

SCIENCE

MAS

OHLMAN



A STUDY OF EXISTING LAND USE IN WEBSTER TOWNSHIP  
WASHTENAW COUNTY, MICHIGAN

by  
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## FOREWORD

In the course of this work many people have given helpful advice and encouragement. To them I should like to express my appreciation and gratitude. Among those should be included Prof. H. M. Wight and Prof. W. H. Ramsdell under whose general direction this work has been undertaken, to Dr. S. A. Graham and Dr. E. C. O'Roke who have also given valuable advice and assistance throughout the study. Grateful acknowledgment is also made to Mr. R. C. Behymer, District Conservationist of the Fenton and S.E. Livingston Soil Conservation Districts, and Mr. H. S. Osler, Washtenaw County Agricultural Agent for aid in formulating the questionnaire.

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## INTRODUCTION

It is quite evident that we are facing a new era in American History and that our frontier has changed from expansion to new and virgin land to wise utilization of what we already possess. Collectively we have begun to realize that each and every acre of land in our country must be judiciously utilized so as to supply our National needs and to assure security for the individual landowner.

Generally speaking, we have two types of land mismanagement. In the first case the land is being used for purposes that should never have been attempted or are not in accord with present needs, and in the second the general enterprise is compatible with the soil but the management practices of the owner or tenant are far out of line.

Congressional acts of the last ten years indicate conclusively that agricultural mismanagement has made necessary a National program for the purpose of promoting the conservation of our agricultural resources. The "greatest good for the greatest number" philosophy of public forest regulation found its way to private land utilization, from the national standpoint. Legislation aimed in this direction, through social channels, is bringing the

realization to us as individuals that stability and security can come only through proper land planning, utilization, and management.

### LAND MANAGEMENT PLANS

In general, formulation of a land management plan entails three major steps. First, land classification showing present and proper use for each parcel of land. Second, ascertaining if and why land is being mis-managed and third, drafting a plan that will supply the needs that the second step indicates.

Increasing attention is being focused, by many States, on land planning and utilization surveys and at the present time many counties have been or are being surveyed. Techniques have been developed for gathering this information and the final results show quite vividly the tremendous changes that are needed before proper land management can be achieved. However, emphasis has been placed mainly on land classification and the reasons for mis-management are not widely understood.

Outside of the U. S. Department of Agriculture and related programs, there is little being done to bring about proper agricultural land management practices.

## PURPOSE OF STUDY

The purpose of this study is to develop a technique for obtaining sufficient information to facilitate the formulation of a land utilization and management plan, considering a county as a logical working unit.

To make complete a survey of a county and draft a management plan is a task falling far beyond the scope of this paper. Webster Township was chosen as a typical sample unit of Washtenaw County and while sufficient coverage of the management problem was allowed for, special emphasis was placed on gaining an indication as to the social and human implications of land management.

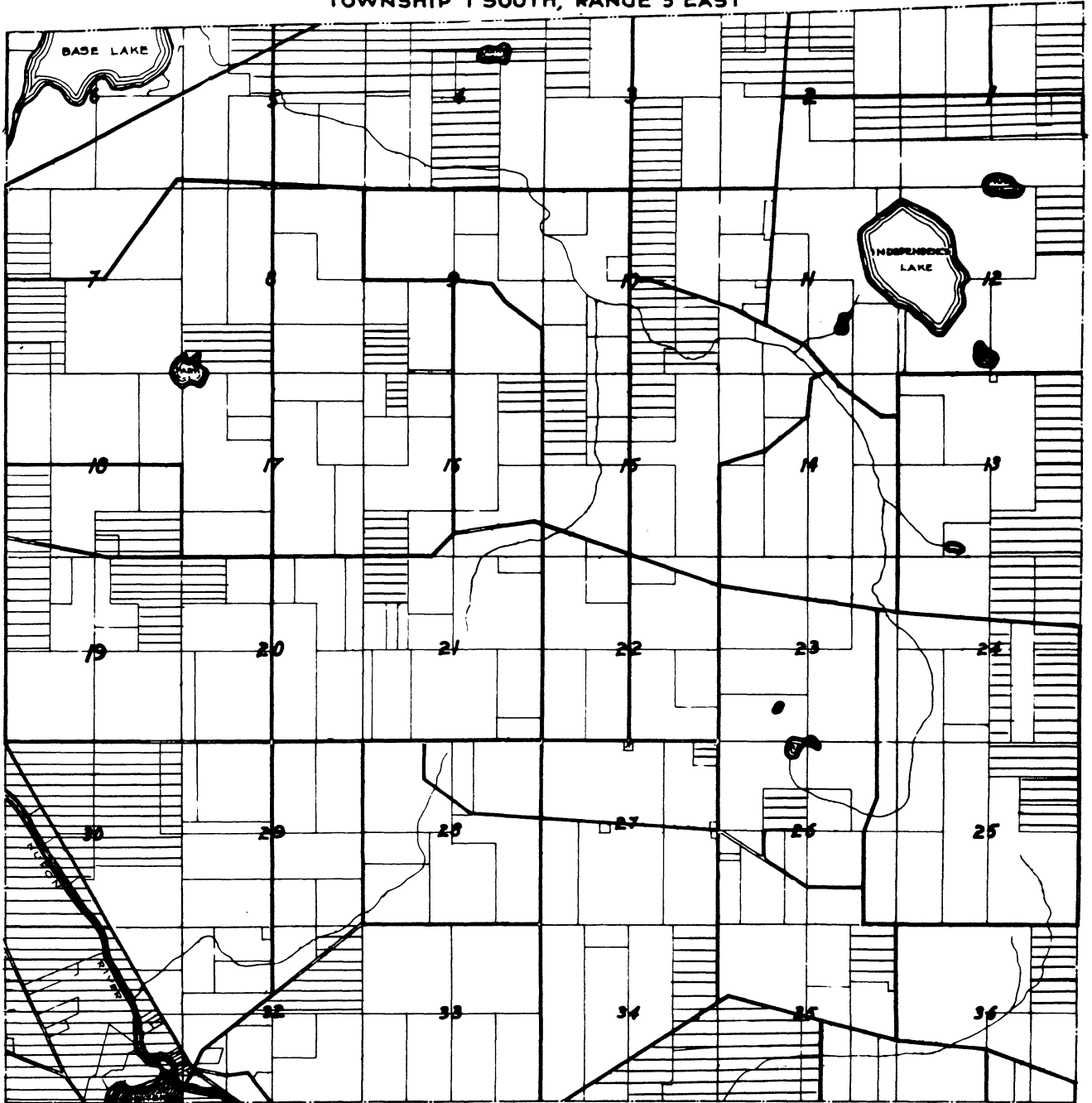
## METHOD USED

In order to gain an insight into the numerous and complex social, and physical factors operating on a given area of land, it seemed logical to contact each individual landowner. For this reason a questionnaire was developed including only questions that were reasonably sure of being answered and yet giving complete coverage of the objectives. The author personally interviewed all the landowners and tenants in Webster Township who could be contacted in the time available for the study.

The accompanying map indicates the land ownerships which were not so covered. Information from neighbors was

# MAP OF WEBSTER TOWNSHIP

TOWNSHIP 1 SOUTH, RANGE 5 EAST



## LEGEND



AREA COVERED BY PERSONAL INTERVIEW

AREA NOT COVERED BY PERSONAL INTERVIEW

obtained as to the type of ownership, occupation of the individual, and the use to which the land was devoted on most of the parcels omitted.

The southeast corner of the Township was purposely omitted because of its proximity to the Village of Dexter and the urban character of the settlement resulting therefrom. Also, 290 acres in sections 34 and 35 owned by the Loch Alpine Subdivision Company (a real estate development non-agricultural in character) were omitted. The area thus not included encompassed approximately 1100 acres. The total area surveyed by personal interview amounted to approximately 18,000 acres and the area for which no information could be gained amounts to less than 500 acres.

### Questionnaire

The questionnaire used, as reproduced on the following pages, is the result of the combined efforts of the author and as many men in the particular field as could be contacted and some portions of the questionnaire as used by Swears<sup>1</sup> were included.

The five basic and interrelating important factors around which the questionnaire was built are as follows:

First, the physical features of the land itself--the soil and topography.

<sup>1</sup>Swears, C. C. 1941. A Study of the Landowner-Sportsman Relationship in Webster Township, Washtenaw County, Michigan. Master's thesis, University of Michigan. Unpublished. Typewritten.



Second, the farm enterprise and management practices used by the individual.

Third, operation, influence, and effectiveness of the educational, organizational, and action agencies operating in the section.

Fourth, personal information concerning the individual, his family, ideas, opinions, and recognition of the problems attendant to land management.

Fifth, the reaction of the men interviewed toward forming a land management program.

Some changes were found necessary after a few interviews and amounted mainly to omitting those questions and portions of questions for which accurate answers could not be gained.

The questionnaire in itself is self explanatory and indicates the scope and character of the questions asked. The complexity of the problem and the variety of information collected made it advisable from the standpoint of time saving to handle the data mechanically by means of sorting and tabulating machines. Therefore the questions were arranged for such analysis prior to going into the field and each was given a code. Spaces for quantitative information were filled in by the interviewer as the information was received. This was found to be of value in gaining personal information. The farmer could see that

he, as, John Doe, did not enter into the picture but only his ideas and practices as one of an indistinguishable group were gained.

Name \_\_\_\_\_ Location \_\_\_\_\_

1. Card Number. Col. 1,2,3.

2. Code Number. Col. 4,5. (Soil Class)

3. Age Group. Col. 6.

0-	3- 30-34	6- 45-49	9-60-
1- 19-34	4- 35-39	7- 50-54	
2- 25-29	5- 40-44	8- 55-59	

4. Occupation.

Present. Col. 7.

0-	3- Professional & Business	6- Widow
1- Farmer		
2- Farmer and other type	4- Laborer	5- Retired

Previous. Col. 8.

0-	3- Professional & Business	(Background- Farm, Rural, Urban)
1- Farmer		
2- Farmer and other type	4- Laborer	5- Retired

5. Ownership Status. Col. 9.

0-	3- Tenant-Rent	6. Idle
1- Owner	4- Rents-Shares	
2- Tenant-Shares	5- Rents-Cash	

Time. Col. 10.

0-	3- 15	6- 30	9- 45
1- 5	4- 20	7- 35	10- In family since early times
2- 10	5- 25	8- 40	

6. Family & Size. Col. 11,12.

- Supported by farm. Col. 13

Children@ Boys over 21. Col. 14.

Children- Boys under 21 and over 15. Col. 15.

(Boys \_\_\_\_\_, Ages \_\_\_\_\_, Grade \_\_\_\_\_, High \_\_\_\_\_, Adv. \_\_\_\_\_, Occupation \_\_\_\_\_)  
 (Girls \_\_\_\_\_, Ages \_\_\_\_\_, Grade \_\_\_\_\_, High \_\_\_\_\_, Adv. \_\_\_\_\_, Occupation \_\_\_\_\_)

7. Help. Sons. Col. 16.

Hired. Col. 17.

0-	3- Neighbor	(Cost _____)
1- Part time	4- Need part time help	(NO. _____)
2- Year-round	5- Need year-round help	

8. Cooperating Agency. Col. 18.

0-	4- AAA	8- Wheat OK
1- Farm Security	5- Was a AAA Mbr.	9- Corn OK
2- Nat'l Farm Loan	6- AAA - OK	
3- Production Credit	7- AAA not OK	

9. Soil Conser. Service. Col. 19.

0-	3- Spectacular erosion
1- SCS and AAA same org.	4- Proper knowledge of
2- Distinguishes between	

10. Organizations. Col 20.

0-	3- Cooperative of Dexter
1- Grange	4- 4-H
2- Farm Bureau	

- 11. Educational. Col. 21. 0- 4- US Govt. Bul.
- 1- Farm Home Hour 5- More Prac. Info.
- 2- WKAR 6- Aid from Co. Agent
- 3- Mich Col. Bul. 7- No Radio

(Magazines- SF MF CF FJ CG \_\_\_\_\_ . Papers- AAN DN DFP \_\_\_\_\_)

- 12. Satisfaction with profession. Col. 22. 0- 3- Would and will leave
- 1- Only Pfofession 4- Would not advise young man to start.
- 2- Good but-

- 13. Total Acreage. Col. 23,24,25.

