichols arboretum

The Peony Garden Turns 90!

friends newsletter • spring-summer 2012

Inside: Great Lakes Garden, Gifted • A Farm Grows at Matthaei • Student Prizes • and more

M UNIVERSITY OF MICHIGAN

Matthaei Botanical gardens
and Nichols arboretum

caring for nature, enriching life

**1800 N. Dixboro Rd.
Ann Arbor MI 48105**

Robert E. Grese, Director

Karen Sikkenga,
Associate Director

friends newsletter

Joseph Mooney, Editor
jfmoooney@umich.edu

For information:

734.647.7600
mbgna.umich.edu

U-M Regents

Julia Donovan Darlow, Ann Arbor
Laurence B. Deitch, Bingham Farms
Denise Ilitch, Bingham Farms
Olivia P. Maynard, Goodrich
Andrea Fischer Newman, Ann Arbor
Andrew C. Richner, Grosse Pointe Park
S. Martin Taylor, Grosse Pointe Farms
Katherine E. White, Ann Arbor
Mary Sue Coleman, *ex officio*





PICTURED, TOP TO BOTTOM:

A wide-angle view of the Peony Garden in bloom. The Garden celebrates its 90th anniversary this year.

Hanging baskets are ready for the Mother's Day Weekend Sale & Fundraiser at Matthaei.

An eastern massasauga rattlesnake makes its way across a section of pavement at the Botanical Gardens.



Gift Boosts Great Lakes Garden

A major gift of \$800,000 will primarily fund construction of the Great Lakes Garden at Matthaei. The gift is the largest since the Matthaei family donated over 200 acres to the University in 1957 for the creation of Matthaei Botanical Gardens. Construction will begin in late summer or early fall 2012. For more information, see p. 7.

Nine Decades of Peonies

This season marks the 90th anniversary of the Nichols Arboretum Peony Garden. In addition to its famed blooms, the garden is also benefiting from the Peony Initiative, a multi-year restoration project. Tree peonies are being planted, as are heirloom annuals for visual interest after the garden finishes blooming. Don't miss the largest collection of heirloom peonies in North America! Peak bloom late May through mid-June, weather depending. Call or visit our peony Facebook page for updates (search for "The Peony Garden at Nichols Arboretum").

Students Garner Prizes, Fellowships

Annual prizes and awards recognize creative work and scholarship related to the Matthaei-Nichols mission. The Nanette R. LaCross and William D. Drake prizes honor work by students in the School of Natural Resources & Environment (SNRE) or Program in the Environment (PitE) who link their studies with us. The Winifred B. Chase Fellowship helps students in systematic botany research, plant geography, and other phases of botany requiring field study. This year's winners, who take home a total of \$13,000 in prizes: **Chase Prize:** Daniel Katz (SNRE); Tess Nugent, Earth & Environmental Sciences (EES); Na Wei, Ecology & Evolutionary Biology. **Drake Prize:** Laurent Beriont (EES/PitE); Ayehlet Cooper (SNRE); Helen Graham (SNRE); Daniel Katz (SNRE); Lindsey MacDonald (SNRE); Diana Portner (SNRE). **LaCross Prize:** Erin Dreps (SNRE); Allyson Green (SNRE); Jen Horton (Urban Planning) The Presidential Management Fellow winner is Ben Johnson (SNRE). The PMF is a paid leadership development program at the entry level for advanced degree candidates.

Eastern Massasauga Workshop

Join us for a free workshop highlighting the eastern massasauga rattlesnake. For this program, Yu Man Lee, a conservation scientist with Michigan Natural Features Inventory, and Matthaei-Nichols' staff member Steven Parrish discuss the massasauga, its biology and ecology, detection and survey methods, and its habitat-management challenges. Steven will describe the National Fish and Wildlife Foundation-funded project currently underway at the Gardens to restore massasauga habitat. Discussion is followed by a field trip of the Gardens' property to view massasauga survey methods (condition dependent) as well as management practices used to restore massasauga habitat. See p. 4 for details.

Bonsai Garden Update

Construction of the new bonsai display garden continues. Grading for the site was completed in April and will be followed by the fencing, gravel, plumbing, and wiring. The benches, beautifully constructed by volunteer Bill Sloan, are ready. The vagaries of construction and weather make it difficult for us to predict exact times but if all goes well, installation and placement of the plants is scheduled for later this summer or fall. Pending a few crossed fingers, the bonsai garden structure may be ready by end of year. The new garden will allow us to display much more of our bonsai collection than currently possible. Stay tuned for more updates.

Connecting People & Nature with Restoration

Matthaei-Nichols is co-sponsoring with the School of Natural Resources & Environment, Grand Valley State, and others the fourth annual meeting of the Midwest-Great Lakes Society for Ecological Restoration, May 4–6 at Matthaei. Conference includes a keynote address on the Great Lakes by Helen Taylor of the Nature Conservancy, four workshops, over 50 contributed presentations, off-site field trip, and much more. Visit the Midwest-Great Lakes SER chapter home page for registration information: ser.org/mwgl.

Save the Dates

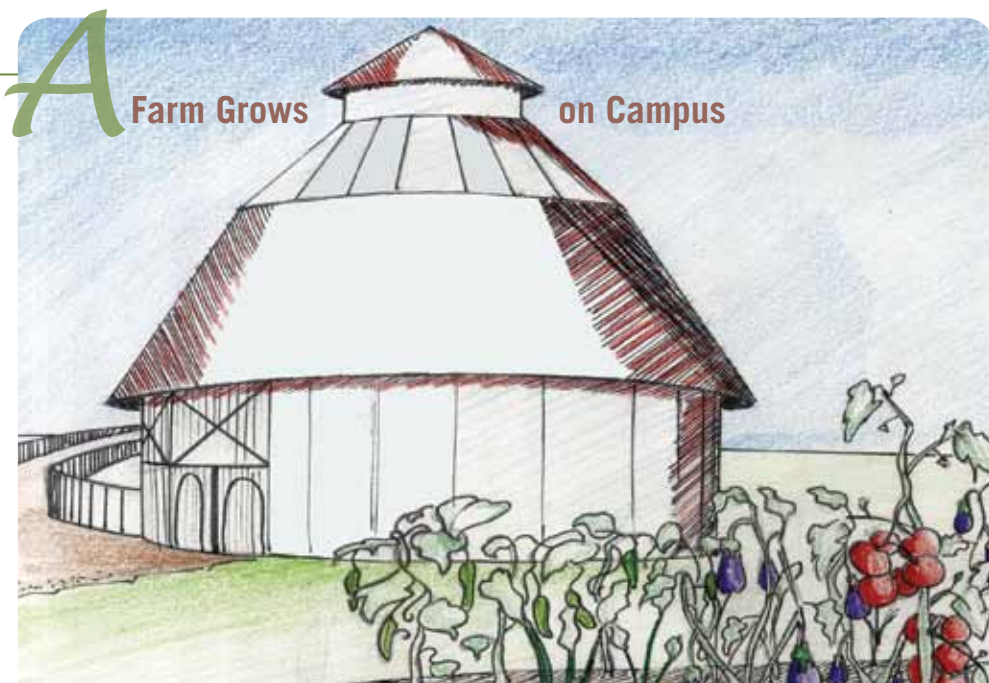
May 12–13, 10 am–4:30 pm, Matthaei
Mother's Day Weekend Fundraiser & Sale
 Hanging baskets and containers.

May 19–20, 10 am–4:30 pm, Matthaei
Heirloom & Water-Wise Fundraiser & Sale
 Water-resilient perennials for shade and sun, plus herbs and vegetables grown and sold by Cultivating Community.

May 19, 10 am–4:30 pm, Matthaei
(Note location and date change)
Peonies Galore Fundraiser & Sale
 Antique and heirloom peonies for sale.

Mid-May-early June, Nichols Arboretum
Nichols Arboretum Peony Festival
 The Peony Garden is early this year! Call ahead or visit our website for festival and bloom updates.

Thurs.–Sun., June 7–24, Nichols Arboretum
Shakespeare in the Arb
The Merry Wives of Windsor
 Early, day-of-performance ticket sales and discounts for members.



Farm Grows on Campus

The campus farm at Matthaei Botanical Gardens: for U-M students, a gathering place and learning center for sustainability and best practices in growing food

Where does our food come from, how is it grown, and why does that matter? Many of us are asking similar questions today about the food we eat.

Soon, University of Michigan students will find their own answers as they create and grow a campus farm at Matthaei Botanical Gardens, first with a small pilot garden this summer, followed by a formal groundbreaking in 2013.

As much laboratory as classroom, the farm will connect students with nature in ways they might never have experienced before. Such hands-on experience, Matthaei-Nichols Director Bob Grese believes, provides invaluable lessons in small-scale food production for students who—even if they don't go on to be farmers—“will play a role in food production and delivery systems as policy makers, planners, health professionals, social workers, and ecologists,” he says.

Strong Student and University Support

Whatever their academic stripe, U-M students certainly champion the farm idea. A proposal submitted by undergraduate students in ENV 391, a course in LSA's Program in the Environment, indicates significant student backing for a farm. Of 457 responses to a survey attached to the proposal, 83% expressed a moderate to high interest in starting a farm, and more than half would enjoy volunteering at the farm or participating for academic reasons.

Most important, the farm has the University's blessing. In its most comprehensive study yet of sustainability on campus, the U-M released

last year the Campus Sustainability Integrated Assessment (CSIA). The Sustainability Executive Council chaired by President Mary Sue Coleman endorsed the study and recommended that the University create a campus farm.

Commenting on sustainability after the release of the CSIA, President Coleman pointed out that the University's role in addressing these issues is to lay the groundwork for “the next generation of scientists, leaders, and engaged citizens.”

Along with undergrads, graduate students in the School of Natural Resources and Environment will be working with Grese, Matthaei-Nichols staff, and U-M faculty members to make the farm a reality.

Planning for a sustainable food program and campus farm implementation will serve as the student group's capstone master's project. The farm would be part of a University-wide effort to increase students' knowledge of critical food topics so they can make informed food choices for themselves and help educate others.

The Farm and Its Mission

The farm would tangibly demonstrate the U-M Sustainable Food Program's core values. “It will tie education, community, and sustainable food together in a way that hasn't been done before at U-M,” notes master's proposal team member Elizabeth Dengate. And because Matthaei-Nichols' and the farm's mission align so closely, “the Gardens stands out as the place on campus that fosters the same kind of learning the farm will promote.” The farm will also help students extend their learning beyond

campus, “giving them opportunities to further connect, learn, and explore while on site at the Gardens,” Dengate adds.

The student farm points to important socio-political issues, too. If one definition of sustainable food and farming is “food that is produced, distributed, and processed in a way that supports environmental longevity and health, and social equity,” according to the master's team, then business as usual—profligate use of pesticides, large-scale monoculture, and other detrimental food-growing practices—won't insure we are stewarding the world for future generations. A campus farm, the student master's team leaders say, provides an avenue for exploring and educating about alternatives. ♻️

Having a Farm, and Getting There, Too

An issue of growing importance is transportation to Matthaei Botanical Gardens. No public transportation exists, and options are limited to car, bicycle, or walking. Since the Gardens is some miles from campus and narrow, winding Dixboro Road lacks a bike path, few opt for the two-wheeled approach and almost no one for the two-footed.

Students are willing to be creative, however: car-pooling or hopping on a bus that brings classes to Matthaei are two possibilities under discussion, though a bus may make the most sense from volume and environmental perspectives. Discussions with the Ann Arbor Transportation Authority are also ongoing but as of this writing there are no definite plans to create an AATA route on Dixboro or divert other lines.

Nevertheless, there is avid interest among students who responded to a survey about transportation to Matthaei Botanical Gardens. In the survey, conducted earlier this year, 47% and 25% of students, respectively, were somewhat or very interested in visiting the Gardens, while 77% of respondents who had visited the Gardens said that they had used a car. Nearly three-quarters were somewhat or very comfortable with using a bus to get around, and 75% were more inclined to visit the Matthaei Botanical Gardens if a university sponsored bus or carpool was available at no cost.



Members Spring Fever Garden Party Fri., May 11, 5-7:30 pm, Matthaei Botanical Gardens, Rm. 125

Calling all kids: You're invited to our Spring Fever Members Garden party, too! We'll have lots of fun activities during the evening such as decorating flower pots, a planting session, and more. Refreshments served. Mom and dad: not a member of the Arb & Gardens? Join Friday and enjoy the festivities and everything we have to offer throughout the year.

Sensational Nature Youth & Kids' Activities & Workshops— Spring-Summer 2012

Discover, learn, and play all summer at Matthaei and in the Gaffield Children's Garden, where you'll invent, create, design, show off your artistic talents, or see what's new and growing in your favorite vegetable patch. We'll have free self-guided scavenger hunts, discovery cards, and adventure backpacks available at the Matthaei front desk during regular business hours beginning in May.



Wed., June 20

Butterflies and Dragons

Look for signs that summer is truly here—dragonflies, hummingbirds, summer flowers, and more. Then help us celebrate summer with crafts, games, and guided hikes. **12-YE-16**

Fri., June 22

Bugs Are Beautiful

Without insects, we'd be in big trouble. Insects pollinate almost 90% of all of our food crops. Which makes butterflies, moths, bees, beetles, and flies very important. Take a hike to look for pollinators and build a model flower and fantasy pollinator to celebrate our winged friends. **12-YE-17**

Fri., July 13

Art for the Garden

Gardens and garden decorations tell visitors a story about you and your garden. Come listen to stories that take place in gardens and then make a garden decoration to take home. **12-YE-18**



Summer Drop-In Days at the Gaffield Children's Garden

Check the Gaffield Children's Garden bulletin board for drop-in activities throughout the summer.

Sign Up!—

For our Sensational Nature workshops listed below.

The \$5.00 fee per child includes activities and materials. For more information call 734.647.7600 or visit our website, mbgna.umich.edu, where you can sign up for our free monthly e-newsletter to stay on top of what's happening here. All activities held 10 am–noon at Matthaei unless noted otherwise.

Wed., July 25

Herb Tales

Explore the Herb Knot Garden at Matthaei and the herb and spice beds in the conservatory for a fragrant diversion and a look at herbs from all over the world. Make herbal iced teas and a sachet to take home. **12-YE-19**

Fri., Aug. 10

Wetland Explorer Hike

Grab an adventure backpack and explore a constructed wetland, a floodplain, and a pond. Use dip nets to examine the abundant life living in and near water. **12-YE-20**

Wed., Aug. 22 10 am

Pickle It!

Before refrigerators, people pickled vegetables at the peak of the season to store them for fall and winter. Pickles are fun to make and even more fun to eat! Try making pickles from different fruits and vegetables and take a sample home. **12-YE-21**



Pollinator Week: June 18-24

Pollinator Week is an international celebration of the valuable ecosystem services provided by bees, birds, butterflies, bats, and beetles. The U.S. Secretary of Agriculture signs the proclamation every year. Visit pollinator.org for more information.

All programs below unless otherwise noted are free, open to the public, and take place at Matthaei Botanical Gardens. Money collected for fee-based classes covers materials. See specific listings for any discounts. Fee-based programs are noted with a \$ and venues outside of Matthaei are marked with a ⌘.

MAY

§ Spring-Summer 4-H Junior Master Gardener program

Hands-on classes help kids 9–11 discover the fun of gardening and volunteering. Six classes, 5/8–6/19, followed by 2 monthly garden sessions through mid-September. \$40 per child; application deadline April 30. Info: 734.997.1678.

May 4–6

§ Connecting People & Nature with Restoration

Annual meeting of the Midwest-Great Lakes Society for Ecological Restoration. Visit the Midwest-Great Lakes SER chapter home page for registration information: ser.org/mwgl.

Tues., May 8, 7:30 pm

What's Bugging Your Rose Garden?

Sponsored by Huron Valley Rose Society. Program covers soil problems, diseases, and pests, and solutions.

Wed., May 9, 6–8 pm

⌘ Wild Ones Plant Sale and Exchange

Sponsored by Wild Ones Ann Arbor. Held at Native Plant Nursery. Info: for-wild.org/chapters/annarbor.

Wed., May 9, 7 pm

Pests and Pathogens in Beekeeping

Sponsored by Ann Arbor Backyard Beekeepers (A2B2). A close look at pests and pathogens and integrated pest management (IPM) practices for the new beekeeper. Info: rimendel@sbcglobal.net.

May 12 & 13, 10 am–4:30 pm

Matthaei Botanical Gardens

Mother's Day Plant Sale

A large selection of hanging baskets and containers grown by Matthaei-Nichols staff and volunteers. Plus, gift items in the Garden Store at Matthaei. 734.647.7600.

Sat., May 12, 10 am–2 pm

Matthaei Botanical Gardens

American Rhododendron Society Sale

Tues., May 15, 7:30 pm

The Blue/Green Alliance: Jobs for the Future

Sponsored by Sierra Club, Huron Valley Group.

A discussion about the Jobs21! campaign for 21st century jobs in renewable energy, manufacturing, transportation, energy efficiency, recycling, and more.

Mid-May through early June (weather-dependent)

Nichols Arboretum Peony Festival

The peonies are early this year but the Peony Festival is still on! Join us for the 90th anniversary of this renowned garden. For updates, call or visit our website or Facebook page.

Wed., May 16, 7:30 pm

Superbirders of Southeast Michigan

Sponsored by Washtenaw Audubon Society

Andy Dettling and Jacco Gelderloos have sighted a huge number of bird species over the course of the year. Hear their tales of death-defying rides in all weather and traffic.

Sat., May 19, 9 am–3 pm

Annual Herbfest

Sponsored by Evening Herb Study Group.

Free information about herbs during the Matthaei Heirloom and Water-Wise Sale. Plus, herb cooking demo and tastings at 11, 1, and 3.

Sat. & Sun., May 19 & 20, 10 am–4:30 pm

Matthaei Botanical Gardens

Heirloom & Water-Wise Spring Plant Sale and Fundraiser

A selection of water-resilient perennials that adapt well to dry summer conditions, plus herbs and vegetables grown and sold by the U-M student volunteer group Cultivating Community. Proceeds support Matthaei-Nichols and Cultivating Community.

Sat., May 19, 10 am–4:30 pm

Matthaei Botanical Gardens

Peonies Galore Sale and Fundraiser

A rare opportunity to purchase some of the same varieties of beautiful heirloom peonies that grow in the U-M Nichols Arboretum Peony Garden. 734.647.7600.

Sat., May 19 & 26, 9 am–noon

§ Painting in the Peony Garden

An Ann Arbor Art Center Workshop. Paint or draw in the Arboretum Peony Garden with instructor Janet Kohler. Bring sketchbook, preferred medium, sunscreen, hat, and comfortable shoes. Registration & info: annarborartcenter.org.

Sun., May 20, 2 pm

Bulbophyllums

Sponsored by Ann Arbor Orchid Society. A discussion about this largest group of orchids found mostly across Southeast Asia and the South Pacific.

Wed., May 23, 7 pm

Design of a Dawn Redwood Forest

Sponsored by Ann Arbor Bonsai Society. Kurt Smith discusses how to design and assemble a redwood forest. Info: annarborbonsaisociety.org.

Sat., May 26, 10 am–1 pm

Dawn Redwood Workshop

Sponsored by Ann Arbor Bonsai Society. Those with intermediate bonsai skills invited to this workshop using dawn redwood. Participants will have an opportunity to design their own dawn redwood clump or forest. Info: annarborbonsaisociety.org.

JUNE

Sat., June 2, 10 am–2 pm

Creating Bonsai Hosta

Sponsored by Hosta Hybridizer Group. Discover "bonsai hosta" techniques, discuss hybridizing information and techniques, and learn the process of embryo rescue and its feasibility for hostas. Plus, annual breeder stock exchange, seedling contest, auction, and seed trade.

Sun., June 10, 1–4 pm

Eastern Massasauga Rattlesnake Conservation Presentation and Field Trip

Sponsored by Matthaei-Nichols. Staff from Michigan State and Matthaei-Nichols discuss the eastern massasauga rattlesnake, its biology and ecology, detection and survey methods, and some of the challenges of managing its habitat. Presentation followed by a field trip of the Matthaei property.

Thurs.–Sun., June 7–10; 14–17; & 21–24

Shakespeare in the Arb –

The Merry Wives of Windsor

Sponsored by Matthaei-Nichols & U-M Residential College. Directed by Kate Mendeloff of the U-M Residential College. Members may purchase tickets at a discount and before the general public sale. For more information visit our website or call 734.647.7600.

Mon., June 11, 7 pm

Herbs, a Taste for Life - Culinary Herbs and Recipes

Sponsored by Evening Herb Study Group. Tonight's program features herbs not usually considered for culinary use and common herbs in unusual recipes.

Tues., June 12, 7:30 pm

Showing Off Your Roses

Sponsored by Huron Valley Rose Society. Tonight's program provides options for sharing the beauty of the rose with others.

Wed., June 13, 6-8 pm

✿ Nichols Arboretum Oak Openings: An Ergonomics Lesson and Workday

Sponsored by Wild Ones Ann Arbor. Come dressed to help clean up errant invasives in the Oak Openings. 734.604.4674.

Wed., June 13, 7 pm

Catching Swarms

Sponsored by Ann Arbor Backyard Beekeepers (A2B2). Tonight's program looks at catching a swarm of bees. Info: rimendel@sbcglobal.net.

Sun., June 17, 1-4 pm

Annual Rose Show

Sponsored by Huron Valley Rose Society. Entries accepted until 11 am; show opens to the public at 1.

Tues., June 19, 7:30 pm

Oil and Gas Drilling in Washtenaw County

Sponsored by Sierra Club, Huron Valley Group. When oil company landmen began seeking leases to explore for oil and gas in Lodi Township, local landowners compared notes and began researching. Mitchell Rhode and Clive Wooten explain their findings and what they did next.

Wed., June 20, 7:30 pm

Rock Star of the Bird World: Kirtland's Warbler

Sponsored by Washtenaw Audubon Society. Join writer Bill Rapai for the fascinating account of the near-extinction of the Kirtland's Warbler, and the people who saved it.

Wed., June 27, 7 pm

Bring Your Own Bonsai

Sponsored by Ann Arbor Bonsai Society. Those working on their own bonsai who need assistance encouraged to attend this hands-on workshop. AABS members will be on hand to help. Info: annarborbonsaisociety.org.

JULY

Mon., July 2, 7 pm

In the Herb Garden at Matthaei

Sponsored by Evening Herb Study Group. A walking tour of the Alexandra Hicks Herb Knot Garden and information about the history and uses of herbs. Refreshments served.

Tues., July 10, 7 pm

Beekeeping: Summer Management

Sponsored by Ann Arbor Backyard Beekeepers (A2B2). Tonight's program takes an in-depth look at summer management which involves determining the presence of varroa mites and hive beetles and how to reduce their negative impacts. Info: rimendel@sbcglobal.net.

Tues., July 10, 7:30 pm

Watering Techniques for Roses

Sponsored by Huron Valley Rose Society

Tues., July 17, 7:30 pm

Walk & Talk: Up Close to Michigan Native Plants at Matthaei-Nichols

Sponsored by Sierra Club, Huron Valley Group. Matthaei-Nichols staff member and native plant specialist Connie Crancer discusses the resilience of native species and their use in bioswales, formal prairie wildflower gardens, and more. Tonight's outdoor program showcases the beauty of Matthaei, the long-time venue and host for Sierra Club HVG.

Sat., July 21, 11 am

Get to Know My Orchid

Sponsored by Great Lakes Judging (Orchids). Each of the judges and student judges in attendance will bring an orchid or photograph to discuss species data, hybridizing insights, judging comments, or culture.

Wed., July 25, 7 pm

Bonsai Design Options

Sponsored by Ann Arbor Bonsai Society. Three AABS members, selected for their fine eye for detail in bonsai design, will offer design suggestions to members who present a pre-bonsai or bonsai for review. Info: annarborbonsaisociety.org.