Acreage in permanant pasture Col. 26,27. (Up. \_\_\_\_ .Br. \_\_\_\_ .Ms. \_\_\_\_)

- Status of pasture. Col. 28. 0- 3- Not improved
- 1- some improved 4- Retired from cultivation
- 2- All improved

- Reason for retirement. Col 29. 0- 3- AAA retired
- 1- soil erosion 4- Marsh
- 2- Soil depletion 5- Brush

Acres seeded. Col. 30,31. ( A1 \_\_, Cl. \_\_, JG \_\_, T \_\_, Br \_\_, \_\_\_\_\_ )

Acres in supplemental pasture. Col. 32. (Species \_\_\_\_\_)

Acres in woods. Col. 33,34.

- Grazing- Col. 35. 0- 4- Not good for woods
- 1- Grazed 5- Not good for animals
- 2- Not Grazed 6- Not fenced

Acres in corn. Col. 36,37. ( Yield \_\_\_\_\_ )  
 Acres in Wheat. Col 38,39. ( Yield \_\_\_\_\_ )  
 Acres in Oats. Col. 40,41. ( Yield \_\_\_\_\_ )  
 Acres in others. Col. 42,43. ( Yield \_\_\_\_\_ )  
 Total cropped acreage. Col. 44,45,46.

- 14. (No. Beef Cattle Fatening \_\_\_\_\_, No. sold \_\_\_\_\_ \$ \_\_\_\_\_ Breed \_\_\_\_\_ )
- (No. Western Lambs Fat. \_\_\_\_\_ NO Sold \_\_\_\_\_ \$ \_\_\_\_\_ )
- (Dairy cows \_\_, Sold \_\_, M. Base \_\_, Breed- G R \_\_\_\_\_, Dealer \_\_\_\_\_ )
- (Sheep \_\_\_\_\_, Sold \_\_\_\_\_, Wool \_\_\_\_\_ \$ \_\_\_\_\_, Breed- F M C \_\_\_\_\_ )
- (Hogs \_\_\_\_\_ ?Sold \_\_\_\_\_, Freed \_\_\_\_\_ )
- (Horses \_\_\_\_\_, Sold \_\_\_\_\_, Breed \_\_\_\_\_ )
- (Money crops \_\_\_\_\_ \$ \_\_\_\_\_ )

- 15. Income. Col. 47. 0- 1- Supported by farm 2- Outside aid

- 16. Topography. Col 48. 0- 3- gently rolling
- 1- level 4- Hilly
- 2- partially level with gentle slopes

- 17. Soil. Col. 49. 0- 2- Heavy 4- Medium
- 1- light 3- half and half

- 18. Rotation. Col. 50. Row crops in years
- Col. 51. Small grain in years
- Col. 52. Average meadow in years

Varies. Col. 53. 0- 4- Varies with slope  
 1- same for all 5- Varies with both  
 2- same as always 6- Varies with season and  
 3- Varies with soil and seeding success.

19. Gullying. Col. 54. 0- 1- yes 2- No

(Crop in which there is the most washing- Corn, Oats, Wheat \_\_\_\_\_)

20. Yields. Col 55. 0- 3- Organic matter 6- Comm. Fert.  
 1- Same in all 4- Erosion 7- Soil  
 2- Not same in all 5- Weather 8- Manure

21. Plowing. Col. 56. 0- 3- Both affect  
 1- soil affects manner 4- Nothing affects  
 2- Slope affects manner

Col. 57. 0- 3- Best outside of contour 6- Just  
 1- parallel to fence 4- Should follow slope plow  
 2- longest irrespective 5- No need to consider slope

22. Green manure & Cover Crops Co. 58. 0-  
 1- grow specifically for manure (Species \_\_\_\_\_)  
 2- grow specifically for cover (Species \_\_\_\_\_)

23. Lime. Col. 59. 0- 5- Dost prohibits  
 1- do not use 6- would if owned  
 2- Soil test 7- No need  
 3- Rule of thumb 8- Plan to (Cost \_\_\_\_\_)

Total acreage over 10 year period. Col. 63,64.

24. Comm. Fert. Col. 62. 0- Do not use 5- 0-8-24  
 1- Super phosphate 6- Row crops  
 2- Phosphate 7- Small Grain  
 3- 2-12-6 8- Cost prohibits (Cost \_\_\_\_\_)  
 4- 0-14-6 9- Plan to (Amt. \_\_\_\_\_)

Total acres per year. Col. 63,64.

25. Manure. Col 65. 0- 3- meadow 6- 10-19 9- 40-  
 1- rpw 4- All 7- 20-29  
 2- grain 5- 0-10 8- 30-39 (Acres \_\_\_\_\_)

26. Practices. Col. 66. 0- 4- Strip Cropping  
 1- Sod in gullys 5- Terracing  
 2- Sod in waterways 6- Contour furrowing  
 3- Tile (\$ \_\_\_\_\_) 7- Diversion ditches

27. Woodland Planting. Col 67. 0- 3- Softwoods  
 1- plant trees 4- Hardwoods  
 2- underplant

28. Fuel. Col. 68. 0- 1- woodlot 2- coal 3- oil

Reason for. Col 69. 0- 1- no wood 2- cheaper 3- too busy & no help

Wood supply will last for 20 more years. Col. 70.

29. Wildlife. Col. 71. 0- 5- Is comp. with farming  
 1- Doing something & interested  
 2- Not doing, but interested  
 3- Not doing, not interested  
 4- Not compat. with farming.

30. Soil Conser. Service. Col. 72. 0- Acquainted with S. Livingston Dst.  
 2- Not acquainted.

Col. 73. 0- 3- Passive interested  
 1- Interested in encorporating 4- For the novice only  
 2- not interested

Col. 74. 0- 5- Controlled hunting  
 1- advice 6. Scientific Farming  
 2- Machinery use 7- Fed. Govt. should leave alone  
 3- Plant & Seed 8- Farmer should organize  
 4- Cooperative 9- Should not organize

31. Future of Farm. Col. 74. 0- 3- Rent- shares  
 1- Continue in family 4- Rent-cash  
 2- Sell

32. Best enterprise. Col. 76. 0- 3- Sheep  
 1- Dairy 4- Truck  
 2- Cattle 5- General

33. Labor. Col. 77. 0- 3- Horse and Hand  
 1- Mech. equipment 4- Hand  
 2- Mech. & Horse

34. Appearance. Col. 78. 0- 3- Neligent  
 1- well kept up  
 2- Fairly well kept up

35. Present enterprise. Col. 79. 0- 4- Truck 8- Investment  
 1- Dairy 5- Poultry  
 2- Cattle 6- Hogs  
 3- Sheep 7- Grain

REMARKS :-

## ANALYSIS OF RESULTS

### TABULATION

Because of the extensiveness of the material gathered it is impossible to make a detailed analysis without increasing the paper to undesirable and confusing length. Straight distributions are included for most of the questions while the results of others are brought out in discussion. Two-way distributions comparing soil, age, period on the land, ownership, and present enterprise have been worked out for the most questions in order to show more clearly the factors that may have had an influence on the farm operation, practices and land use.

### COMPARISON BY TWO-WAY DISTRIBUTION OF--

#### Soil Classes

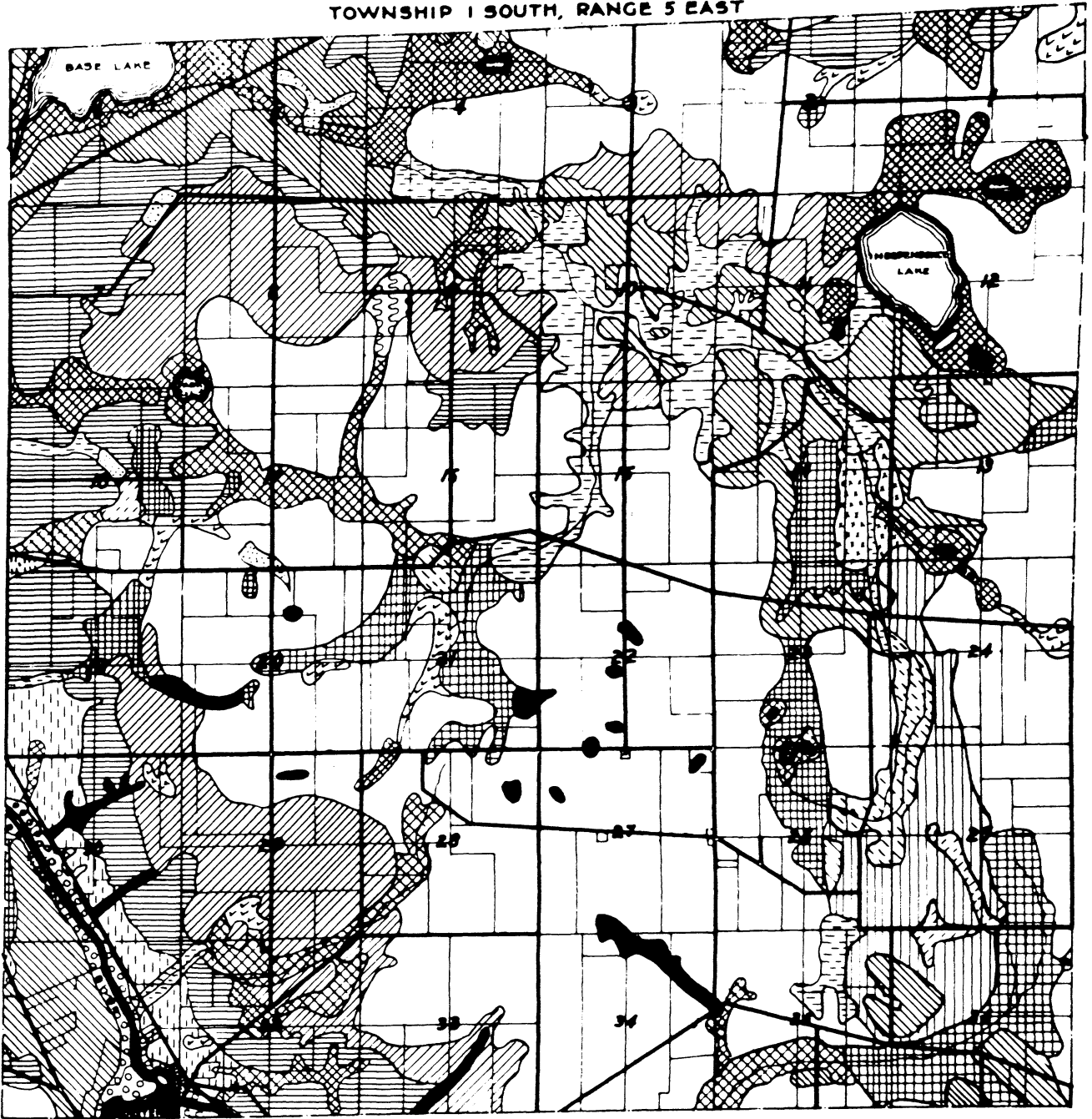
The soil map for Webster Township as published by the U. S. Department of Agriculture<sup>2</sup> was reproduced and used as a basis for classifying each farm into a soil class unit. It is noticed by a glance at the soil map (page 13)

<sup>2</sup>U. S. D. A. Bureau of Soils. 1930. Soil Survey of Washtenaw County, Michigan. Government Printing Office, Washington, D. C.