AUGUST

Mon., Aug. 6, 7 pm

Herbs of the Middle Ages

Sponsored by Evening Herb Study Group

Sun., Aug. 12, 1 pm

Bonsai Succulents

Sponsored by Michigan Cactus & Succulent Society. A discussion and demonstration of pseudo-bonsai, succulents that form a thickened stem relatively quickly giving the appearance of great age. Succulents also require less watering than bonsai plants, making care somewhat easier. Info: cuzenlouie37@yahoo.com.

Tues., Aug. 14, 7 pm

All about Honey

Sponsored by Ann Arbor Backyard Beekeepers (A2B2). Tonight's program covers interesting facts about honey and its unique properties, including different types of comb and honey extraction methods. Plus, a discussion about the merits of removing honey now vs. the fall. Info: rimendel@sbcglobal.net.

Tues., Aug. 14, 7:30 pm

Cooking with Roses

Sponsored by Huron Valley Rose Society. Tonight's program includes tasting and sharing of recipes that incorporate roses.

Sat., Aug., 18, 11 am

Tolumnia

Sponsored by Great Lakes Judging (Orchids). Marilyn Lee discusses some of the important orchid species, hybridizing, and culture being done with *Tolumnia*, a group of warm-growing orchids.

Tues., Aug., 21, 7:30 pm

From Wilderness to Designer Forests

Sponsored by Sierra Club, Huron Valley Group. John Knott, author of *Imagining the Forest: Narratives of Michigan and the Upper Midwest*, discusses the evolution of cultural attitudes toward forests from the early 19th century to the present.

Wed., Aug. 22, 7 pm

Fertilizing Your Bonsai

Sponsored by Ann Arbor Bonsai Society. Information on the science and practice behind fertilization and the health of bonsai. Plus, a demonstration on making fertilizer cakes and a discussion of alternative fertilizing. Info: annarborbonsaisociety.org.

Sat. & Sun., Aug. 25 & 26

Annual Bonsai Show

Sponsored by Ann Arbor Bonsai Society. All invited to this annual showing of AABS members' trees, with over 100 trees on display from all sizes and species. Plus, workshops, demonstrations, and vendors available. Info: annarborbonsaisociety.org.

Get Involved!—

Join a Matthaei-Nichols Garden Team as a Volunteer

Volunteers enjoy fresh air, a variety of beautiful garden settings, hands-on learning and the company of fellow gardeners and staff horticulturists. Lend a hand weekly or a few times per month during the growing season. Activities include planting, weeding, mulching, pruning, and other seasonal garden maintenance. Contact the Volunteer Coordinator to learn more: tgriffit@umich.edu or 734.647.8528.

Gaffield Children's Garden

Enjoy this playful, interactive landscape as you help tend 15 unique garden spaces—including veggie, herb, and butterfly gardens, fairy & troll knoll, and more. Must enjoy working in a kid-friendly atmosphere. Fridays, 9 am–noon.

Matthaei Display Gardens

Learn new gardening techniques while you help maintain a variety of unique display and exhibit gardens. Garden locations vary. Tuesdays, Wednesdays, & Thursdays, 9 am–noon.

Weekend Weeders

For those who work weekdays this is a great opportunity to dig in and help out in the display gardens at Matthaei. Saturdays, 9 am–noon.

Nichols Arboretum Gardens

Enjoy the beautiful natural setting of the Arb as you help maintain the horticultural collections featured at the Washington Heights entrance including the Peony Garden, Gateway Garden, Laurel Ridge, and heirloom climbing roses. Mondays & Fridays, 9 am–noon.

Native Plant & Seed

Learn more about landscaping with plants that are native to our region as you tend a variety of gardens at Matthaei and Nichols. This group is active year-round and activities include general garden maintenance (April–September) and seed collection/propagation (October–March). Schedule TBA.



Pictured above right, top to bottom: Native plant and seed volunteers take a break with Matthaei-Nichols staff member Connie Crancer; volunteer Pete Wilcox planting the Gateway Display Garden at Matthaei; volunteers Jon Doherty and Kourtney Barber pull weeds at Matthaei.



Special Events

Looking for a more flexible, one-time only volunteer option? Check out these special events and visit “Get Involved” on our website to register:

Matthaei Spring Plant Sales: May 12 & 13; May 19 & 20

Volunteers help make our annual plant sales hum! May 12 & 13 is our Mother's Day Weekend Sale & Fundraiser; the following weekend our Heirloom and Water-wise Sale & Fundraiser in Greenhouse 3. For both weekends we have a variety of positions and shifts available morning and afternoon.

Peonies Galore Sale: May 19 (at Matthaei Botanical Gardens)

The warm spring weather has put the Peony Garden and the Peony Sale on a fast track this year, so we've moved the sale date and location to Matthaei and incorporated the sale into our May 19 events.

Shakespeare in the Arb: Thurs.-Sun., June 7-24

The 2012 season of Shakespeare in the Arb features *The Merry Wives of Windsor*, directed by the U-M Residential College's Kate Mendeloff. Ushers and box office assistance needed (pm shifts only). Orientation required.

Pictured, left: A scene from the 2011 season of Shakespeare in the Arb; volunteers Linda Hintz and Cindy Baird at the spring 2011 plant sale.



Major Gift Brings Great Lakes Garden Within Reach

A donor has made a gift of \$800,000, primarily to fund the Great Lakes Garden at Matthaei. This is the largest gift to Matthaei-Nichols since Frederick C. Matthaei, Sr. and his wife Mildred Hague Matthaei donated over 200 acres to the University of Michigan to create a new home for the Botanical Gardens.

The garden will draw attention to the Great Lakes region, long known for its floral diversity. “Few regions in the country are blessed with as great a range of habitats,” says Matthaei-Nichols Director Robert Grese. Within these ecosystems are many endemic plants—those found here and nowhere else in the world. The Great Lakes Garden will celebrate the distinctive beauty of the Great Lakes flora, help visitors understand why conservation of this diversity is so important, and bring visitors up close to plants they might never see in the wild or in any other garden. The Great Lakes Garden helps to fulfill Matthaei-Nichols’ long-term mission of environmental stewardship, sustainability, and outreach.

We’re now 88% of the way toward our fundraising goal. To help take us over the threshold, please call or email Director of Development Gayle Steiner: gayles@umich.edu; 734.647.7847.

Above left: The showy lady's slipper (*Cypripedium reginae*) is a rare orchid that's native to northern North America, including Michigan. The showy ladyslipper is one of the many native plants that will be featured in the Great Lakes Garden. Photograph by Tony Reznicek.



Garden Party!

**Special Members-Only
Event at Matthaei
Friday, May 11, 5–8 pm**

Join us for a festive evening and the start to a new growing season, National Public Gardens Day, and 50 years of Matthaei Botanical Gardens.

- **Mother's Day Sale of hanging baskets, terrace pots, and planters**
- **Season preview talk with Horticulture Manager Michael Palmer (5:30-6)**
- **Live music**
- **Kids' planting activity**
- **Seasonal refreshments**
- **And much more!**

**Have a friend who's not a member?
Invite them to join so they can enjoy
the party, too!**

**RSVP by Tuesday, May 1 to Andy Sell:
sella@umich.edu; 734.615.9475.**



Featured Friends

“Featured Friends” is an occasional series spotlighting one or more of our members.

Sanam Arab (L);
Elizabeth Young

Sanam Arab

Student member since 2011

For Sanam Arab (AB'07, MS'10) travel is a favorite pastime, so she appreciates seeing plants from around the world at the Matthaei Botanical Gardens conservatory or escaping the crowds on central campus in Nichols Arboretum. Since moving to Michigan from Iran, Sanam earned two U-M degrees, including a masters from the School of Information, and works full time at the Hatcher Graduate Library. Now she's pursuing a Graduate Certificate in Museum Studies. This latest endeavor is changing her perspective on the purpose of botanical gardens and arboreta. She sees each plant and tree as part of a larger ecosystem, a living museum. These insights motivated her to become a new student *Friends* member. You'll see Sanam in the conservatory rediscovering plants that she grew up with in Iran or walking her dog in the Arb.

Elizabeth Young

Department of Sociology Ph.D. Candidate and student member since 2009

Elizabeth Young earned her undergraduate degree on the wooded campus of Haverford College. When she chose to continue her studies at the University of Michigan finding green spaces like those at Haverford was high on her list. Elizabeth always makes time to find some peace and relaxation in Nichols Arboretum, away from the intensity of her doctoral studies and away from the urban bustle. You'll most likely find her in Heathdale, where she remembers watching her first Shakespeare in the Arb performance. Elizabeth joined as a Friends student member in order to support the Arb and future music and theater performances. She hasn't missed a Shakespeare in the Arb season since!

Matthaei Botanical gardens
and Nichols arboretum



Student farm takes root

friends newsletter • fall 2012

Inside: The Great Lakes Garden • Interns: the Summer Difference • Massasauga, Part II • and more

M UNIVERSITY OF MICHIGAN

Matthaei Botanical gardens
and Nichols arboretum

Caring for nature, enriching life

U-M Regents

Julia Donovan Darlow, Ann Arbor
Laurence B. Deitch, Bloomfield Hills
Denise Ilitch, Bingham Farms
Olivia P. Maynard, Goodrich
Andrea Fischer Newman, Ann Arbor
Andrew C. Richner, Grosse Pointe Park
S. Martin Taylor, Grosse Pointe Farms
Katherine E. White, Ann Arbor
Mary Sue Coleman, *ex officio*

**Matthaei Botanical Gardens
& Nichols Arboretum**

1800 N. Dixboro Rd.
Ann Arbor MI 48105

Robert E. Grese, Director

Karen Sikkenga,
Associate Director

friends newsletter

Joseph Mooney, Editor
jfmooney@umich.edu

For information:

734.647.7600
mbgna.umich.edu



Pictured, top to bottom:

Director Bob Grese with U-M Provost Phil Hanlon (center) and students involved with the U-M student farm (from left: Allyson Green, Lindsey MacDonald, Jerry Tyrrell).

An eastern massasauga rattlesnake hibernacula, or winter quarters. The massasauga, which is listed as a species of special concern in Michigan, uses crayfish burrows for hibernation.

Students in Program in the Environment's Environmental Ethics class (ENV 376) brave a chilly winter day last January to help remove invasive shrubs during a Nichols Arboretum workday.

A view of the student farm in July shows tomatoes, peppers, eggplant, and sunflowers. The farm is located at Matthaei Botanical Gardens.

On the newsletter cover: A campus-wide cross-section of students came out to plant and dig on the U-M Student Farm inaugural workday.

Provost Visit Marks 50th

A visit from U-M Provost Phil Hanlon, together with donors, members, University officials, and students, marked the anniversary of the 1962 dedication of the Botanical Gardens. Provost Hanlon, who spoke of Matthaei-Nichols' many links to the U-M mission, including education, research, and community engagement, has been a key supporter of our initiatives under the leadership of Director Bob Grese. When it was their turn to take the podium, students involved with the U-M student farm provided insight into the status of the project, including plans for a Harvest Festival on October 4. See p. 4 for details about the festival.

Interns: the Summer Difference

Summer is the growing season here in more ways than one: this year nearly 40 students from across the U-M doubled our ranks from May through August, contributing their school smarts and fresh ideas to every department. The students represented schools and colleges such as Literature, Science, and the Arts; School of Natural Resources and Environment; the Business School; and others. Thank you, summer 2012 interns!

Thinking Outside the Classroom

Students inhabit our facilities in other ways, too, notably for classes, fieldwork, and volunteer workdays. Matthaei regularly hosts the fall Ecology Field Lab (EEB 372); Woody Plants (NRE 436) typically conducts a field trip to Matthaei, Mud Lake Bog, and Horner-McLaughlin Woods; Soil Ecology (NRE 430) visits Radrick Forest; and students use the Arb for individual study. This October we'll also lead a field trip for an Environmental Interpretation class from U-M Dearborn.

Student Farm Bears Fruit

By late July the U-M Student Farm at Matthaei looked lush and green with tidy rows of vegetables under a summer sky. The pilot farm program began with the blessing of the university and an award of \$42,000 from The Planet Blue Student Innovation Fund for student-initiated projects that promote environmental sustainability at U-M. Stay tuned as the farm progresses and plans for next year unfold.