SOIL

MAP OF WEBSTER TOWNSHIP

TOWNSHIP 1 SOUTH, RANGE 5 EAST



LEGEND

- |                          |                     |                    |
|--------------------------|---------------------|--------------------|
| Miami Loam               | Bronson Sandy Loam  | Newton Sandy Loam  |
| Fox Sandy Loam           | Brookston Loam      | Berrien Loamy Sand |
| Bellefontaine Sandy Loam | Brookston Clay Loam | Rifle Peat         |
| Hillsdale Sandy Loam     | Griffin Loam        | Greenwood Peat     |
| Brady Sandy Loam         | Gilford Loam        | Carlsile Muck      |
| Washtenaw Loam           | Walkkill Loam       | Houghton Muck      |



that Miami loam is the dominant best soil and encompasses approximately fifty percent of the total area and Bellefontain and Hillsdale, inferior soils from the agricultural standpoint, occupy the largest percentage of the remaining area.

A soil classification, as shown on page 15, was devised on the basis of general productivity of the soil type. Three classes are used, the first representing the best agricultural land, the third the poorest in the township, and the second intermediate. Thirty-eight percent of the total land area in Webster Township (outside of the previously mentioned areas omitted) falls in the soil classification 1, thirty percent in soil class 2, and thirty-two percent in soil class 3.

J. O. Veatch, 1941,<sup>3</sup> divided the state of Michigan into four general land classes as follows:

First class--"Land of highest value for general farming on the basis of inherent productivity of the soil . . . ."

Second class--"Usable land of medium value for general farming . . . ."

Third class--"Land of doubtful value for general farming. Suitable locally for special crops, subsistence farms and extensive grazing."

Fourth class--"Vary low or no value for general farming. Small acreage suitable for high-acre-value crops under special conditions. Low value for extensive grazing."

<sup>3</sup>Veatch, J. O., 1941. Agricultural Land Classification and Land Types of Michigan. Michigan State College, Agricultural Experiment Station Special Bulletin, 248 (Revised). East Lansing, Michigan.

## SOIL CLASSES AND ACREAGE OF EACH

Soil Class	Description	Major Type Name	Number of Cases Interviewed	Acreage	
				Area Covered	Total
1	Well drained clay loams and loams	Miami Fox	47	7389	8300
2	Dominately well drained clay loames and loams, with sandy & light sandy loams and/or drained organic soils	Miami and Fox+-dominate, with Hillsdale Bellefontaine and/or Rifle Peat Carlsile Muck Houghton Muck	24	3706	6500
3	Sandy & light sandy loams or dominately so with organic.	Hillsdale Bellefontaine Rifle Peat Carlsile Muck Houghton Muck	33	5136	6900
			Total	16231	21700

Omitted 800 acres of Class III--Dexter area

290 acres of Class II--Loch Alpine Sub-division

Approximately 40 percent of Webster Township is included in class 1, 55 percent in class 2, 5 percent in class 3, and none in class 4.

It might have been well to use Veatch's classification as a basis for this study. However, it was thought, for the purpose of bringing to light more information regarding the less valuable agricultural soils, the classification as used in this survey would facilitate a more thorough analysis. A map showing the soil classes is found on the next page.

#### Age-Classes---Population

Ages were recorded in five year classes but in order to bring out more significant comparisons for two-way distributions on age, these five year classes were condensed into three groups as follows:

Age group	19-34	35-49	50+	No information
Number of cases interviewed	6	27	70	2

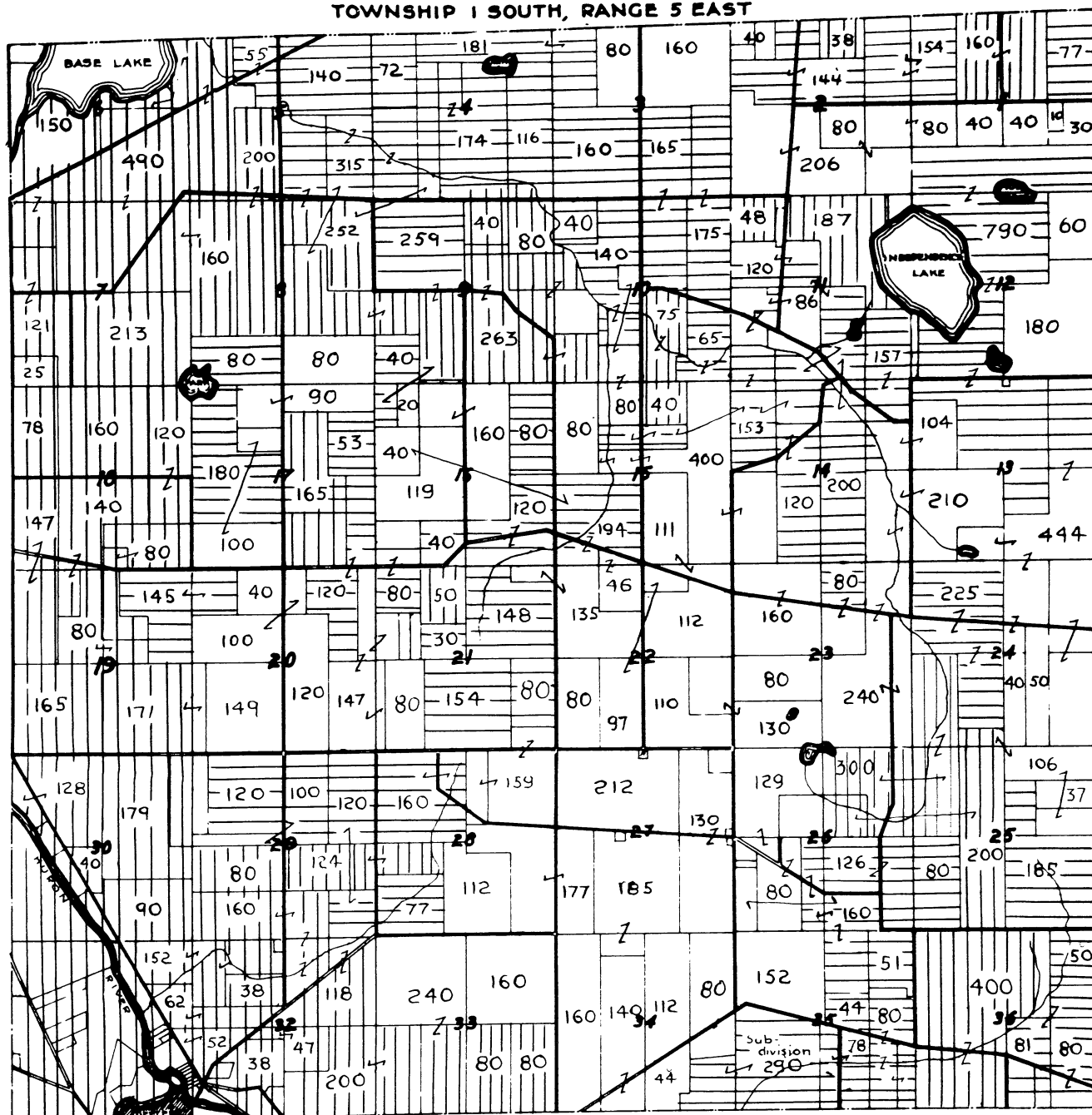
#### Years of Occupancy

This information was tabulated in five year periods but due to the size of the sample and the large distribution, these classes were further condensed as follows:




Period on the farm--years	0-5	6-20	21-35	36+
Number of cases interviewed	34	21	17	33

# MAP OF WEBSTER TOWNSHIP

TOWNSHIP 1 SOUTH, RANGE 5 EAST



## LEGEND

-  SOIL CLASS 1
-  SOIL CLASS 2
-  SOIL CLASS 3

### Class of Ownership

A comparison of management used should bring out some important facts in relation to owners and tenants and in a few instances this will be pointed out.

### Present Occupation of Resident

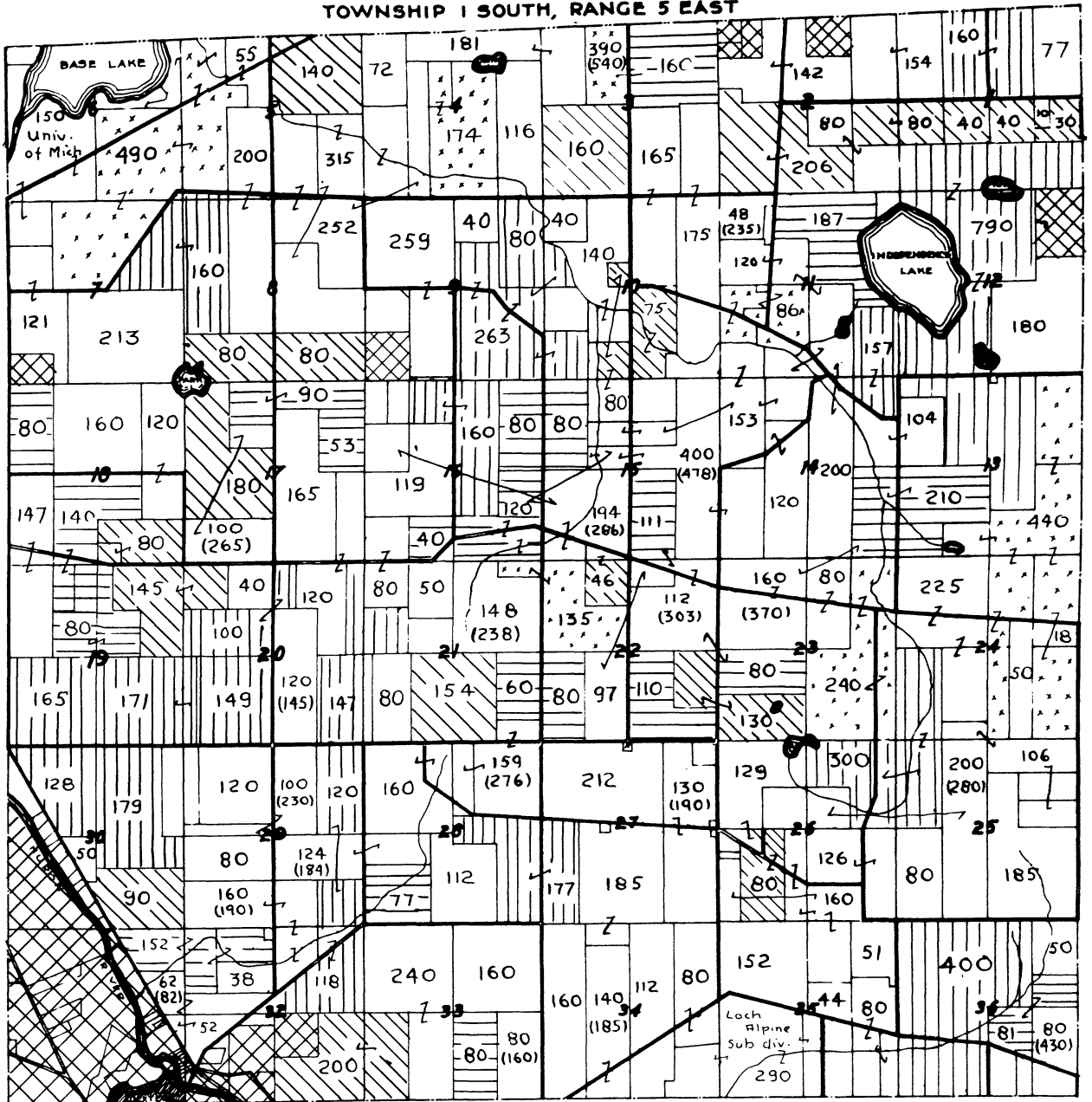
Where comparisons with the present occupation facilitates a more thorough analysis of the questionnaire the following occupations were used as headings: farmer, farmer plus other type of labor, professional and business, laborer, retired.