A Full Calendar

Last year we recognized the need for a simpler way of showing the many programs and events that we and our partner groups provide for the public. On almost any given day the Arb & Gardens is a hive of activity with programming that ranges from beekeeping to birding, native plants to rock gardening, bonsai, orchids, and more. The result was a more comprehensive calendar of programs and events. Check out the calendar on pp. 4-5 for a list of fall offerings.

Massasauga, Part II

Congratulations to our Natural Areas team for securing a new round of funding from the Sustain Our Great Lakes grant program, administered by the National Fish and Wildlife Foundation, for the second phase of restoration work on eastern massasauga rattlesnake habitat. In Phase I we improved nearly 65 acres of habitat by removing invasive shrubs, which encourages native species; purchased, planted, and caged 150 disease-resistant American elms; and sowed 75 gallons of native-plant seeds, among other efforts. Two major conservation goals for Phase II are ecological restoration work on 50 new acres of massasauga habitat and the removal of exotic invasives on 25 of those acres.

Great Lakes Garden Underway

Earlier this year we received a major gift that will underwrite the construction of the Great Lakes Garden at Matthaei. Work on the garden is scheduled to begin around the beginning of September, with project completion by November 1. The garden will feature, of course, plants native to the Great Lakes region. What sets this garden apart from similar installations in other botanical gardens will be the recreation of Great Lakes habitats such as dune, alvar (limestone plain with little or no soil), and wetland—environments in which many Great Lakes' native flora live exclusively. See p. 2 for the Great Lakes Garden story.

Feast!

Our winter 2012-13 conservatory exhibit "Feast! – A Cross-Cultural Culinary Tour of Plants from Around the World," highlights many of the plants in our conservatory and how ancient and modern world cultures have used these plants in celebrations and cooking, particularly during the holidays. The exhibit, which runs through Jan. 6, 2013, features a grand opening on Sat., Nov. 24 that includes the annual Spinner's Flock sale. During the grand opening members receive a 20% discount on all Garden Store purchases.

Save the Date

**Sat., Sept. 29, 9 am, Nichols Arboretum
2nd Annual Run for the Arb**

All proceeds benefit Matthaei-Nichols; 20% registration discount for members—the family pooch is welcome, too! Register yourself and Fido online at our website. See p. 4.

**Sun., Sept. 16, 1 pm, Nichols Arboretum
Music in the Arb**

An afternoon of world music in the Arb, with performances by faculty from the U-M School of Music and U-M Residential College. Free. See p. 4 or visit our website in early September.



In the Great Lakes Garden, visitors will discover the region's botanical riches and explore issues and research related to Great Lakes plants and habitats.

A gift of \$800,000, the largest since the Matthaei family donated over 200 acres in 1957 for the creation of Matthaei Botanical Gardens, will fund construction of the Great Lakes Garden at Matthaei.

Best known for its plentiful supplies of fresh water, the Great Lakes region harbors another treasure—an astonishing diversity of native flora and the places they grow.

Many of these plants are endangered, threatened, or of special concern in state or national rankings, or find their purchase in habitats that exist only here or in a few other places worldwide.

A Natural Heritage Worth Protecting

“The Great Lakes Garden will allow us to honor a unique regional heritage—it’s really about the sense of place,” says Matthaei-Nichols Director Bob Grese, whose own research over the years has focused on native gardens and the people who designed them. “It will also demonstrate that we are a center to celebrate the region,” a longstanding directive of Matthaei-Nichols and its sustainability initiatives, Grese adds.

The idea of creating spaces that incorporate native plants is well-established and grounded in good environmental stewardship practices. Native plants grow well in their own regions, and they support beneficial insects and other wildlife, contributing to a harmonious ecosystem.

Along with the strong conservation theme, notes Grese, the Great Lakes Garden connects with the U-M Herbarium and the Native American groups on campus and how it tells their story, especially in ethnobotanical terms.

Grese and other Matthaei-Nichols staff have been collaborating for several years with the Herbarium,

whose assistant director, Tony Reznicek, has provided invaluable knowledge and support for the Garden and the plants it will contain.

Botanical gardens, Reznicek says, have evolved in recent years to be more in line with their region’s natural heritages. Reznicek, who has consistently campaigned for gardens everywhere to display more of our native heritage, says that prior to this evolution in thinking, the idea of a native garden was considered unusual because gardens had traditionally been home to more exotic varieties of plants.

Thankfully that mindset is changing. And given the interest in native plants and how they’re able to survive in harsh environments, adds Reznicek, “there should be some real lessons about sustainability that go along with native gardens.”

Recipe for Success

The Great Lakes Garden site is located behind the Gateway Garden at Matthaei, with entrances near the Marie Azary Rock

Garden and the Alexandra Hicks Herb Knot Garden. The garden will reproduce as closely as possible several regional habitats such as coastal beach, alvar, and oak openings.

Grese’s face lights up when he discusses some of the plants that will be a part of the garden—including the many native orchids of the region such as the lady slippers. “Orchids are such a treasure when you find them in the wild,” says Grese. “People used to see them along roadsides and other wild places, but they’re becoming much more rare.” Michigan alone is home to nearly 100 species of native orchids, according to the USDA Plants Database.

Reznicek is passionate about alvar habitats, places of exposed bedrock that are home to species such as the lakeside daisy (*Tetranneuris herbacea*). Besides the Great Lakes region, alvar habitats are found in only four other places in the world—England, Estonia, Ireland, and Sweden.

The garden will also feature a native fern garden named after the late Warren (“Herb”) Wagner, former director of Matthaei Botanical Gardens. Wagner was particularly interested in fern hybrids and how these hybrids showed continual adaptation and change.

Like all living things, Great Lakes flora and fauna are connected to a bigger ecological picture. “All of the plants that occur in the glaciated Great Lakes regions came from somewhere,” says Reznicek, “and this provides some interesting links to other North American flora.” Ancestors of the lakeside daisy, for example, are from the high plains. The forebears of the dwarf lake iris are from Appalachia. “So very directly we can see the connections to other places,” Reznicek notes.

The timing is right, too. The Great Lakes Garden presents an amazing diversity, with important take-home lessons about our unique heritage and ways that people can “think about different approaches to gardening and work for change,” adds Reznicek. 🌿

What to Expect

The Great Lakes Garden will be a place of display and of refuge for native species and will feature five habitats found in the Great Lakes region:

Great Lakes Endemics Garden

Flora found in sandy conditions such as dune, rocky beaches, and alvar, an exposed limestone habitat that exists in just four other world locations.

Native Orchid Display Garden

Iconic Great Lakes orchids are the envy of horticulturists everywhere. Michigan alone is home to nearly 100 native species. The Orchid Display Garden will contain native orchids and related species, with interpretation about where they’re found in the wild.

Oak Openings Garden

Among the most threatened in the U.S., with less than 1% of the original remaining, oak openings are quasi-open woodlands and prairies that feature wildflowers requiring full summer sun.

Woodland Wildflower Gardens

Native wildflowers found throughout the region in conditions ranging from dry to moist. A special feature will be the Herb Wagner Fern Collection, integrated throughout the Woodland Wildflower and other gardens.

Prairie Wildflower Garden

Sun-loving native prairie flowers will grow in this garden, attracting birds and butterflies. Visitors will also learn about using wildflower species in garden settings.



Pictured, above left: Looking as much like an abstract painting as a plant habitat, an alvar site on the Bruce Peninsula in Ontario is home to mosses and lichens as well as plants such as northern white cedar. **Above:** Dwarf lake iris (*Iris lacustris*), which grows in alvar habitats.

Sign Up! —

For our **Homemade Heritage** kids' workshops listed below. Fees are per child and include activities and materials. For more information call 734.647.7600 or visit our website, mbgna.umich.edu, where you can also subscribe to our free monthly e-newsletter. All programs below held at Matthaei Botanical Gardens unless otherwise noted.

Sat., September 29, 10 am–noon

Festi-Fall

Explore the many ways that plants and animals prepare for fall and colder weather. Create a wreath of rainbow-colored leaves and make arts and crafts from nature's bounty. Bring a light colored t-shirt and use leaves and natural materials to design and paint your own designer t-shirt. \$8.00/child includes activities and materials.

12-YE-22



Sat., Oct. 27, 10 am–noon

Halloween Spooktacular

Join us for our annual Spooktacular event. Pumpkins and gourds come in all shapes and sizes, so choose your favorite to decorate the house for Halloween. Plus, make fantastic butterfly, dragonfly, and bird masks to take home and sample tasty pumpkin treats. \$8.00/child includes activities and materials.

12-YE-24

Sat., Oct. 13, 10 am–noon

Build Your Own Scarecrow

Build a kid-sized scarecrow to take home! Listen to stories about scarecrows and how farmers relied on them to keep animals from raiding the farm and garden, then build and decorate your own scarecrow to take home. Bring a set of child-sized clothing; we provide the rest. \$10.00/child includes activities and materials. 12-YE-23



Sat., Nov. 17, 10 am–noon

Kids Are Chefs, Too!

Release your inner chef! Learn how the original Thanksgiving celebration used native plants and items brought from Europe, while today's Thanksgiving feasts include foods from around the world. Learn to make foods from native plants as well as plants brought by immigrants and explorers to America. Make a decorative centerpiece to take home. \$8.00/child includes activities and materials. 12-YE-25



Sat., Dec. 8, 10 am–noon

Winter Wonders - Solstice Celebration

Celebrate the Winter solstice—even if it's a bit early! Learn about the change of seasons, decorate with native plants and other evergreens, and make a holiday card and decorations to take home. \$10.00/child includes activities and materials. 12-YE-26



Scout Programs

Scouting programs at Matthaei provide Girl and Boy scouts with new experiences and opportunities to meet many different journey, badge, and patch requirements. Please contact children's ed coordinator Liz Glynn for questions about meeting your troop or den's specific badge and patch goals: 734.763.6667; lizglynn@umich.edu



Exploration Nature Uncover botanical treasures!

Learn the roles plants play and why they're important. Also, build a terrarium to take home.

Trail Treks Discover tracks and trees

Discover Michigan's unique trees along the Sam Graham Trees Trail. Plus, receive a booklet to make leaf rubbings and learn what makes Michigan ecosystems so special.

Eco-Kids Go green and make a difference

Kids can make a difference when it comes to the health of the planet! Make paper, learn how composting works, or plant a tabletop garden to explore ways you can change the world.

Sketchbook Detectives Put the world on paper

Find out how artists and scientists both uncover the secrets of nature through close observation. In this workshop, paints, pastels, and colored pencils are your tools for rediscovering the natural world.

Wetland Explorer (Offered May/June & early October)

Clean water is important to everyone and everything! Explore ponds and streams to discover and learn about creatures and plants and their role in wetlands. This program counts toward the following badges: Junior Girl Scout-Outdoor Creativity & Outdoor Surroundings, and Cub Scouts.

All programs and classes unless noted are free and take place at Matthaei Botanical Gardens.

For complete program information visit our online calendar at mbgna.umich.edu or the "Come Learn" section of our website.

SEPTEMBER

Sat. & Sun., Sept. 8 & 9, 10:30 am–4 pm

Exotic Plant Sale

Presented by Michigan Cactus and Succulent Society & SE Michigan Bromeliad Society
A large selection of cactus, succulents, bromeliads, supplies, books, and more. Info: 248.380.7359



Sat., Sept. 8, 1 pm

The Wonderful World of Bromeliads

Presented by SE Michigan Bromeliad Society
An introduction to the bromeliad (pine-apple) family features its diversity of form and color, its survival strategies, and its importance to the ecology of its habitat.

Sun., Sept. 9, 1 pm

Growing Bromeliads in Michigan

Presented by SE Michigan Bromeliad Society
Tips on choosing bromeliads that best suit your needs. Plus a discussion of potting, fertilizing, watering, propagation, and more.

Mon., Sept. 10, 7 pm

Garden Pollinators—Not Just Bees

Presented by Herb Study Group
Hear entomologist Dr. Mark O'Brien discuss the many different kinds of pollinators.

Tues., Sept. 11, 7:30 pm

Soil Testing for Your Roses

Presented by Huron Valley Rose Society
A discussion on soil testing and why it's performed. Also, Q&A and refreshments.

Wed., Sept. 12, 6 pm

Matthaei Botanical Gardens Foray

Presented by Wild Ones Ann Arbor
Explore native plantings and lawn alternatives at Matthaei. 734.604.4674; wildones.org/chapters/annarbor/.