### OWNERSHIP STATUS







Of the 105 occupants interviewed eighty-nine were owners, representing eighty-five percent, and sixteen were tenants. The following summary and map on page 19 present a clearer picture of the ownership status:

# MAP OF WEBSTER TOWNSHIP

TOWNSHIP 1 SOUTH, RANGE 5 EAST



## LEGEND

-  FARM OPERATED BY OWNER
-  FARM OPERATED BY MANAGER
-  OWNER LIVES ON FARM AND RENTS LAND TO OTHERS
-  TENANT
-  IDLE
-  NO INFORMATION

140 Acre<sup>re</sup> owned  
 (185) Acre<sup>re</sup> operated

Summary of information on ownership status  
(105 individuals)

Class of Ownership	Total	Number	Managing Farm	Live on the Land			Rent and work other land besides home estate
				Rent for/on			
				Cash	Shares	Idle	
Owners	89						
Male		80	67	2	3	8	19
Female (Widow)		9	3	2	3	1	
				Rent land for/on			
				Cash	Shares		
Tenants	16						
Male		15	15	6		9	
Female (Widow)		1	1	1			

It will be noted from the preceding summary that fifty-six percent of the tenants are on a share basis with the owner. In most cases it is a fifty-fifty proposition, while in two cases the owner supplies all the equipment and stock for two-thirds and the tenant his labor for the other one-third. Most cash renters were required by the owner to stay within the AAA crop acreage restrictions.

Agricultural land rented for from \$2.60 (\$1.87 per acre cash from the tenant plus 53¢, the amount of the AAA check) to \$3.00 per acre on a yearly basis regardless of whether or not the renter became a tenant and utilized

the buildings or merely used the land for crops during the summer months. Pasture for cattle ranged from \$1.00 to \$1.10 per acre on a yearly basis with no restrictions as to the number of animals or periods of grazing. From 4 to 4 $\frac{1}{2}$ ¢ per head per week was charged for sheep pasture with no charge for the young until they were weaned. As far as could be determined by the author there were no restrictions as to the number of head allowed per acre or any specific period of grazing.

The two-way distribution comparing ownership with soil classes (App. 1) shows that the largest percentage or 50 percent of the tenants are located on class 3 soil. A larger survey would probably show some trend in respect to the idle areas but the personal factors have entered into the situation and the abnormal defense boom on wages and demand for labor has confused the picture.

#### YEARS OF OCCUPANCY

Change in ownership of farm property might have a direct bearing on the productivity of that particular parcel. However, in order to correctly judge a parcel on these grounds it is necessary to gather information concerning the previous owners. Most important is--what kind of a farmer was he? This information was obtained in an incidental manner whenever possible and it was learned that



in many cases the previous owner was unable to make a living because of his methods of farming rather than the soil. This is further attested by the fact that some of the more successful farmers in the area are living on soil that was greatly mis-managed prior to purchase.

The main reason for gathering this information was to see if it would have any bearing on the type of farm management. The summary of the field information is as follows:

Years of Occupancy	0-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46+
Cases	34	7	4	10	3	8	6	3	2	28

The number of persons who have established residence during the last five years represents approximately thirty percent of the total number interviewed. The two-way distribution on age (App. 2) shows that sixty percent of this group are fifty years and over in age. This indicates a trend of city workers, many of whom were born and raised on a farm or in a rural area, together with city business and professional men, moving back on the farm.

A comparison of soil classes with years of occupancy (App. 2) indicates that approximately the same percentage (30 percent) of those interviewed in each soil class, have remained on the farm for thirty-six or more years. A trend of the poorer soil classes changing hands more rapidly is

noticed as, the largest percentage of those living on the land from 0-5 years have moved in on class 2 and 3 soils.

The 6-20 group should include those who moved back to the farm during the depression and it is interesting to note that sixty-seven percent moved in on the best land. Lack of information concerning the previous owner does not allow for a complete analysis as to the reasons for this.

As an indication as to how some men feel about their farm and land the following information concerning one case is given. One owner, who had lived on and worked the farm since birth, but was no longer able to keep on because of infirmities, would not close a sale deal with a Detroit business man until he, the buyer, was able to assure him, the owner, that his son would take over the management of the farm, and that the farm would not be used as a play thing and allowed to run down.

#### PRESENT AND PREVIOUS OCCUPATION OF RESIDENT

Information concerning the present occupation of the owner or tenant and the occupation prior to taking up residence in this township is summarized below:

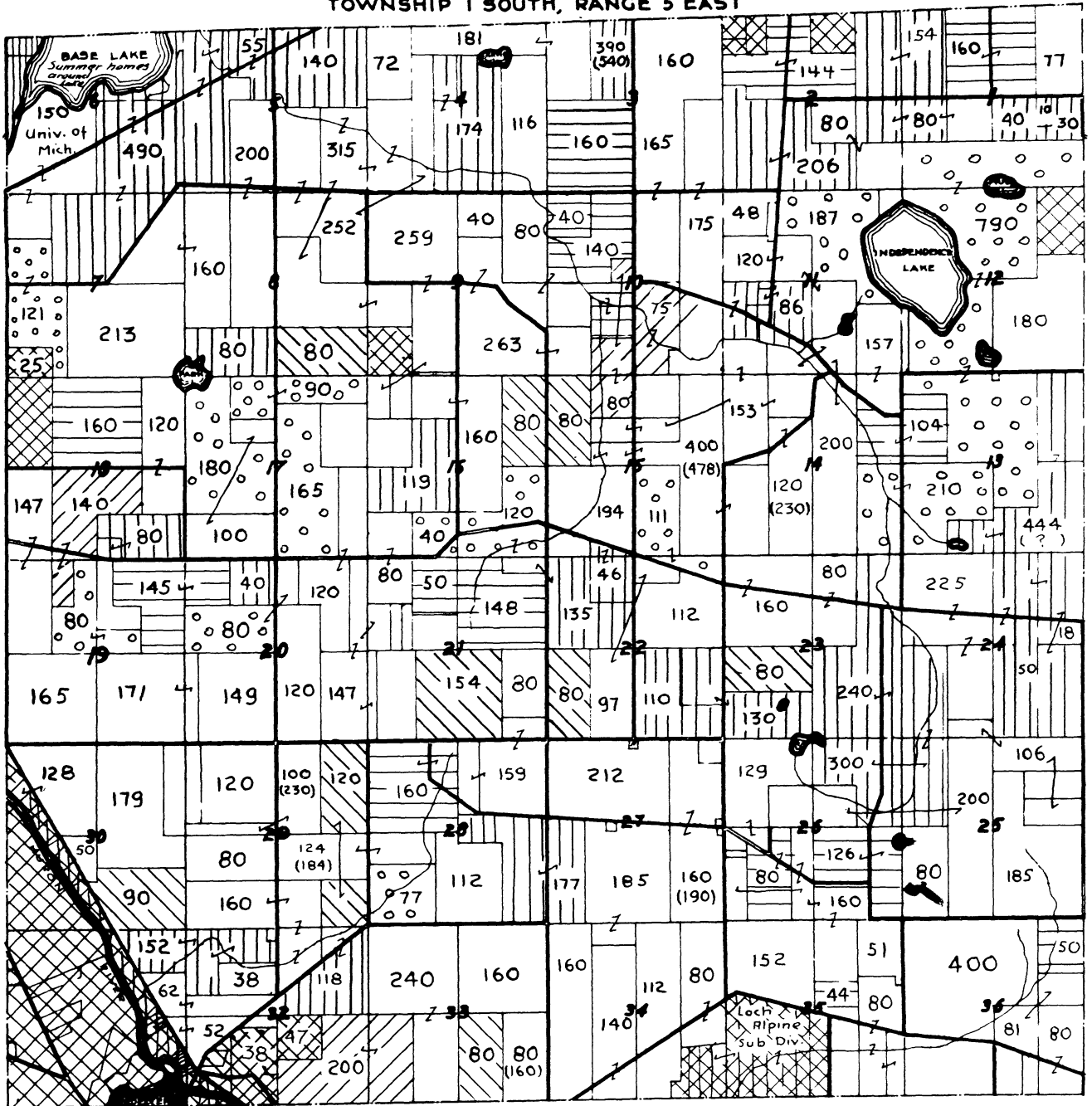
Summary of Present and Previous Occupation Information

Occupation Class	Number at Present in Class	Number Previously in Class
Farmer .....	68	66
Farmer plus other type of labor...	14	3
Professional and Business.....	11	22
Laborers .....	3	6
Retired .....	7	1
No information ...	2	7
Cases interviewed.	105	105








It is interesting to note, from the above summary, that six men have retired and remained on the land. In four cases the sons were managing the farm and in the other two, the land was rented on shares. Twelve of those interviewed have supplemented their income by doing other work as well as farming since coming on the land. Some were taking advantage of the "defense wages" to pay off debts and put aside enough money to completely equip the farm after the war is over.

Six professional and business men, four of whom were interviewed, can be correctly classified as "Gentlemen Farmers." Four out of this group were living on the land and commuting to business daily, the other two coming out on weekends and for short periods. All six men had

TOWNSHIP 1 SOUTH, RANGE 5 EAST



OCCUPATION OF OWNER OR TENANT

- |   |                         |  |         |
|---|-------------------------|--|---------|
|  | FARMER                  |  | LABORER |
|  | WIDOW                   |  | RETIRED |
|  | FARMER PLUS OTHER TYPE  |  |         |
|  | PROFESSIONAL - BUSINESS |  |         |
|  | NO INFORMATION          |  |         |

experienced farmers as managers and the farms were well stocked with registered or improved grade stock. Their reasons for investing in the farm vary somewhat with the individual. In general, though, as was brought out in the discussion resulting from the interview, Henry Ford's philosophy that the farm represents a good investment and place to live, is finding approval with many of his men and is being generally accepted by quite a few in the professional and business group. As far as could be determined this type of investment could not be engaged in by a man in the average income bracket as the amount of money spent for improvements etc. will tax the farm to the limit for a long time to return even a fair interest rate on the initial investment.

The remaining professional and business men interviewed were interested mainly in a home or place to live in the country. As is seen by a glance at the map (page 19) this group and the "retired group" were renting their land to farmers who need more acreage for crops and grazing.

A comparison of present occupation with soil classes (App. 3) indicates that the professional and business group are purchasing the better lands.

An interpretation of occupation based on age and years on the land indicates, that during the depression period seven out of eight business men commenced farming and have continued to the present. In almost every case the

individual had spent considerable time on the farm in youth. In at least two cases the man came back to the "old homestead." Perhaps the reason for their staying with the farm was a fortuitous gift of the property because of death or retirement. It is also of note, that their average age was approximately 30-35.

Occupations of the older man (group 35+) and those living on the farm for thirty-six or more years have remained fairly steady.

#### PERSONAL AND FAMILY DATA

##### Ages

Ages were divided into five year classes. The Bureau of Census uses five year classes up to the thirty-fourth year and ten year classes thereafter, so if desired the following summary can be compared with census figures.

Age	Cases
19-24 . . . . .	1
25-29 . . . . .	1
30-34 . . . . .	4
35-39 . . . . .	9
40-44 . . . . .	6
45-49 . . . . .	12
50-54 . . . . .	20
55-59 . . . . .	16
60+ . . . . .	34
No Information . . . . .	2
Total . . . . .	<u>105</u>

It is interesting to note that only twenty-six per- cent of those interviewed are in what might be considered as the prime age group of 35-49 and that thirty percent are 60 years or older.

### Size of Family

From the sociological standpoint the size of the family is important as it gives the number of children raised as well as the number in the family circle. This information facilitates comparison with state and national figures.