Wed., Sept. 12, 7 pm

Fall Hive Management

Presented by Ann Arbor Backyard Beekeepers
Topics include the status of pests and pathogens; determining hive strength prior to winter cluster; and last-minute interventions to aid in hive survival.



Fri., Sept. 14, 6–10 pm

Cattleya walkeriana

Presented by Ann Arbor Orchid Society
Harray Akagi of H&R Orchids in Hawaii discusses the culture of this Brazilian native, as well as the breeding of various orchids at H&R. Pre-orders due Aug. 31: AnnArborOrchids@aol.com.

Sat., Sept. 15, 11 am

Great Lakes Judging (Orchids)

Presented by Great Lakes Judging (Orchids)
Dennis Seffernick presents new awards and Jim Heilig discusses *Phalaenopsis* orchids. Info: 517.546.8303.

Sun., Sept. 16, 1-4 pm, Nichols Arboretum

Music in the Arb

Presented by Matthaei-Nichols
An afternoon of music in the Arb, with performances in the peony garden, at the river front, and in the amphitheater.



Mon., Sept 17, 7:45 pm

Hiking and Botany of Isle Royale

Presented by Michigan Botanical Club
Washtenaw County Parks and Recreation naturalist Faye Stoner leads a presentation on hiking on Isle Royale and the botany of this rugged national park in Lake Superior.

Tues., Sept. 18, 7:30 pm

Great Lakes Estuaries: Keys to the Health of the Great Lakes

Presented by Sierra Club Huron Valley Group
Michigan DNR scientist Paul Seelbach explains the latest studies on the Great Lakes river estuaries and provides insight on what the future holds.

Wed., Sept. 19, 7:30 pm

Washtenaw Audubon Society

Tonight's topic TBD.
Info: washtenawaudubon.org or call 734.677.3275.

Sat., Sept. 22, 10 am–4 pm

Michigan State African Violet Society Semi-Annual Display and Sale

Presented by the Michigan State African Violet Society
Experts on hand to answer questions. Free seminar at 11:30 am.

Wed., Sept. 26, 7 pm

Annual Bonsai Auction

Presented by Ann Arbor Bonsai Society
Annual auction of bonsai and bonsai-related materials. Info: annarborbonsaisociety.org.

Sat., Sept. 29, 9 am, Nichols Arboretum

Run for the Arb- 5K Walk/Run

All proceeds benefit the Arb & Gardens. Registration fee \$20 for Matthaei-Nichols members; \$25 general public. Register online at mbgna.umich.edu.



OCTOBER

Mon., Oct. 1, 7 pm

Herb Study Group

Tonight's program TBD. Please call or visit our website: mbgna.umich.edu.

Thurs., Oct. 4, 4–8 pm

Harvest Festival

Presented by University of Michigan Sustainable Food Program (UMSFP)
All invited to an evening in celebration of the student farm at the University of Michigan. Free shuttle available from Central Campus to Matthaei. Info: umsfp.com.

Tues., Oct. 9, 7:30 pm

Winter Protection for Your Roses

Presented by Huron Valley Rose Society

Tues., Oct. 9, 7 pm

Fall Management II

Presented by Ann Arbor Backyard Beekeepers
A discussion of hive honey supply, how to determine hive strength and survivability, and practical methods for mice control.

Wed., Oct. 10, 6:45 pm

Wild Ones Ann Arbor

Presented by Wild Ones Ann Arbor
Tonight's program TBD. For updates visit wildones.org/chapters/annarbor/.

Sun., Oct. 14, 2–5 pm

Stars & Stripes of the Mini-Catts

Presented by Ann Arbor Orchid Society
A presentation on the smaller *Cattleyas* and a discussion about their culture. Info: AnnArborOrchids@aol.com.

Mon., Oct. 15, 7:45 pm

Jens Jensen and Other Naturalists: Methods of Naturalistic Landscaping

Presented by Michigan Botanical Club
Hear Robert Grese, director of Matthaei-Nichols Arboretum and professor of landscape architecture at the U-M School of Natural Resources and Environment, discuss the renowned Danish landscape architect Jens Jensen.

Tues., Oct. 16, 7:30 pm

Ah, Wilderness! The 25th Anniversary of the Michigan Wilderness Heritage Act

Presented by Sierra Club Huron Valley Group
A behind-the-scenes look at the legislative process that protected 90,000 acres of diverse Michigan ecosystems.

Wed., Oct. 17, 7:30 pm

Washtenaw Audubon Society

Tonight's topic TBD.

Info: washtenawaudubon.org
or call 734.677.3275.

Wed., Oct. 24, 7 pm

A Study of Bonsai in Silhouette

Presented by Ann Arbor Bonsai Society

An opportunity for attendees to study their trees prior to winter storage. Info:

annarborbonsaisociety.org.



NOVEMBER

Sat., Nov. 3, 10 am–2 pm

Annual Hosta Seed Trade

Presented by Hosta Hybridizer Group

A hosta seed trade and special presentation on embryo rescue by Patrick Brown. Info: jo43@tds.net.

Mon., Nov. 5, 6 pm

Annual Potluck and Bonsai Critique

Presented by Ann Arbor Bonsai Society

All invited to enjoy a meal followed by a critique of the Matthaei Botanical Gardens and AABS trees. All invited; bring a dish to pass. Info: annarborbonsaisociety.org.

Mon., Nov. 5, 7 pm

Herb Study Group

Tonight's program TBD. Please call or visit our website: mbgna.umich.edu.

Sat., Nov. 10, 1:30 pm

Rock Garden Plants for Eastern N. America

Presented by Great Lakes Chapter, N. American Rock Garden Society

Author and rock-garden expert Rex Murfitt, from Victoria, BC, discusses rock garden plants suitable for our region, with an emphasis on Saxifrages suitable for smaller rock gardens and troughs. Info: reznicek@umich.edu.

Sun., Nov. 11, 2 pm

What's New in Roses for 2013

Presented by Huron Valley Rose Society

Also, Q&A and refreshments.

Tues., Nov. 13, 7 pm

Winter Management

Presented by Ann Arbor Backyard Beekeepers

A discussion about winter hive preparation and the problem of condensation, including practical approaches to managing internal condensation.

Wed., Nov. 14, 6:45 pm

Annual Potluck, Slide Show, and Deep Roots Award

Presented by Wild Ones Ann Arbor

All invited for a harvest celebration of ideas and food and the presentation of the Deep Roots Award, which recognizes the outstanding stewardship of a Wild Ones' member. Bring a dish to pass. Info: 734.604.4674.

Wed., Nov. 14, 7:30 pm

Washtenaw Audubon Society

Tonight's topic TBD.

Info: washtenawaudubon.org
or call 734.677.3275.

Sat., Nov. 17, 11 am

Great Lakes Judging (Orchids)

Ed Cott discusses recent awards and Ron Payeur talks about First Class Certificates. Info: 517.546.8303.

Sat., Nov. 17, 2 pm

Life as an Epiphyte

Presented by SE Michigan Bromeliad Society

A presentation on how bromeliads acquire the moisture and nutrients they need and their survival strategies.

Sun., Nov. 18, 2–5 pm

Weird & Wonderful Orchids

Presented by Ann Arbor Orchid Society

Dawn Schlote of Mystic Orchids in Ohio discusses the culture of unusual orchids. Also, show and tell, raffle, and related items for sale. Info: AnnArborOrchids@aol.com.

Mon., Nov. 19, 7:45 pm

Biodiversity of Aquatic Plants—Temperate Versus Neotropics: Is Northeastern North America the Amazonia of Diversity for Aquatic Plants?

Presented by Michigan Botanical Club

Tues., Nov. 20, 7:30 pm

Wondrous Wilderness: Tramping in New Zealand

Presented by Sierra Club Huron Valley Group

Author Jim DuFresne shows why New Zealand is such a paradise for hikers and backpackers, and why backpacking is such a passion with New Zealanders.

Sat., Nov. 24–Sun., Jan. 6, 2013

Feast! - A Cross-Cultural Culinary Tour of Plants Around the World

Conservatory exhibit

From cinnamon in Sri Lanka to figs in ancient Rome, the winter exhibit takes a look at how plants have played an essential role in celebrations and cooking, especially during the holiday season. Activities during the exhibit include a visit from Father Christmas, food event, music on Nov. 24, member sale, and more. Visit our website soon for more information.

Sat., Nov. 24, 10 am–4:30 pm

Spinner's Flock Holiday Sale

One-of-a-kind clothing, art, accessories, and holiday items for sale by local and regional weavers and fiber artists.

DECEMBER

Sat., Dec. 8, 10 am–noon

Annual Holiday Greens Workshop

Presented by the Ann Arbor Garden Club

Create your own wreath or greens arrangement. Materials provided. Bring your own clippers. Potluck follows. \$15 per person includes materials. Space limited; reservations recommended. 734.255.7912.

Tues., Dec. 11, 7 pm

Alternative Hives and Beekeeping

Presented by Ann Arbor Backyard Beekeepers

A show and tell about the different shapes and construction of alternate hives and a discussion about the difference between organic and biodynamic beekeeping.

Sat., Dec. 15, 11 am

Chinese *Paphiopedilums*

Presented by Great Lakes Judging (Orchids)

A presentation by Katie Payeur. Info: 517.546.8303.

Tues., Dec. 18, 7:30 pm

Great Adventures from Around the Globe

Presented by Sierra Club Huron Valley Group

Share your travel pictures and stories with us! Send a Powerpoint presentation or 10–15 digital photos with your stories to lighthawkpilot@gmail.com.

NOTE:
Be sure to call ahead (734.647.7600) or check our website—mbgna.umich.edu—in advance of any program. Due to speaker availability or other reasons beyond our control, program dates or topics occasionally change after the newsletter is printed.

Visit our website
for more information:
mbgna.umich.edu

Get Involved—Volunteer! Fall 2012

Fall is the perfect time to dig into some great volunteer opportunities at Matthaei-Nichols. Contact the Volunteer Coordinator at 734.647.8528 or tgriffit@umich.edu for more information. All trainings are held at Matthaei Botanical Gardens, 1800 N. Dixboro Rd., unless otherwise noted. Note: Preregistration required for all training sessions and special events.

Natural Areas

Native Plant Team – Fall/Winter Kick Off

Thurs., Sept. 6, 1–3 pm

Expand your knowledge of SE Michigan native plants by helping out with seed collection, processing, and propagation. Future plants will be used in various native gardens and natural areas projects at Matthaei-Nichols. Volunteer workdays occur weekdays 9 am–noon and 1–4 pm; September–March. Volunteers may help weekly or at least two times per month during the season.

Prescribed Burn Crew Training

Thurs., Oct. 11, 1-3 pm, Nichols Arboretum - Reader Center

A great service learning opportunity for those who enjoy the natural areas at Matthaei-Nichols and would like to help maintain them. Volunteers are on call for weekday, afternoon burns (1-4 pm) during the spring and fall. The training will provide basic information about the use of prescribed fire as a restoration tool and the basic volunteer duties. A tour of past burn sites and hands-on demonstration will be provided, weather permitting.



Above: Volunteers Sayaka Terada, Dorothy Yenni, Liz Sweet, and Tim Schafer process milkweed (*Asclepias syriaca*) seeds.

Visitor Services

Conservatory Ambassador Training – two options

Sat., Oct. 13, 9 am–noon

Wed., Oct. 24, 1–4 pm

Cooler days and bare branches bring visitors to our conservatory, where ambassadors greet and guide them to points of interest and informal learning opportunities. Ambassador training introduces volunteers to the Visitor Services department and covers the basics about the conservatory's tropical, temperate, and arid biomes and their many fascinating plants. Ambassadors commit to two 3-hour shifts per month and attend ongoing educational sessions.

Education

2013 Docent Training - Information Sessions

Tues., Dec. 4 and Thurs., Dec. 6, 2–3:30 pm

Inspire future generations of environmental stewards as a Matthaei-Nichols Docent! We are now accepting applications for the 2013 Docent Class. During the academic year, docents work in small teams to lead interpretive programs for school groups and evening and weekend activities for scout, youth, and family events. Docents develop skills in interpretation and

active learning while sharing enthusiasm and knowledge of the natural world with learners of all ages. *Docent classes begin late January 2013 and run for approximately 8 weeks.*



Right: Docent Kathy Wirstrom leads a school tour in the conservatory.

Special Events

Music in the Arb

Sun., Sept. 16, 1–4 pm., Nichols Arboretum

An afternoon of world music from the U-M School of Music and the U-M Residential College. Volunteers are positioned at key locations in the Arb to greet and direct audience members to the performance locations.

Run for the Arb

Sat., Sept. 29, 9 am, Nichols Arboretum

Join us for the 2nd Annual Run for the Arb, a family run/walk through the trails of Nichols Arboretum. All proceeds benefit Matthaei Botanical Gardens & Nichols Arboretum. Volunteers help out with registration, way-finding, refreshments, and finish line.



Left: Volunteers help runners at the finish line at Run for the Arb 2011.

Building a Home for Our Bonsai and Penjing



Masons and carpenters are busy transforming a large, quiet space southwest of the conservatory into the Bonsai and Penjing Garden at Matthaei, a project six years in the planning. Since the first gift of \$30,000 in March 2008, donors have given over \$280,000 toward the dream of a permanent space to exhibit our bonsai collection. The trees are constantly pruned, trained, and watered to thrive at a fraction of their usual size.

Bonsai artistry lies in capturing the essence of a tree growing in specific circumstances in the wild. When this has been skillfully done, visitors report experiencing a sensation of actually standing in a forest.

As we celebrate the success of raising money for the garden, a final fundraising phase will ensure the knowledgeable, seven-day-a-week care that the collection and garden demand. Each donor offering \$1,000 or more will be named on an honor roll in the garden. In addition, three major spaces within the garden could still be named, e.g. the display space could be the YourName Gallery, or the work area could be the YourSpouse Studio. Contact Development Director Gayle Steiner, 734.647.7847 or gayles@umich.edu.

Thank you in advance—and watch for the grand opening of the Bonsai and Penjing Garden next year.

Above: An artist's rendering of the bonsai garden at Matthaei Botanical Gardens. The garden, featuring display space and a studio, will be located southwest of the conservatory

A Flowering of Friends

These are tough times, but they prove what we already know—the loyalty of our longtime members and the curiosity and excitement of our new *Friends*. For the first time since Matthaei Botanical Gardens and Nichols Arboretum merged in 2004, our *Friends* memberships have surpassed 2,000, representing households from twelve states and from Canada dedicated to supporting the Arb & Gardens and the work we do.

All of those memberships add up to one-third of Matthaei-Nichols charitable giving. Together with end-of-year annual gifts to our enrichment fund, *Friends* membership dues are a stable source of income in an unpredictable economic environment.

Your dollars provide important support for:

- ✿ Natural areas restoration and trail maintenance;
- ✿ Plants for outdoor display gardens, conservatory, and seasonal displays;
- ✿ Paid educational internships for nineteen University students, who enrich the Arb & Gardens and receive an immersive learning experience.

This year we added some key benefits. These include the 'Family Tree' membership level incorporating youth program benefits, a switch from free conservatory admission to free parking at Matthaei, additional educational tours for *Friends* at the sustaining level and above, and membership dues reduction for college and university students.



Your questions and comments are important to us. Please feel free to call or email Membership Manager Andy Sell at 734.615.9475; sella@umich.edu.

The Matthaei-Nichols Memorial and Tribute Program



Our memorial and tribute gift programs provide a meaningful way to celebrate a special occasion or remember a loved one. You can dedicate a tree or a bench, create a special ceremony to remember a family member or friend, or name a trail or garden. These enduring and tax-deductible gifts support our work to promote environmental stewardship, education, and enjoyment for the public and for the University of Michigan community.

Cumulative or one-time gifts of \$1,500 receive a tribute tree with an inscribed tree tag and profile on our online TributeTracker.

Gift amounts of \$5,000 and above are eligible for bench dedications, which include a bench plaque and a profile on the TributeTracker. Gifts to the tribute and memorial fund directly support the maintenance of the many trails, gardens, and natural areas at the Arb & Gardens today and for future generations and are vital in the installation of new trees for our collections and benches for visitors.

Tribute Tracker lists all current tributes and each listing provides a description of the tribute, dedication, donation date, location, and map. You can also search for a specific tribute. Visit the TributeTracker on our home page—mbgna.umich.edu—by clicking on the icon pictured here or by searching for TributeTracker in the search field on any page of our site.



For more information, call or email Membership Manager Andy Sell at 734.615.9475; sella@umich.edu.

Appendix 8: Standard Operating Procedures

8.a. Farm SOPs

8.b. UMSFP SOPs



Standard Operating Procedures

To ensure greatness

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Farm

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UMSFP – Working with Matthaei Botanical Gardens Staff

Updated by Allyson Green (green.allyson@gmail.com) on April 22, 2013

Purpose

1. Facilitate positive relationships with Botanical Gardens staff
2. Ensure that the Botanical Gardens staff are abreast of Campus Farm activity
3. Ensure that the Campus Farm interns, volunteers, visitors, and UMSFP are abreast of rules, events, and requests of the Botanical Gardens staff

Procedures

1. Mike Palmer (mdpalmer@umich.edu) is the point person for all things Campus Farm related. Email Mike about planting plans, ordering seeds, equipment needs, and activities happening at the Campus Farm. Jeff Walters (jnw@umich.edu) may be included in emails that involve facilities and property management, but talk with Mike first.
2. Let MBGNA staff know when you are using the farm space or greenhouses, whether it's for a workday or special event.
 - a. Email Mike Palmer (mdpalmer@umich.edu) with times and locations of workdays so he can update the MBGNA calendar. Also include any equipment (shovels, work gloves) you may need.
 - b. Email Linda Neely (lmneely@umich.edu) to request any space other than the farm or greenhouse space (classrooms, auditorium, etc.).
3. Keep all MBGNA staff in the loop about events and milestones at the Campus Farm. Share successes and highlight your gratitude for their continued support. Invite them to come participate in events! Bob Grese (bgrese@umich.edu) or the Campus Farm interns can send emails to all MBGNA staff.
4. Other Key contacts:
 - a. Catriona Mortell-Windecker (catriona@umich.edu) will serve as the Campus Farm intern supervisor and also supervises Cultivating Community. Contact Catriona with questions on getting involved with student life activities like orientations and Welcome Week. She has a great wealth of institutional knowledge about support for on-campus gardening through the years.
 - b. For marketing and publicity (sharing photos, blogs, or articles), contact Joe Mooney (jfmooney@umich.edu). He will often come take photos of us working.
 - c. Tara Griffith (tgriffit@umich.edu) works with all the volunteers at MBGNA.
 - d. Liz Glynn (lizglynn@umich.edu) is the Children's Education director. She's great for advice on educational events and gardening in general.

Farm - Facilitating Workdays (Pilot Garden)

Updated by Allyson Green (green.allyson@gmail.com) on July 12, 2012

Before Starting Projects

1. Make Introductions: Welcome new volunteers, introduce yourself and anyone else running the workday, introduce volunteers to each other
2. Orientation: Give background on the project and orientation to the site to anyone who needs it
 - Where does the farm fit in the UMSFP?
 - What are we doing now?
 - How does this help achieve the farm and UMSFP missions?
3. Collect any tools from the horticulture hallway if you need them (trowels, shovels, gloves, kneeling boards). NOTE: if you will be using more than a few tools, make sure to check with Mike Palmer at Matthaei (Horticulture Manager): mdpalmer@umich.edu

Gardening Tasks

1. Weeding! This is priority #1 in the garden. Weed beds first, walkways if time.
 - Make sure volunteers can identify weeds, know to pull roots if possible, and know what to do with their freshly uprooted weeds (throw to the side).
 - Encourage volunteers to ask when they are unsure if a plant needs to be pulled.
2. Pest control! Check for and kill harmful bugs, look for signs of diseases.
 - Broccoli: Look for little green cabbage moth larvae. Squish them!
 - Greens and Eggplant: Try to catch and kill flea beetles
 - Tomatoes: Check for Colorado Potato Beetle larvae and adults (fat, orange grub, or spotted beetle). Squish them!
 - Trample groundhog tunnels
3. Harvest! Check for ripe produce and harvest when needed.
 - Encourage volunteers to take home produce, leave some in the staff kitchen at Matthaei, bring to campus to donate, or donate to Food Gatherers
4. Fix structures that are not stable (fence, tomato stakes, etc.)
5. Water! Watering tips:
 - When possible, water around the base of plants instead of spraying from above (especially cucumbers!)
 - Watch the hose to make sure plants are not getting smashed underneath it

- A longer soak is better than a quick, surface-wetting spray for plants, so try to really soak the soil if you can (especially when it's hot and dry)
 - Turn the valves on the fence and on the splitter to “ON.” If no water comes out, turn on the well (push down the handle of the blue pump outside of the fence in the trees)
 - Celery likes to have more water than the other plants!

Before Leaving

1. Turn off water and straighten up hoses.
 - Ask Project Grow neighbors if they would like the water on before turning it off.
 - Make sure both the valve on the splitter and on the fence are turned off.
 - Turn off the well if it's later in the evening and no one else is around.
2. Clean and return supplies to horticulture hallway.
3. Move big piles of weeds if necessary.
4. Close the gates so the deer don't eat our food!
5. Thank volunteers, remind them to record volunteer hours, and invite them to the next workday or event.

After Workday

1. Follow up with volunteers: Send a personal thank-you email to new volunteers with the link to the UMSFP Volunteer Eval to fill out. Email returning volunteers if you see something they would appreciate being validated for (e.g., “Thanks for teaching Bob how to water tonight! Now we'll have a crew of watering experts!”)
2. Record volunteer hours.
3. Share notes with other group members if needed (e.g., the tomatoes are almost ready to harvest, so keep your eye on them next time!)

Managing Volunteers

1. Make them feel welcome, needed, and appreciated!
2. Get their stories: who are they, why are they here?
3. Teach simple skills, even if you think it's probably unnecessary. Example: watering, weeding, and harvesting may seem common sense, unless you've never done it before! Explain techniques simply and thoroughly and include the reasoning behind using certain techniques.
4. Empower returning volunteers: If they learned how to water last week, let them teach a new volunteer this week! Find ways to help them take ownership of the garden, using what they've learned already.

Farm – Working in the Greenhouse

Updated by Allyson Green (green.allyson@gmail.com) on April 22, 2013

Introduction to the Greenhouse

The Matthaei Botanical Gardens have generously offered space in their heated greenhouses to use for season extension. This space is available year-round to grow those plants that fare well in a shallower soil base with fewer daily hours of sunlight. The greenhouse is only a two-minute walk from the Campus Farm space, and enables us to produce vegetables, greens, and herbs throughout the school year. Working in the greenhouse requires close communication and coordination with the Botanical Gardens staff, particularly Mike Palmer.

Greenhouse Protocols

1. Before working anywhere indoors, you must reserve the time and space beforehand, through the Botanical Gardens staff. These are busy spaces, used by other groups and U of M classes, so let the staff know when you'll be there, whether it's a regular workday time or for a special event.
2. There are several resources available for use in the greenhouse, including many tools, seed trays, and soil. Ensure that a staff member is asked before using anything for the first time, and always put anything used away clean and in its proper place. All tools are found in the back Hort Hallway.
3. Always leave your workspaces cleaner than you found them: this means sweeping up spilled soil, etc.
4. Any motorized equipment can be driven *only* by MBGNA staff members.
5. Starting seeds:
 - a. Keep track of the soil and trays used by recording it on the clipboard provided by Adrienne (amobrien@umich.edu) each week. Additional soil can be found in the garage or the Hort Hallway, and additional trays can be found in the Pot Room or Hort Hallway. Always check with a staff member if possible before getting out more supplies.
 - b. Label all trays with variety and start date.
 - c. Keep trays organized on our bench, and let Mike Palmer know if you need more space.
6. Use the sink in the kitchen of the Hort Hallway for washing hands when harvesting.