### Summary of Size of Family Raised (including Parents)

Size of Family	Number of Families in this Group	Total Number
1	5	5
2	23	46
3	21	63
4	16	64
5	18	90
6	9	54
7	5	35
8	2	16
9	4	36
10	1	10
11	1	11
12	1	12
No Information	9	
Total Cases	<u>105</u>	

The average size of family in this sample is approximately 4.4.

### Number Supported by the Farm

The number of persons supported by the farm is more important from the economic standpoint. The figure in the following summary includes not only the family of the owner or tenant but also the permanent hired help and their respective families.

### Summary of Number Supported by Farm

Number Totally Supported by Farm	Number of Families in This Group	Total
1 . . . . .	8	8
2 . . . . .	26	52
3 . . . . .	22	66
4 . . . . .	13	52
5 . . . . .	7	35
6 . . . . .	4	24
7 . . . . .	1	7
8 . . . . .	1	8
9 . . . . .	3	27
Farm not fully supporting anyone . . . . .	20	20

The average number supported in each soil class as computed from Appendix 5 is 3.35 for Class 1, 3.28 for Class 2, and 2.89 for Class 3. This might indicate that the better classes of soil are supporting larger families and more hired help. However, these figures do not represent the "carrying capacity" of the farm. Numerous social factors enter into the picture and do not allow for an evaluation of carrying capacity.



Farm Labor Situation

We cannot conclude from the age grouping of the owners and tenants alone as to whether or not the young men are moving off the farm. It is quite apparent that, generally speaking, only one son can take over the management of the family homestead, especially if he is married. In order to bring out more clearly the situation as it exists, the sons over 21 and those under 21 were recorded.

Summary of Information as to Ages of Sons

Number	Number of Families	Total
Sons Over 21 Years of Age		
1 . . . . .	23	23
2 . . . . .	19	38
3 . . . . .	3	9
4 . . . . .	2	8
8 . . . . .	1	8
None . . . . .	57	<u>86</u>
Sons Under 21 Years of Age		
1 . . . . .	24	24
2 . . . . .	5	10
3 . . . . .	1	3
4 . . . . .	1	4
None . . . . .	74	<u>41</u>

Summary of Information on Sons Helping on the Farm

Sons Helping on the Farm	Number of Families	Total
1 . . . . .	33	33
2 . . . . .	1	2
3 . . . . .	1	3
None . . . . .	70	<u>39</u>

Out of the total of 86 sons raised on the Webster Township farms, and now over 21, five are married and managing a farm other than the homestead and two of this group are in Webster Township. Nine other sons over 21 and single, are helping their fathers full time. Two others are married and helping full time. Four are married and helping part time on a share basis with their fathers. This makes a total of 15 sons over 21 in 48 families helping their dads, or 42 percent. Chances are that after the war is over, this 42 percent will represent full time employment.

There are 41 families with boys under 21 and in 12, or 34 percent of the cases, these sons are helping their fathers on the farm. This percentage is lower than we would expect because boys from the age of 1-20 are included. It would be better to record only those over 15 in future surveys.

A comparison of sons helping on the farm in each soil class (App. 6) shows 46 percent of the total on Class 1 soil, 24 percent on Class 2 soil and 30 percent on Class 3 soil. This may indicate that more sons are able to gain their living on the better soils.

PRESENT EMPLOYMENTSummary of Present Employment

<u>Type of Labor</u>	<u>Number of Cases</u>
Part-time (Total) . . . . .	50
Haying . . . . .	9
Harvest . . . . .	16
Neighbor . . . . .	25
Full-Time . . . . .	23

Summary of Employment Needs

<u>Type of Labor</u>	<u>Number of Cases</u>
Part-Time . . . . .	26
Full-Time . . . . .	25

The figures shown under present employment represent the conditions last year (1941). At this time farmers are finding it practically impossible to get full time labor, and much less, part time. In one instance, a farmer hired four different men on a full time basis during the winter months of 1942, but one was taken by the draft. The other three men were drawn to the factories by the higher wages paid for defense work.

From the summary on employment needs it is shown that only 25 percent of the farms are able (under present management) to support outside part-time labor, while 24 percent are able to support outside full-time labor. The daily wage demanded varies from \$3.00 to \$3.50 per day and the monthly wage from \$60.00 to \$100.00 (May, 1942). In most instances, the owners are unable to meet the

present wage and thus may be forced to curtail operations. This has already taken place in some instances where the owner (in older age brackets) has stopped dairying and is concentrating effort on feeding stock and poultry.

It is noticed from the summary of present employment that a surprisingly small percentage of the farmers are exchanging help. In view of the present farm labor shortage it is likely that exchange of help between neighbors will increase.

Last year, many acres of good hay were left uncut. It is quite probable that much more hay will be left this year and that combines, corn pickers and other mechanical aids will be in great demand. Three combines were owned by the farmers interviewed, two by older men and one by a young man. In the latter instance he was the son of a farmer and helping his father on the farm. He was able to pay for his combine machine last year and made a small profit, as well, by charging approximately \$2.50 per acre to combine small grain and soybeans.

#### MECHANICAL EQUIPMENT

##### Summary of Use of Mechanical Equipment

Use all mechanical equipment . . . . .	7
Use mechanical equipment and horse . . . . .	57
Use horse and hand . . . . .	31
No information . . . . .	10
Cases . . . . .	105

The number in the no information group is accounted for by the fact that the land was either idle or the owner or tenant was renting to others.

The distribution (App. 7) of use of mechanical equipment on age, years on the land, and soil classes shows that the younger men (19-49) are more mechanized than the older group, 50+. There is little difference between the years on the land groups. When Soil Classes 1 and 2 are combined and compared with Class 3, it is found that 65 percent of the former and 61 percent of the latter are mechanized, indicating that the better soils are slightly more mechanized.

#### INCOME

At first an attempt was made to determine the income of each man interviewed either by direct questioning or from stock and crop data. A multitude of reasons and problems prevented the author from following this through. However, the owners and tenants receiving outside aid or income from other sources were recorded.

This distribution (App. 8) on age, years on the land and soil classes might indicate that: first, the better soils are more sustaining; and secondly, a larger percentage of the more recent purchases are not fully supporting the owner.

### APPEARANCE OF BUILDINGS

This question was not asked directly and is based on the author's observations.

#### Summary of Appearance of Buildings

Well kept up . . . . .	48
Fairly well kept up . . . . .	43
Negligent . . . . .	8
No record . . . . .	<u>6</u>
Total Cases . . . . .	105

From the above summary, it is noticed that 49 percent of the farms are included in the well kept-up group. This percentage checks favorably with Swears' <sup>\*</sup> study which shows approximately 54 percent in the well kept-up class. The discrepancy of 5 percent is probably due to the fact that the urban like settlements were included in his figures. Two-way distributions on appearance did not bring out any significant information. This would indicate that personal factors concerning the owner, other than age, have more of a bearing on this matter than does anything else.

### FUTURE OF FARM

This question was included in order to ascertain in a general way how the land ownership might look in a few years. Of course, so many factors enter into the situation that no definite conclusions can be drawn from it except in a very general manner.

\* op. cit. p. 5.

Summary of Farm Future

Continue in family . . . . .	70
Expect to sell . . . . .	13
Expect to rent . . . . .	13
No Information . . . . .	<u>9</u>
	105

The distribution on age (Appendix 9) shows that the younger men plan to stick to farming or purchase the land they are now tenants on and that most of the older men either have someone to pass the farm on to or they are as interested in renting as they are in selling.

PRESENT FARM ENTERPRISE

Very general enterprise classes were used for the first few interviews but it was soon discovered that for comparison purposes the numerous combinations of enterprises undertaken by each individual would be too confusing. So the enterprises of each case were recorded in the same column on the statistical card. Thus, the fifty-nine cases shown in the summary below, opposite dairying, may either be specializing altogether in dairying or also may have sheep or hogs, and so forth, as well.

Summary of Present Enterprise

	<u>Cases</u>
Dairying . . . . .	59
Cattle Western . . . . .	
Native . . . . .	23

Summary of Present Enterprise (Continued)

	<u>Cases</u>
Sheep Western Native . . . . .	43
Truck . . . . .	2
Poultry . . . . .	26
Hogs . . . . .	45
Grain . . . . .	7
No enterprise . . . . .	25

The large number in the "no enterprise" group includes, those who are renting their property to others, and whose main source of income is not from the farm.

The above summary represents the frequency of enterprise rather than the importance from the standpoint of income. It is noticed that dairying rates first in number, with hogs and sheep second and third, respectively.

While Appendix 10 does not show any spectacular trends, it is noticed that the older men are specializing more in feeding stock and the younger men are general farmers, specializing mainly in dairying.

Appendix 11, a two-way distribution of present farm enterprise on present occupation, is included to give a more clear picture of what those other than farmers are engaged in.

STOCK DATA

This information can be used to determine the type and size of the farm enterprise. It is noticed that



question 14 in the questionnaire asks for a complete inventory of the stock on hand and also animal and crop products sold. The value of collecting and recording such data cannot be questioned, but the time required to get the complete information forced the interviewer to record only portions of the question. For this reason, a complete analysis cannot be made.

Summary of Information on Stock Data

Stock	Total Number	Cases	Average
Dairy Cows			
Average Number Milking . . . .	724	59	12.2
Sheep--Ewes . . . . .	2130	42	51
Western lambs . . . . .	986	6	164
Hogs--			
Approximate Number Sold . . .	611	32	19
Cattle--			
Western and Native Sold . . .	244	23	10
Horses . . . . .	145	45	3.2

One man was specializing in raising pure bred registered English Suffolk and Shropshire sheep which he sells to the farmers in the surrounding country. In the fall of the year he has from 200 to 300 sheep in his flock and sells quite a few to 4-H Club members.

Two other young men, one time 4-H Club members, are also raising registered sheep. One of the two raises

registered Ohio Improved Chester Hogs, as well, and finds it very much worth his while.

Each landowner was asked what farm enterprise he considered as the most profitable and almost to the man, they gave general farming for their answer. This was to be expected, of course, but one very important point was brought out in some discussions resulting from this question. In their opinion, the type of enterprise that a farmer may engage in is dependent upon the abilities of the operator rather than what the farm may be capable of producing.

#### SATISFACTION WITH OCCUPATION

This question was asked in order to find out in a general way whether or not the man had and was making a satisfactory income from farming. Forty-two stated that farming was the only occupation, thirty-nine were more or less satisfied and five were definitely not satisfied and would discourage any young man from taking up the occupation.

Many interesting discussions resulted from this question and the most generally important opinion expressed was that only men born and raised on the farm stood a chance of making a success of farming. Some made the observation that "city folk" who bought farms and ran them

as a hobby during good years, were left "high and dry" after the depression because their savings were wiped out and their farms were invariably not being run on a sustaining basis.

### EDUCATIONAL DATA

Part four of question ten and question eleven were included for the purpose of gaining information concerning the use made of the various educational and service agencies and programs available to the farmer.

#### Summary of Educational Data

Listen to the U. S. Department of Agriculture Farm Home Radio Program . . . . .	25
Listen to Michigan State College Radio Program over station W.K.A.R. . . . .	45
Receive Michigan State College Agricultural College Farm Bulletins . . . . .	48
Receive U. S. Department of Agricultural Farm Bulletins . . . . .	47
Receive aid from the County Agricultural Agent . . .	30
Have children who belong to the 4-H Club . . . . .	18
Owners or operators of farm have belonged to the 4-H Club . . . . .	2
Receive no appreciable direct educational program .	22
Have no radio . . . . .	4

It is noticed from the above summary that approximately the same number, and almost invariably the same men, are taking some advantage or all possible aids. Approximately seventy-five percent of the men who receive no appreciable educational program are living on class 2 and 3 soils.

In general, the Michigan State Agricultural College Radio Program over station W.K.A.R. at East Lansing is considered more valuable than the U. S. Department of Agriculture Farm Home Hour Program. The main reason for this is that local information on farming and market reports has much more appeal. However, some did contend that they were able to become better acquainted with the National Agricultural situation through the medium of the Farm Home Hour.

Farmers are touchy on matters concerning the skill and training needed of farm operators and other small points. For instance, many were up in the air in respect to the widely broadcasted idea of enlisting the services of college boys, women and city folks to take the place of needed and unobtainable part time help for the harvesting period. This left the impression on many of those interviewed that the leaders in farm affairs spent too much time in an office chair philosophizing and were not very well informed as to farm needs.

The radio programs probably reach more of the women folks than the men, but are receiving strong support from

both sexes, especially the W.K.A.R. programs.

Two men keep a complete file of most all farm bulletins issued by Michigan State College of Agriculture and augment this file with U. S. Department of Agriculture Farm bulletins, the latter kindly supplied by their State Senators. The writer tried to find out through what medium the farmers received the college bulletins, the subjects most interested in and the extent of use of the information. In most instances the County Agricultural Agent was the source of supply, either directly or through the 4-H Club activities.

The writer asked each farmer, "What is the last bulletin that you have read?" in order to open a discussion as to interests and extent of use. The answer in many cases was, "By gosh, darned if I remember." Eleven men flatly stated that they were unable to interpret the information on a practical basis. Others stated that they were a "good thing" and had found the bulletins to be very helpful but could not remember just how. Spraying, feeding, fertilizer and liming information was indicated by a few as their main interest.

All in all, the writer was impressed with the fact that very few men were willing to attempt new ideas presented in print. However, if they were able to actually see a demonstration of the idea in practice, either by

their neighbors or some organization, the chances of their adopting the practice was quite good.

It appeared that the bulletins were better received by the women and that they were more open minded and interested in new ideas and improvements pertaining to their part of the work as caring for the home and poultry. Yet, almost to the man, those interviewed thought the idea was a great thing and should be continued.

The County Agent system received general approval and many said, "He must be good, otherwise he would not have remained in office as long as he has." The benefits derived from the County Agent system, as far as could be determined, was mainly through the 4-H Club and the ladies organizations. Advice on general farm matters and culling of chickens were the only services frequently mentioned by the farmers.

The 4-H Club activities have accomplished much to acquaint the young people with the possibilities of making a good living on the farm and indirectly is benefiting the parents. Two young men who are managing their own farms owe their interest and success to the 4-H, while fifty percent of the young men helping on the farm are 4-H members. A few of the younger boys were making a start on improving their fathers sheep heard by purchasing a registered ram. Not one farmer interviewed had any fault to find with the Club and all were very much pleased with what had been accomplished.

Farm magazines, such as the Michigan Farmer, Successful Farmer, Capper Farmer, Farm Journal, Country Gentleman and Hord's Dairyman were subscribed to by most of those interviewed. Quite a few farmers stated that they were able to get more helpful suggestions from the magazines because of the popular and easily understood manner in which material is presented, than from types of technical bulletins. Most men subscribed to the local Dexter newspaper and the Ann Arbor News, while only a few take a Detroit paper.

As an incidence pointing to the need of a better coordinated farm extension service, the following case is cited. A farmer, one time Town Supervisor, wrote the State College and asked for some assistance in developing a management plan for his woodlot. He received an answer to his letter which stated that some one would visit him, but no one ever came. Naturally, he was and is disappointed and being an influential farmer could easily undermine much of the good work that has been and is being done.

The author talked with some farmers who would like to play a more important part in farm organizations and affairs but felt unable to put their ideas across to a group. This is by no means unusual as many successful business men have the same trouble. Perhaps a "discussion class" as organized by business groups would help these men out.

One farmer mentioned the fact that during the last war

farm training was given to high school students. He thinks the need for such a program is greater now than then, and that something like this should be started.

### FARMER ORGANIZATIONS

Farmers have always been considered as the most difficult group to organize and keep together. With the idea of finding out more about this situation question 10 and part 8 and 9 of question 31 were included in the questionnaire.

Only five men contended that farmers should not organize and forty-nine thought that the farmers must organize in order to solve the many problems confronting them as individuals and a group (that is outside of the CIO and like labor organizations). The other fifty per cent felt that there was little to be gained by organizing and were not willing to expend any effort in this direction. Most of the men in this group were in the older age brackets.

Due to the fact that most all men in the dairy business belong to the Michigan Milk Producers' Association only the Grange and the Farm Bureau were included in the questionnaire. The Farmer's Union is not active in Webster Township, though it was at one time. Politics and the type of leadership were the most frequent reasons given for the failure of this organization in this particular section.



The Grange is no longer a strong organization in Webster Township. Most of the twenty-four men who belong are in the older age group and consider it to be more of a social organization and for the women than anything else.

The local Farm Bureau organizations are being run by two young men who appear to be "live wires." They recently completed a membership drive and have forty-four out of the one hundred and five interviewed as members. Their meetings are held once a month at some member's house and approximately fifty percent of the men attend. They discuss the problems confronting the farmers today and invite all members to air their grievances. As would be expected the greatest percentage of the members are farmers and fall in the age group of from 19-49 and have been on the land from 6 to 35 years. A few of the older men are still active and contribute their share to the cause.

The Farm Bureau stores or cooperatives are patronized by as many, if not more, non-members as members. That such cooperatives should be encouraged and enlarged in scope is the opinion of most. Many of the older men were active in starting the original cooperative movement a few years ago.

The Cooperative of Dexter, which handles some Farm Bureau Approved products, is supported by a large percentage of the farmers in this township. Some would like to have

a cooperative selling enterprise combined with this organization.

The United Mine Workers, District 50 has been trying to raid the membership of the Michigan Milk Producers' Association, to which fifty percent of the farmers belong. Only one man interviewed has joined the CIO. This person is not a farmer but has a man running the farm for him while he works in a defense factory. Almost to the man, the rest of those interviewed are against this type of organization, as farmers, generally speaking, do not like violence. In fact, two men in the Township became so concerned about the matter that they personally contacted their fellow "Milk Producers" to persuade them not to join the CIO.

#### COOPERATING AGENCIES

Only an indication as to the effects of federal farm legislation on the farmer and his attitude toward such fall within the scope of this paper. Of the four important agencies operating in this township, namely, Farm Security Administration, National Farm Loan, Production Credit and the Agricultural Adjustment Administration, only the latter is well enough represented in numbers to allow a general evaluation.

As far as could be determined, only two families in

the township are clients of the Farm Security Administration and only one was interviewed. He was well satisfied with the program and was being assisted by one of the more successful farmers in the township who is on the Farm Security Board.

It was discovered after seven interviews that most farmers knew the National Farm Loan Administration as the Federal Land Bank. For this reason the author is not sure that the ten clients interviewed include all clients in the township. However, those interviewed contended that it was a "life saver," for them and that they were well satisfied with the interest rates and manner of administration. The two-way distribution of National Farm Loan clients on age classes (Appendix 12) shows 90 percent of the clients to be 50 years or over in age.

Five men interviewed were clients of the Production Credit Administration. Four considered it to be a very favorable agency while one man did not think much of the fees charged for periodic inspection of stock. One farmer in the township, who last year started to work at the Bomber Plant in Ypsilanti, is a member of the National Farm Loan and Production Credit Committees operating in this section.

Summary of Information from Sample Cases on  
Agricultural Adjustment Administration

Cooperators at the present time . . . . .			57
Out of this group:			
Think program is O.K. . . . .	53		
Think program not O.K. . . . .		4	
Were cooperators but are not now . . . . .			17
Out of this group:			
Think program is O.K. . . . .	5		
Think program not O.K. . . . .		12	
Never have cooperated . . . . .			18
Out of this group:			
Think program is O.K. . . . .	7		
Think program not O.K. . . . .		11	
No Information . . . . .			13
Total . . . . .	65	27	105

The no information group includes owners of idle areas and small parcels of land.

In general, I think it can be safely concluded that the Agricultural Adjustment Administration, in requiring approximately one quarter of the farm to be planted to soil building crops, has gone far in making the farmer Soil Conservation conscious.

As was to be expected, the individual reactions to the program were as varied as the reasons behind them, but approximately 70 percent of those interviewed, from whom information was obtained, had become more-or-less tolerant of this form of regulation. Twenty-nine percent had what they considered as major grievances while the remainder were more or less "on the fence."

The reasons for the favorable reaction to the program fall in three general groups. First, because no major change in farm operations was necessary and the parity payments were "pure gravy." Secondly, the farmer was astute enough to manage his total enterprise within the restrictions and still gain more income per year with less or the same amount of labor, and lastly, because farm prices had been raised to a higher level, and they felt that the crop restrictions had been largely responsible for bringing this about.

Those who were opposed fall into two general groups. The first and largest are against any regulation and feel that they are better able to run their business than <sup>the</sup> federal government, or for that matter, any other organization, and that the natural law of "supply and demand" was and is the best regulator. The second group stated that they were unable to feed the stock needed to bring a reasonable income from their crop acreage allotment and that their outside feed bills were much greater than the parity payments.

Four men in this group felt that the wheat allotment was all right while one man was not inconvenienced by the corn allotment but wanted to raise more wheat.

Even though this program has been in operation for almost ten years, it was quite surprising to find that a great many of the cooperators were not at all well informed

as to the objectives and policies of the program. Two farmers in the township are Committeemen for the A.A.A. One is a recently retired professional man and the other a farmer of questionable standing in the minds of many. Quite a few of those interviewed did not think much of these men as farmers and administrators and further contended that the type of men (good farmers) needed for the field administration were too busy making a living to take over such a job.

The two way distributions of the A.A.A. information based on age, years on the land, and soil classes (App. 12) shows no especially significant trends. The apparent absence of correlation, however, does indicate that the reactions to the program are more closely associated with the personal factors than anything else.

At the start of the survey, it was thought that an indication as to the amount of land retired from soil depleting to erosion resisting crops could be gained. However, it was soon found that to accomplish this objective would require a much longer questionnaire, as a picture of the farm for ten years back would be necessary, so no further attempt was made. A comparison of acreages in these two types of crops in a township operating under the A.A.A. and one not so covered would probably show this picture well enough for practical purposes. However, it was found that the A.A.A. crop acreage restrictions had

forced twenty farmers to crop lands other than that parcel they are living on. The reason for this is that the added crop acreage is needed to maintain an enterprise large enough to sustain the family.

Of interest is the fact that two men stated, it was not right for the government to pay them for something that they should have been doing on their own accord (that is, concerning soil conservation) and for that reason, are not going to sign up but expect to keep within the acreage allotment, anyway. Quite a few other patriotic individuals contended that at this time (during the war), the government could ill afford to pay "parity payments." In this latter group are men who consider the whole program as a relief agency that is undermining the initiative of the "border line" farmers and that it will result in a detrimental effect on the farm community as a whole.

That numerous individual problems would result from this type of regulation is to be expected and the author was very much surprised to find that little or no provision for this was included in the general program. The Committeemen appeared to have no time to spend with helping solve problems and the author doubts if the men in question were well enough informed on farm matters to be of much assistance.

Because of "parity payments" a few owners, who were renting crop land to others required the renter to seed a

certain number of acres each year, usually equal to the amount of seeded area plowed.

### SOIL CONSERVATION SERVICE

The questions relating to the Soil Conservation Service and Districts were included to determine not only the extent of knowledge of the organization and practices on the part of the landowner but also to ascertain the individuals reactions toward such program as a means of helping solve their land use problems.

Seventy-one landowners thought erroneous that the Soil Conservation Service and the Agricultural Adjustment Administration were the same organization, while only thirteen were able to distinguish between the two.

In the judgment of the author, twenty-one individuals considered that soil erosion of any consequence was active only in the west and on the very hilly areas, while sixteen men could see serious erosion problems on lands all around them as well as on their own, in some instances. Forty-seven recognized that gullies and washing occurred in their fields but appeared not to be particularly alarmed over it.