UMSFP – Approving New Member Groups

Updated by Liz Dengate (cedengate@gmail.com) on April 19, 2013

1. When it comes to UMSFP member groups, the focus should be on quality, not quantity. The work of UMSFP is not judged by the sheer number of member groups, but on the work they do and the number of members involved in each group. Outlined below are procedures to support this.
2. If a student group is interested in becoming a new UMSFP member group, they should submit a copy of the Member Group Application, explaining how their work relates to the mission of UMSFP, describing their goals and projects, and giving details on membership.
3. The Leadership Team should read their Application, discuss it during a weekly meeting, and vote on whether the new group meets the criteria for member groups.
4. If a new student group has a very similar mission or set of goals to an existing member group, encourage or suggest a merging of minds, creating one larger and more efficient group out of the interested parties.
5. If new groups share the mission of the UMSFP and bring new goals, projects, or methodologies, congratulations – you’ve got a new member group! Inform the member group that they should appoint a representative to the Member Group Council, inform them of their new rights and privileges, and send them an invite to the next member group potluck.
6. If the new group has a very different mission from UMSFP, or if food-related work is just a small piece of their overall mission, suggest that they become newsletter subscribers and remind them that UMSFP would be delighted to feature news about their food-related events and projects in the newsletter, website, and Facebook page.
7. Always treat applicant groups with respect and enthusiasm. These are students who share our love for food and are working hard on campus or elsewhere. Think of them as allies and future resources for our good work.

UMSFP - Contacting Faculty

Updated by Liz Dengate (cedengate@gmail.com) on April 19, 2013

Purpose

Maintaining communications and collaborations with key faculty members is integral to reaching UMSFP's education goals. Faculty members can be contacted in order to:

- Pass along information about UMSFP and ask them to share with their students
- Establish collaborations, such as UMSFP or food-related course projects, lecture topics, or research projects
- Encourage future food-related courses
- Invite classes to the farm or greenhouse space for field trips
- Ask for advice on technical matters in which the faculty member has some expertise

Procedures

1. Maintain a list of faculty members with personal interests, course topics, research focus, or experience in food or agriculture sustainability (this list was started in spring 2013 to be added to the UMSFP website)
2. Maintain email contact with key faculty members (including the new Sustainable Food Systems cluster hire faculty members as they join campus), and encourage site visits and coffee meetings with those who express interest. Meeting an interested faculty member out at the farm, and combining a conversation with a walk around the grounds, can encourage them to include food-related projects in their classes, or bring a class out on a field trip.
3. It's helpful to appoint one point person as the communicator with each faculty member.
4. When speaking with faculty members about possible lecture topics, trips, or projects they could include in their class schedule, develop a list of a few specific suggestions for each professor based on what you know about the classes they teach.
5. Encourage professors with a research background in agriculture-related fields to use the farm as an extension of their lab, or to push members of their labs to develop research projects for the farm space.
6. Follow up regularly after any meeting or conversation to let the faculty member know that their time is important to you and you're excited to collaborate with them in the future.

UMSFP – Class Visits

Updated by Lindsey MacDonald (Lindsey.e.mac@gmail.com) on April 19, 2013

Purpose

1. To spread the word about the UMSFP and all that it has to offer (showcasing examples of sustainable food in our own University community)
2. To build relations with academics
3. To provide avenues for students to get involved
4. To integrate curricular and extra-curricular U of M offerings on the topic of sustainable food

Procedures

1. 1-2 weeks prior to the visit, work with the professor for the class to determine:
 - their intended goals for the class visit
 - the format of your visit (panel, presentation, discussion, technical capabilities, other attendees, classroom setup, number of students, etc.)
 - what the students already know on the topic
 - the location and timing of the class
2. Depending on the timing of the class, finalize who will do the class visit.
3. Based on professor's goals and timing for the visit, look through presentation options in M+Box presentations folder.
4. In class, make sure to:
 - speak to the mission of the UMSFP
 - encourage students to get involved
 - provide your contact information for students to follow up after class
 - provide the website (www.umsfp.com)
5. After the class:
 - Send the professor a thank you and ask if you can provide anything else for the class. Also, inquire about when the class will be taught again, so that a visit can be put on the calendar for upcoming semesters.
 - record the class collaboration, with notes, in the UMSFP Contacts googledoc excel sheet (found on M+Box)

UMSFP – Harvest Festival

Updated by Lindsey MacDonald (Lindsey.e.mac@gmail.com) on April 19, 2013

Purpose

1. Bring Ann Arbor community and University faculty, students, and staff together to celebrate sustainable food.
2. Showcase the farm space, all of the UMSFP member groups, and some of the cool food initiatives happening in the broader community

Procedures

1. **Setting the Date** - Work with Linda Neely, the Events Coordinator at the Botanical Gardens, to find a day when there is not another event, because you will want to reserve the auditorium as a rain alternative, as well as the outside farm space (do this over the summer). We did Thursday, October 4th from 4-8pm. You also should check into what is happening around the community to make sure you do not schedule on the same day as another cool food event. Also, remember that the sunsets fairly early at this time of year (we did lots of cleanup in the dark). The second you have the date confirmed, tell the Office of Campus Sustainability, the Graham Institute, University Unions, and the Advisory Board.
2. **Tickets** - Make a complimentary ticket list for people who you would like to see the space because they have money/expertise/etc, or people who have been especially helpful along the way (we did this for about 20 people – President Coleman, Provost, etc.). Early September, you should print (or figure out another way to do accounting) and sell tickets: Tickets can be sold in the Dana Commons. We did a suggested donation of \$8 for ahead of the event, \$10 at the event for students and \$12 ahead of the event and \$15 at the event for non-students. We had all of this listed as a suggested donation so that people can pay more or less, depending on ability to pay. Volunteers also get into the event for free, so this option can be listed on the website. Keep track of the number of pre-paid tickets so that you can better estimate the amount of food to get from the caterers – in 2012, there were 155 pre-paid tickets (including payment up until the night before). We ran out of food because we ordered food for 150.
3. **Entertainment:** for 2012, Dragon Wagon, Magdalen Fossum, and the Crane Wives played on an improvised stage (plywood nailed to pallets). This coordination takes a lot more time than you would think, so start early on making contacts. We had musicians that were not students, but using music school students could work great as well. Dragon

Wagon was gracious enough to provide the sound system for the whole evening (plugged into the blue shed – coordinate with MBGNA staff on extension cords and making sure power is on). Magdalen, who was 11 years old, played for a \$50 college donation, and the other two bands played for \$400 each (with an additional \$400 to Dragon Wagon for running sound all evening). One oversight in 2012 was that we did not provide water for the performers and the caterers took drinks down before they were done playing. Either ask the bands to bring extra water, or make sure to provide it.

4. **Transportation** - Reserve a bus and the Botanical Gardens rental van. You can rent a bus at Transportation Services (http://pts.umich.edu/taking_the_bus/charters.php). You will need the farm account shortcode to do so. Have the bus run a continuous shuttle from outside of Rackham and the Farm. You will want to post the schedule on the umsfp website (the round trip takes about an hour). You can coordinate the van with Catriona Mortell. It is likely that the van can only be driven by Botanical Gardens paid staff (getting volunteers to help with this is very difficult, so coordinate at very beginning of semester). Having these two options allows you to run a shuttle every 30 minutes throughout the night. See “Outdoor Adventures Coordination” for bike transportation details. We had a volunteer directing traffic who drove personal vehicles to the overflow parking.
5. **Catering** - We worked with University Unions in 2012 to provide food using produce from the local farms they have contracts with. They also included plateware for a cost. You could arrange reusable plateware through another company for a bit cheaper, but for ease we just had Catering do it for us. Early in September, work to finalize a menu. The week before the Festival, you will need to tell caterers how many meals you would like. You will have to just make your best guess on this, and have a back up plan for if you run out of food.
6. **Community Contacts** - Contact local food organizations that might be interested in having a table, or being involved in some way (consider going to the Homegrown Festival in the Fall to connect with these people again). Initial contact should be made in early September, at the latest. This year community contacts were disappointed to be contacted with such short notice because they would have liked to organize a bit more. Local businesses and farms might be interested in providing raffle prizes or other forms of donations as a way to improve their visibility. In 2012, Goetz farm provided pumpkins at a discounted rate, for example.
7. **Member Group Coordination** - facilitate a discussion about how member groups would like to be involved. In 2012, member groups made posters with information about their groups and a sign-up sheet. Something else could be done to get member groups more engaged if they are interested, be creative. These were hung on the fence around the farm.

In this meeting, organize a volunteer team, both for prep work and for day-of.

8. **Outdoor Adventures Coordination** - (www.recsports.umich.edu/outdooradv) if you would like to have a bike option for transportation to the event. You might be able to work with the OA garden member group to facilitate this ride. People can rent bikes from OA, and then take the back roads route to get there (Outdoor Adventures knows the route). It is important to note that if people stay to the end of the Festival, the bike ride home will be dark. Bike lights and helmets are strongly advised. Outdoor Adventures is also the place where we rented yard games (bocce, corn hole, etc.) for alternative entertainment during the Festival. Make sure to reserve this gear a couple of weeks before the Festival, at the latest.
9. **SNRE Communications** – You can advertise the event in the poster holders at the entrances to the Dana building if we coordinate with SNRE Communications. They may want the artwork, or they may want to help creating it. Just make sure to touch base with them early. The request for help should come from an SNRE student.
10. **UMSFP Website Setup** - a paypal payment form, or another way to pay online should be setup. We also changed the main photo (the scrolling one on the homepage) on the website to a Harvest Festival advertisement. We added a tab for Harvest Festival. This tab had all details about timing, payment, entertainment, etc. You will want to think about when to close online payment. We did the night before the event, but earlier might be easier logistically.
11. **Central Student Government Funding** - Since UMSFP is not an official student group, register as “Friends of the Campus Farm.” In 2012, we received \$3,000. Fill out forms, paying careful attention to what will and will not be funded. You must have receipts for every purchase made. Get into the first cycle of funding in early September.
12. **Zero-Waste Funding** – This funding comes from SSI. You will coordinate with them on logistics of how it all works. Apply for this funding at the beginning of September. It might be useful to appoint a zero-waste coordinator to enforce, make signage, and interact with SSI.
13. **Publicity** - While this may begin earlier in September, the biggest publicity push should come in the two weeks before the event. This should be done through the UMSFP newsletter, listserv emails, posters (we used a very limited number to reduce event waste), personal emails to key stakeholders, quarter sheets, and online and print media.

14. **Media** - Prepare a press release for local print and online media, including the Michigan Daily, the Ann Arbor Observer, Ann Arbor.com (Kim Bayer is a great contact for this), and MLive.com. Pursue short articles as well as the addition of the Festival to all local event listings.
15. **Volunteer Coordination** - By at least a week before the event, ensure that you have key volunteers dedicated to each hour of the event, beginning three hours beforehand and until two hours afterwards. PitE students, newsletter subscribers, and member group members are excellent sources of volunteers. You can also offer free tickets to the festival with a certain volunteer hour requirement. You will want to have one person responsible for keeping balls in the air (the caterers will have their phone number, they will make sure the bands have water, they will make sure all of the volunteers are given direction, etc.). This person will be “on” the whole day and evening of the event (8am-11pm for 2012).
16. **Decorations** - We used hand-painted banners (many can be found in the blue shed at the farm), hay bales, corn stalks, pumpkins, and gourds to decorate the site in 2012. Local farms and cider mills are good sources for fall decorations. Hold painting parties to create a variety of colorful banners. Frame the area with your directions in a way that highlights the spaces you want people to be in. For example, set hay for sitting by where the bands will play. Also, there are some weird stumps and poles in the farm site, so we covered these for safety.
17. **Informative Signage** - You’ll need directional signs (leading people to the farm space, to parking, and to restrooms); safety signs near the bees; zero-waste signs; thank-you signs; and entrance signs explaining admission, raffle tickets, and T-shirt sales. Make sure you have zip ties, scissors, paint, markers, and extra boards/cardboard for last minute signs.
18. **At the door** – You should have an entrance tent with ticket taking, donation jar, volunteer check-in, and t-shirt sales. Two people should be working this entrance at all times. It would be nice to have two cash drawers (one for t-shirts and one for ticket sales). This makes accounting easier at the end of the night. We had to write receipts for all t-shirt sales. Inquire with Joni on this. Make sure to have paperweights or tape to tape things down in the case that it is windy. When people arrive at the event, welcome them and give them a lay of the land (what is there to do, when will farm tours happen and from where, where is the food, what is the raffle schedule, etc.). Also, consider having important things written on big signs hung by the tent (t-shirts costs, suggested donation, etc.). Make sure to check people off the list when they arrive, or add them to the list if they did not pre-pay (this is a big metric of success, since people pay different amounts for entrance you can’t just count the money).

19. **Clean-up** — Do as much as you can the night of (make sure lots of flashlights and headlamps are available). The tables, chairs, and tent must be dealt with, at minimum. Put these away neatly as you found them because we want to keep privileges on using these items. If you can, pull all signs directing traffic. You will want to send someone out the next day to pickup things that were missed in the dark. Coordinate with Linda regarding which doors to the building will be open and what procedures are for at the end of the night. After this is done, go celebrate!!!

UMSFP - Leadership Transition

Updated by Liz Dengate (cedengate@gmail.com) on April 19, 2013

Purpose

Student members of the Leadership Team, interns, and occasionally Advisory Board members will come and go as the school years change. Incoming leaders will need to be trained and oriented before assuming leadership of UMSFP.

Suggestions

1. If possible, any incoming leaders should overlap in their roles with existing leaders for a minimum of one month, and preferably at least one semester, to enable easy communication and shadowing.
2. Every spring, a mandatory orientation/retreat for existing and incoming leaders and advisors will enable orientation and training (or re-skilling) of leaders. This day-long event should include a tour of the farm and greenhouse space and satellite gardens; an introduction to online resources, including M+Box, the newsletter, the website, and the Facebook page; group visioning exercises; discussion of UMSFP history and progress; and an opportunity to mingle and meet important UMSFP stakeholders and Advisory Board members.
3. Procedures, communications, and contacts should be carefully documented in full to enable the hand-off and transparency of all useful information.

UMSFP - Facilitating Meetings

Updated by Allyson Green (aggreen@umich.edu) and Lauren Beriont (lberiont@umich.edu) in April 2013

Purpose

This SOP provides insight and tips for facilitating a productive meeting and being an effective facilitator. Meetings of three or more people can greatly benefit from the presence of a good facilitator in the room. Designating a facilitator becomes key in times of conflict or when holding large meetings.

What is the Facilitator's Role?

A facilitator often wears many hats before, during, and after meetings; their main goal is to ensure effective, productive, and respectful communication. The facilitator is responsible, but not limited to, the following:

Ensuring Effective Communication between all groups and individuals. Often this revolves around keeping the group on task and handling meeting logistics. However, the facilitator will need to find a balance between productive tangential conversations and fulfilling the meeting agenda.

Maintaining an Inclusive Environment. The facilitator's role is not to dominate the conversation, but to draw out the opinions and ideas of all participants - especially more shy and introverted individuals. If people are not volunteering to talk in a "popcorn-style" discussion, try using different techniques like going around a circle or breaking out into smaller groups. Inclusivity also refers to open and honest communication. The facilitator should be aware of how personal identities like culture or gender play out in discussion and make sure to protect participants from individual attacks and ensure that everyone respects ground rules.

Confirming the group is in agreement during discussions and decision-making scenarios. Although the facilitator can offer their own opinions, it is the entire group that must come into agreement on points of discussion.

Prepare in advance to ensure the above gets accomplished in meetings. Anticipate responses to discussion, brainstorm questions to generate conversations, and discuss any personal triggers with your co-facilitator or a participant in the room prior to the meeting. (See more in Section III)

Who should facilitate?

A facilitator is often an active member of the group (refer to Section VII about when to bring in a third party facilitator). The facilitator of group meetings can rotate or stay the same throughout the year. At larger meetings, or meetings with controversial dialogue, it is helpful to bring in two

facilitators in case conflict arises. Anyone can facilitate meetings, but it is best if they are familiar with and follow these guidelines.

Pre-Meeting Checklist

Below is a list of some things to consider and accomplish before meetings:

- Reserve Meeting Room
- Create and email agenda to participants at least three days in advance
- Send a reminder email about meeting time and room
- Arrive to the meeting ten minutes early:
- Ensure appropriate room arrangement
- Bring name tags
- Write agenda and goals on board

Tips for an effective facilitator

Focus on process. The facilitator is not trying to answer the question themselves, but engage ALL participants to answer their question and offer ideas. Although the facilitator may feel the urge and curiosity to answer a question, their responsibility is to make comments and suggestions about process not content. If the facilitator wants a question to be answered, they can refer the question to the best expert in the room. At certain times the facilitator may take off the hat of a facilitator to participate in conversation, but they must be transparent and verbal about this transition - this should not occur frequently.

Be multi-partial. Often, facilitator guides will stress neutrality, but being a facilitator doesn't mean not taking a stance with any participant - it means being able to take a stance with every participant. Multi-partiality, "the ability to analyze a conflict[conversation] using multiple viewpoints" provides a safe space for all participants to contribute in (Reframing Campus Conflict by Schrage and Giacomini).

Be transparent about the process, your individual feelings, your role as facilitator, and observations on the progress of the meeting.

Resist the temptation to speak too much, period!

Re-iterate what people say. Acknowledge what participants offer up and address people by first names.

Engage participants using multiple activities to accommodate for multiple learning styles. All large-group discussion may cause participants to withdraw from conversation. Try breaking out into smaller groups, using "Think-Pair-Share", bringing in pictures or videos, or brainstorm your own method.

When to call in a Third-Party Facilitator

In most cases, a member from the group can be an effective facilitator. Below are some instances

when a member from the group might hinder the open communication process of meetings and dialogue. In these cases, the group may call upon a third party facilitator.

- A large number of issues exist within the group
- The issues are complex
- A diverse group of identities are represented at meeting
- Conflict arises because of social identities
- A similar conflict has happened in the past
- The discussion is emotionally charged
- Misperceptions and stereotypes detract from the conversation

Tips for Member Group Council Meetings (Monthly; ~1 hour)

- Use the first meeting of each semester to **set groundrules** with the group. Please allow the group to come up with the majority of their own groundrules at the meeting
- Arrange the room in a circle or square. The facilitator should SIT and does not need to be at the front of the room
- Start each meeting with an icebreaker
- Provide participants with nametags or name triangles
- At each meeting give member groups a chance for group updates and upcoming events
- Remember: UMSFP is here as a resource for member groups, making member groups feel included and important is key
- If taking notes at the meeting, make note-taking brief so you don't look distracted
- Practice Active Listening
- Before the meeting ends, provide each representative with an **action item** to accomplish before the next meeting
- At the end of the meeting, thank member groups and set the date of the next meeting
- At the end of each semester or year, ask for an evaluation and feedback of the meetings

Sample Agenda:

Goals:

-List goals of meeting here

To DO:

-List things to do before meeting or additional notes here

Meeting Order:

1. Icebreaker
2. Announcements
 - a. list announcements here
3. UMSFP Vision Discussion
4. Earth Week/Food Day
5. Next Steps
 - a. Action Item

Tips for Advisory Board Meetings (Monthly; ~2 hours)

- Use the first meeting of each semester to **set groundrules** with the group. Please allow the group to come up with the majority of their own groundrules at the meeting
- Rotate the facilitator for each meeting, co-facilitators might be best
- Assign a notetaker for the meetings
- If taking notes at the meeting, make note-taking brief so you don't look distracted
- Arrange the room in a circle or square. The facilitator should SIT and does not need to be at the front of the room
- Try to mingle students and staff/faculty
- Provide participants with nametags or name triangles
- Remember: The Advisory Board exists to give advice, not make final decisions
- Do not allow staff or faculty to dominate the conversation
- This time is valuable to many people in the room - make sure it is used productively
- Break out into smaller groups during the meeting to keep people engaged
- Practice Active Listening
- Before the meeting ends, provide each member with an **action item** to accomplish before the next meeting
- At the end of the meeting, thank advisory board and set the date of the next meeting
- At the end of each semester or year, ask for an evaluation and feedback of the meetings

Tips for Leadership Team Meeting (Weekly 1-2 hours)

- Use the first meeting of each semester to **set groundrules** with the group. Please allow the group to come up with the majority of their own groundrules at the meeting
- Maintain a consistent weekly meeting time
- Meetings should last 1-2 hours
- Assign a facilitator and notetaker for each meeting. Rotate these positions: whoever was notetaker last will become the next facilitator.
- Create an open document for team to add agenda items, make sure this is complete the night before the meeting
- Arrange room in circle or square
- Run meeting based on updates/ topics of conversation by person
- Assign action items and projects to leadership team members based on position description (eg. Communications should work on website details)

Resources

SNRE's "Effective Facilitation"

<http://www.snre.umich.edu/ecomgt/lessons/stages/organizing_the_process/Effective%20Facilitation.pdf>

SNRE's "Adopting Groundrules" <<http://www.snre.umich.edu/ecomgt/pubs/lippman/Rules.pdf>>

UMSFP – Photography

Updated by Sarah Schwimmer (sischwim@umich.edu) on February 10, 2013

What are photos generally used for?

Primarily, photographs will be used as website banners, Facebook albums, Facebook updates, blog posts, presentations, reports, and promotional materials.

Things to consider for each primary purpose:

Website banners:

Images should be landscape-oriented

When saving images: banner dimensions are 950 x 350 pixels, image quality should be 72dpi for fast web-viewing

Take and use shots that are dynamic, active, and feature multiple people. It should be perfectly clear in the banner what people are doing. Smiling faces are always good!

Be consistent with editing style. Creativity in editing is fine, but all banners featured should be a consistent style-- ie all slightly faded or all with increased saturation.

Facebook albums:

Think of these photos as a way to tell a story: Take before and after shots.

Action photos are very important

Include both photos that show the general atmosphere and close-ups

Feature a mix of candid and posed shots

Albums should highlight workdays and events. Be sure to include shots of group leaders, speakers, and special guests, as well as student workers, volunteers, or audience members.

Blog posts:

Pick a few key, interesting images, but don't overwhelm blog posts with photos.

Link to facebook albums to share more photos

Choose high-quality images

Reference images in posts

Save images at 72dpi for best web-viewing, maximum width is 300 pixels

Presentations:

Reports:

Promotional materials:

Basic image editing

Use layers when working with photos (if using an application where that's possible). Instructions are for Photoshop. People are drawn to brighter images. Clean, simple editing to enhance contrast and maximize brightness is always great.

First adjust contrast and density:

Always adjust levels first. You can use auto-adjust, manual (sliders), or sampling. (Layer > New Adjustment Layer > Levels)

Adjust curves if needed. You can use auto-adjust, sampling, manual, or presets. Linear contrast and lighten tend to be good for web-viewing. (Layer > New Adjustment Layer > Curves)

Adjust colors:

White Balance: Often, Levels or Curves will fix minor color problems. If they did not, fix white-balance issues (ie if whites are appearing as yellow or grey, adjust until they are white again). There are many ways to do this...

Saturation: Use vibrance to adjust saturation (Layer > New Adjustment Layer > Vibrance)

Saving images

Web: 72dpi for web

Printing/full-res: 300dpi

UMSFP – T-Shirt Sales

Updated by Jerry Tyrrell (galant@umich.edu) on April 23, 2013

Purpose:

1. To spread the word about the UMSFP
2. To build a sense of community among all of the people working on food issues
3. To raise money for UMSFP projects

Procedure:

1. Pick a time and location to sell shirts
 - a. Make sure you are allowed to sell shirts in that location. We have never had any trouble selling in the Dana building and we have not had to ask anyone for permission.
2. Remember to bring small bills to make change for people
3. We've typically sold shirts for \$15 each
4. Cash after a sale should be given to Joni Rosenthal at Matthaei Botanical Gardens

Helpful Notes:

1. We buy the shirts from [Ascott](#).
2. We usually get organic cotton tees with one color for ~\$7 per shirt
3. We usually order 100 at a time (22x SM, MED, LG, XL, and 12x 2XL)
4. They generally take about a week to process the order
5. Ascott will bill the Campus Farm account hosted under MBGNA automatically
6. Often we will host office hours and invite people to come buy shirts then