Only fifteen individuals were acquainted with the Fenton or S. E. Livingston Soil Conservation Districts, The S. E. Livingston District is adjacent to the northern boundary of Webster Township.



One of the above men had his farm incorporated in the S.E. Livingston Soil Conservation District. Eighty acres of his property, upon which the buildings stand, are in Webster Township while three hundred and ten acres are in Livingston County. The owner is a Detroit business man and has a good farmer as his farm manager. Both the owner and the manager are more than satisfied with the services extended by the District set-up, and have received much benefit from it. They were especially pleased with the practical suggestions for better farm management offered and contended that what this organization had to offer would well fit in with the needs of the other farmers in this township, as they themselves saw them.

The author explained in a brief manner, to each man interviewed, the operation of the Soil Conservation District idea, placing special emphasis on the cooperation needed from each individual before such an organization could operate successfully, and then inquired as to whether or not they desired to have their farm incorporated in such a District. The author is either a poor salesman or he over emphasized the needed cooperation, as only eight men signified a desire to incorporate their farm in such a unit. Thirty-eight men, however, indicated a more or less passive interest and probably could be enticed if properly approached and shown demonstrations of the work. Fifteen men quite definitely stated that such "stuff" was

for the "novice farmer" and that a man who had spent all his life farming needed no assistance as experience was the best teacher.

In order to gain a general idea as to what the landowner felt a District should include the following summary is given:

<u>Summary of Indicated Needs to be Supplied by District</u>	
Advice on farm management . . . . .	28
Use of heavy machinery as brush plows, terracing machines, etc. . . . .	7
Make available planting stock, softwoods and hardwoods	9
Cooperative buying and selling . . . . .	24
Controlled hunting . . . . .	26
Application of scientific farming . . . . .	18
No answer . . . . .	22
Cases . . . . .	105

Of note is the fact that only eighteen men are interested in the application of scientific farming. This might indicate that science to the layman in respect to farming must be presented in a more practical and understandable manner. However, that twenty-eight men are actually interested in gaining advice on farm management is encouraging.

The discussions resulting from this question impressed the author with the fact that there was a general indication

from the farmers that there should be some sort of an over-all organization or set-up that would encompass all activities directed toward the farmer, and farm activities and operation.

## FARM PRACTICES

### Crop Rotations

As might be expected it was rather difficult to get a complete picture of the rotations used, but it was decided to record the maximum number of years that row and small grain crops were planted in the same field, and the average number of years that fields were left in hay and pasture.

Surprisingly enough, it was found that most operators, or 84 men were using a more or less definite crop rotation while the others interviewed were not recorded because the land they were living on was either rented to others or was idle.

Except in a few cases, where muck soil was near the barn, corn and other row crops as potatoes and beans were planted only one year in the field and followed with one year of small grain by twenty-seven percent and two years of small grain by seventy-three percent. The average number of years that fields were left in hay or pasture is 2.6 years.

Summary of Crop Rotation Used

Crop	Years	Cases
Row crops (corn, beans, potatoes) . . .	1	84
Small grain (wheat, oats, barley) . . .	1	22
	2	60
Hay or Pasture . . . . .	1	2
	2	28
	3	45
	4	9
	5	11

From the above summary it is noticed that the average rotation used is about six years, one year of row crops followed by two years of small grain and three of hay or pasture.

Six of those interviewed stated that the same rotation was used for all cropped fields and four were using the same rotation that they had always used. Seventy-seven men stated that the rotation varied somewhat as to fields and years for the following reasons:

Summary of Reasons for Crop Rotation Varying

Varies because of the soil variation in fields . . . .	1
Varies because of the differences in slope . . . . .	0
Varies because of soil and slope variations . . . . .	4
Varies with the seasonal differences of seeding success	72

The above summary indicates that only five men are aware of the fact that slope and difference in soil type are factors that should regulate to a greater or lesser extent the crop rotation. That seventy-two individuals have experienced failures of seeding is surprising. In only one instance did the author find that the owner put a cover crop of rye on a seeding failure field. As far as could be determined the other men plowed up the field the following year and reseeded with a small grain.

### Crop Yields

Twenty-five men out of eighty thought that crop yields were about the same for all fields while fifty-six stated that they were not the same for the reasons listed below:

#### Summary of Reasons for Yields not Being the Same

Organic matter in soil . . . . .	0
Erosion depleted soil . . . . .	0
Weather . . . . .	29
Use of Comm. Fertilizer . . . . .	14
Use of Manure . . . . .	26
Soil . . . . .	20
Number of Cases . . . . .	56

Twenty men have observed definitely that soil is a factor having some effect on crop yields while at least 26 admit it indirectly by giving fertilizer and/or manure

as their observation. The twenty-nine men, who consider weather alone to be a factor, represent thirty percent of those answering the question. The two-way distribution of yields on soil and age (Appendix 13) shows no significant correlation.

### Plowing

The following summary of the factors affecting the manner of plowing indicates that only twenty-five percent of those interviewed consider the soil, slope or both as factors that should govern the manner in which fields are plowed.

#### Summary of Factors Indicated as Affecting the Manner of Plowing

Soil Affects Manner of Plowing . . . . .	0
Slope affects manner of plowing . . . . .	4
Both affect manner of plowing . . . . .	15
Field size and arrangement are the only factors . . .	13
Nothing affects the manner . . . . .	54
No information . . . . .	19

The summary of the manner of plowing below shows that a few men are paying attention to the dictates of the soil and that most are not conscious of the bad effects of improper plowing.

Summary of Manner of Plowing

Plow parallel to fence row . . . . .	3
Plow longest way of the field . . . . .	6
Plow in best manner approaching contour plowing . . .	16
Just plow . . . . .	55

Out of the fifty-five men who stated that they "just plowed" four thought that perhaps they should pay some attention to the contour and twenty-five felt that there was no need for contour plowing in this section or any modification of such.

Green Manure and Cover Crops

Two men have planted, in the last few years, sweet clover specifically for green manure while three others have used rye for green manure and as a cover crop as well. Two other individuals were using either hay or rye specifically as a cover crop on eroding areas.

The remaining ninety percent of those interviewed felt that the crop rotations and manure that they were using was enough to maintain the fertility of the soil.

Liming

Summary of Information on Use of Lime

Use lime . . . . .	31
As determined by:	
Soil test . . . . .	26
Rule of thumb . . . . .	5

Summary of Information on Use of Lime (Continued)

Do not use lime . . . . .	59
Because	
Cost prohibits . . . . .	13
No need of lime on land . . . . .	16
Do not own--would if owned . . . . .	6
But--	
Plan to use . . . . .	22
No Information . . . . .	15

Only one tenant is using lime and he is working on a share basis wherein the owner supplies all equipment and materials. Six tenants stated that they would use lime if they owned the land while five others on a share basis plan to use lime in the near future if they can convince the owner as to the advisability of so doing.

It is especially interesting to note that only five out of thirty-one were using a rule of thumb determination as to the lime needs of the soil. However in most all cases approximately two tons per acre were used and spread by a local spreader.

Sorrel (Rumex) was used as the rule of thumb indicator while <sup>some</sup> individuals contended that there was no need for lime based their reason mainly on the fact that they were able to get a fair crop of alfalfa without liming.

One individual expressed the opinion that rather than to give "parity payments" in cash the government should make the farmer buy lime or other products needed to build up the soil. Of course \$2.00 credit per ton is given the



farmers by the AAA and two tons <sup>per acre</sup> is recommended under present regulations.

Seven hundred and seven acres have been limed during the past ten years. Actually ninety-five percent of the acres limed have received this treatment within the last five years. Appendix 14 indicates that 9.6 percent of the total plowable land in soil class 1 has been limed while 7.8 percent and 5.8 percent for soil classes 1 and 2 respectively have received this treatment.

### Fertilizer

#### Commercial

#### Summary of Information on Use of Commercial Fertilizer

Do not use . . . . .	37
Because--	
Cost prohibits . . . . .	9
but--	
Plan to use . . . . .	4
Use fertilizer . . . . .	67
Superphosphate . . . . .	4
Phosphate . . . . .	5
2-12-6 . . . . .	54
0-14-6 . . . . .	2
0-8-24 . . . . .	2
on--	
Rpw crops . . . . .	22
Small grain . . . . .	56
No information . . . . .	4
Cases . . . . .	105

It was quite surprising to the author to find that a great many individuals did not know exactly the kind or formula of fertilizer used. Most guessed they used 2-12-6 but were not sure. Fertilizer was placed mainly

on the crop that was to be seeded but, all in all, wheat received more fertilizer than the other small grains.

In some cases the farmer is no longer using fertilizer because of loosing a few crops caused by the burning effect of fertilizer in dry weather. For this reason one man was concentrating on green manure and barnyard manure for his total fertilizer and has found that dry weather has not decreased his yields appreciably.

### Barnyard Manure

#### Summary of Information on Use of Manure

Put manure on--	
Seeded acreage prior to plowing . . . . .	45
Areas to be seeded to small grain . . . . .	4
Areas not in small grain and to be planted to small grain and seeded . . . . .	3
All cropped fields and seeded areas to be plowed (insofar as possible) . . . . .	21
Cover approximately--	
0-9 acres . . . . .	29
10-19 acres . . . . .	24
20-29 acres . . . . .	19
30-39 acres . . . . .	10
40 acres . . . . .	17
No information . . . . .	15
Cases . . . . .	105

Almost all the farmers in this section spread the manure with a manure spreader as fast as a load or two accumulates and only a few of the older men had a large pile in their barnyard. Many individuals concentrated their manure to a field or two and put it on heavy--going over the field two or three times.

## Soil Erosion Control Practices

### Summary of Information on Soil Erosion Control Practices

Maintain sod in existing gullies . . . . .	55
Maintain sod in existing waterways . . . . .	18
Have tile draining the area . . . . .	10
Use either	
Strip cropping	
Terracing	
Contour furrowing	
Diversion ditches	
No answer . . . . .	40

The condition of the gullies was not checked by the author but it is felt that sod finds its way to the gullies, in most instances, only after they are too deep to allow for safe plowing. The only conclusion that can be drawn from the 55 and 18 who stated that they maintained sod in the gullies and waterways is that approximately fifty percent have indicated that they should do something to stop this type of erosion.

The main reason for including this question was to size up in a general way what the landowner thought of the various soil erosion control practices. Its value in the questionnaire is mainly educational. However, the discussions resulting from the question indicated quite conclusively to the interviewer that demonstrations and not talk is practically the only means of putting the needed practices across.

Sixty-one farmers indicated that they were somewhat troubled with gullies while twenty-eight stated that they had no gullies on their area. Comparing the 61 with 55 indicates that at least six individuals are still able to plow right through the gullies.

Along with this question and during the discussion the farmer was asked what crop was planted in the fields that he noticed the most washing in. From this it was evident that the farmer, in general, is an observant individual but unfortunately is not inclined to take much initiative toward correcting things in their incipient stages. Row crops as corn, beans and potatoes were indicated as the crops allowing the most washing.

#### WOODLOTS

While a cruise of all the woodlots on the area would be extremely valuable in ascertaining the extent to which such areas are and could contribute to the farmers income the time and help needed would not allow the author to undertake this problem. Instead, it was thought, that, a survey of the fuel used, the reasons for using, and the opinion of the owner as to the length of time his woodlot might supply his present needs, would give a fair evaluation of the wood resources.

Summary of Fuel Used

Using wood in range and coal for central heating . . . . .	41
Using wood altogether . . . . .	35
Using wood and oil . . . . .	2
Using coal altogether . . . . .	18
Using oil altogether . . . . .	2
No information . . . . .	7
Number of Cases . . . . .	105

It will be noticed from the above summary that only thirty-six percent of those interviewed are using wood altogether as fuel and that forty-four percent of those interviewed are using wood only for the kitchen range.

Summary of Reasons for Not Using Wood Altogether

No wood . . . . .	19
Coal and oil are cheaper . . . . .	28
To busy and could not get help to cut wood . . . . .	7
No information . . . . .	10
Total . . . . .	64

Approximately twenty percent of those interviewed have no wood at all. The seven men who were too busy and could not get help usually use wood altogether for fuel but because of infirmities and other factors, the main one being lack of labor, used coal last winter. The large group who considered coal and oil to be cheaper in the long run were considering their time and labor needed to

get the wood out. The ten in the no information group had no particularly good reason for not using wood altogether.

Summary of Years of Use Left in Woodlot

Woodlot will supply needs for 20 years more . . . . .	57
Will not supply needs for 20 years more . . . . .	22
Are not sure either way . . . . .	19
No information . . . . .	7
Total . . . . .	105

The above summary indicates that the woodlot problem is becoming quite acute and that, generally speaking, the areas are not contributing their share to the farmers income.

Seventy-two percent of those interviewed are grazing their woodlots to a greater or lesser degree. Only twenty-eight percent are not grazing their woodlots at all. Most, in this latter group, are not grazing them because of lack of adequate fencing. Only one man considered that grazing was not good for the woods and six were not grazing them because there was little or no grass in the woodlot.

Quite a few woodlots were heavily cut around 1937 when there was a market for large diameter trees 20" and better, selling for \$15 a thousand board feet on the stump for all species.

The total acreage in woodlots on 105 parcels was found to be 1647 acres or approximately ten percent of the

land surveyed and the average woodlot per farm unit was 16 acres. Seventeen areas that were at one time woodlots were found to be nothing but brush at the present time.

Only eleven of those interviewed were interested in planting trees and nine had considered softwoods while two were considering underplanting present wooded areas with hardwoods.

That the farm woodlot situation is more serious than is brought out by the questionnaire is quite evident to the interviewer. The farmers attitude in general toward woodlots was that they were more a nuisance than anything else. Very few owners were at all concerned with the fact that the resource was either depleted or soon to be so. That woodlots could supply more than some fire wood and pasture for animals was only recognized by a very few. Multiple use management had hardly been considered and none had actually put it into practice.

It is the strong conviction of the author that the potentialities of existing woodlots, placed under proper management, for supplying the farmer with a supplementary income from timber and wildlife crops as well as supplying wood product needs, are great and actually unexploited.

PASTUREPermanent Pasture

The total acreage in permanent pasture for 100 parcels was found to be 3816 acres or 22 percent of the total acreage surveyed. Appendix 14 shows that the largest average acreage in permanent pasture is found in soil class 3 or forty-four acres.

Seventy-eight percent of those interviewed had not improved their pasture at all. Seventeen percent had improved some of their pasture and five percent had improved all the pasture.

Summary of Reasons for Keeping Acres in  
Permanent Pasture

Subject to erosion . . . . .	0
Soil depleted . . . . .	2
AAA Retired . . . . .	1
Marsh . . . . .	33
Brush . . . . .	10
Hilly areas . . . . .	17
Always has been . . . . .	37
No information . . . . .	5

Rotated Pasture and Hay Crops

The acreage in rotated pasture and hay crops were combined and recorded, but not by species. However,



species used were indicated on the questionnaire in most instances and it was found that clover rated first with alfalfa second and timothy third. June grass was used by quite a few for pasture alone. Five men were using brome grass and in all but one case the results were favorable.

Approximately the same percentage of the total area is in rotated pasture and hay as in permanent pasture (Appendix 14). However soil class 1 shows the largest average acreage or 50.

#### Supplemental Pasture

Supplemental pasture totalled forty-eight acres for the area surveyed and sudan grass was used by the four men.

#### CROPS

The total acreage in soil depleting crops was found to represent twenty-eight percent of the total area and twelve percent of this is in row crops as corn, beans and garden truck. Appendix 14 gives the acreage devoted to the various crops by soil classes. It will be noticed that the average acreage devoted to crops decreases from the best to the poorer soils. This is also true for the row crops and undoubtedly results from the AAA Program.

WILDLIFE

The wildlife aspect of land management in Webster Township has been well covered by Swears in 1941.<sup>4</sup> There were three reasons for including a question on wildlife in this present study. First, to balance the study in respect to important land uses. Second, to generally determine how well "controlled hunting" had been sold by Swears and lastly, to double check on the public relation value of such surveys.

Sixty-five men out of 105 interviewed by the author of this paper considered that under proper regulation, game could be hunted and not interfere with farming. Only eleven felt that the two uses--hunting and farming--were incompatible, while the remainder were "on the fence." Even though a few men signified that they were interested in increasing game on their property, a general lack of incentive on the farmers' part to manage for wildlife as a crop was evident to the interviewer.

Based on the results of Swears' study and the impressions made on the author of this paper while discussing the matter with the farmers it appears that a sufficient incentive and economically feasible production method must be placed in the farmer's grasp before he will consider producing more game crops.

<sup>4</sup>Op. cit., p. 5.

The first task, then, of the wildlife manager, is to assure an orderly means of marketing which will also bring just returns to the farmer for products and services rendered. The next and biggest job is to show that: wildlife can be an important farm crop, is a natural product of proper land management, and can be profitably cultivated.

The fact that twenty-six men signified (page 55) that they were interested in controlled hunting shows that Swears' work accomplished quite a bit from the educational standpoint. At least, he planted an idea in the minds of quite a few which was churned somewhat for a year.

#### PUBLIC RELATIONS

Almost to the man, those interviewed by the author, remembered Swears. They were pleased to hear that he had gained some very important and enlightening information from the interviews. Many expressed a desire to read his report.

In regard to the author's survey, I must admit that a few men were not over-enthused with the number of questions which were fired at them, but most of those interviewed were glad to be of service. Some were pleased to learn that the University students were interesting themselves, in the farmer and his problems.

### INTERVIEW TIME

It was found that the best time to find a farmer available for interview was early in the morning, around noon time, after five o'clock in the afternoon, or on days of adverse weather. Unfortunately, because of other work the author was unable to adjust his schedule to conform better with the farmers free time. Because of this much time and travel were wasted in trying to find the owner or tenant in.

The average time spent with each farmer was 76 minutes or approximately one and one quarter hour. The information asked for could be supplied comfortably in one half an hour and still allow for a few side comments. However, the author was interested in learning as much about farming and the farmer as possible and thus allowed the party to enlarge on any matter that he so desired. At times the discussion digressed so far from the questionnaire that the astuteness of the interviewer was taxed to the limit to direct the conversation back to the subject in hand.

## CONCLUSION

### APPLICATION OF THE METHOD DEVELOPED IN THE STUDY

The writer believes that he has demonstrated the personal interview questionnaire technique to be a very valuable aid in formulating land use and management plans.

The County unit has been used by most State Planning Committees as the basis for detailed land classification and economic surveys. For this reason the application of the technique is recommended for <sup>a</sup> ~~the~~ county as the logical work unit.

The study conducted in Webster Township has brought to light some very important information and indicates that there is adequate justification for further surveys. Probably the cost of conducting a county-wide survey would be prohibitive and thus require some sampling technique. There are two means available; either a sample of the county or a complete survey of a few townships within the county. It is suggested that in counties where no classification surveys have been conducted that a 25 percent sample of farm operators be made of the county somewhat similar to the technique used by Bausman in New Castle

County, Delaware.<sup>5</sup> In counties where classification surveys have been conducted sufficient information could probably be gained by a complete survey of a few typical townships.

#### COST OF SURVEY

A total of 1,310 miles were traveled in collecting this information. Figuring an operating cost of five cents per mile, this would amount to \$65.60 or approximately 62 cents per interview.

The distance traveled is somewhat excessive because the author was able to spend only one full day in the field per week and either the morning or afternoon on the other days. Probably if full time were spent in the field each day the miles traveled could be cut in half.

#### COST OF TABULATION

Complete mechanical tabulation, that is, punching, verifying, and sorting of similar data would cost approximately \$50.00. The larger the survey the less the unit

<sup>5</sup>Bausman, R. O. 1941. An Economic Study of Land Utilization in New Castle County, Delaware, University of Delaware. Bul. 228. Newark, Delaware.

cost. Thus the cost of handling data from three or four townships would probably amount to approximately \$60.00.

### LAND MANAGEMENT PLAN

Naturally this study is but an introduction to the many complex factors operating on land use and practices as well as the problems resulting therefrom. The survey has brought out some definite and interesting trends that point to the need of an over-all organization that would coordinate the activities directed toward farm operation and the farmer himself and utilize the human resources of the area to the best advantage. Certain political and economic regulation as well as education through demonstrational, organizational, and sociological activities should be incorporated in a land management plan.

It appears that the plan should cover at least three major phases. First, zoning, to assure proper use of land. Second, to provide means for acquainting the individual with the possibilities of, and the practices that must be used on the particular parcel upon which he is living. Third, to divert undesirable uses from certain areas to other areas that permit these specialties.

#### Zoning

A glance at the map on page 24, showing the occupations

of the owner, gives a very good indication as to some of the problems to be solved by land zoning.

It is noticed that city workers and others interested in land for the purpose of a home alone are on some of the better agricultural soils and many farmers are trying to make a living on the poorer soils. Summer homes are being built around Base Lake in the north western corner of the township and urban-like settlements are extending into the area from the southwest and south central.

Zoning, if put in effect soon, can accomplish much toward bringing about proper adjustment of land use and take care of the first major need mentioned above and perhaps may help bring about the third as well. Some may cringe at the thought of this but it must be remembered that any use put to land whether it be a large or small enterprise should justify itself to the country and the people as a whole.

#### Individual Adjustment

In the final analysis, the most difficult problem on this particular area is to bring about adjustments in farm management that will conform first, to the dictates of the soil, and second, to the needs of the surrounding community. This brings into the picture multiple use and its justification.

It must be remembered that the farmer depends upon



his land to give him the best living possible. He raises the crops that he feels will give him the maximum return on his investment and the multiple use idea must be properly backed up by convincing facts before it will be generally accepted.

### Regulation and Education

Regulation and education are the two main tools operating in this section that are designed to help the farmer shape better farm management plans. The survey points quite vividly to the fact that they both need considerable sharpening.

Restrictions on crop acreages appears to have brought about a better balance between erosion resisting and soil depleting crops. However, problems have resulted from the administration of these restrictions that apparently have not been adequately taken care of by the program set-up. That is, regulation was not properly balanced by education.

None-the-less, the over-all reaction to regulation was favorable, indicating that it can serve as one important means of bringing about proper agricultural land management. Never-the-less it is clear that regulation in itself has some educational values. This appears to have been demonstrated by the survey. The AAA program

actually brought about a realization on the part of many farmers that soil should be conserved.

It should be kept in mind that regulation, as exemplified by the AAA program has been strongly modified by subsidy. This introduces the question of the proper place of public subsidy in land use programs.

The evaluation of the educational facilities, organizations, and agencies operating in this particular township leaves the author with the feeling that more effort must be concentrated in this direction. The present set-up is helping only the most aggressive operators and is leaving too many unreached.

Ideas presented by word of mouth and in print are mainly wasted on the great majority. A program properly designed that points to active participation and demonstration is the main need.

The personal character and other characteristics of the farmer must be considered when developing the educational phase of the program. Only in this manner can a desire to learn more about farming be stimulated and active participation be assured.

## SUMMARY

1. This paper demonstrates the value of the questionnaire technique for obtaining information that will facilitate the formulation of land use and management plans, using the County as a logical working unit.

2. The survey conducted in Webster Township, Michigan shows a need of incorporating certain political and economic regulations with educational programs into an over-all land management plan for this and similar areas.

3. Throughout the survey special emphasis was placed on gaining an indication as to the social implications of land management and evaluating the educational, organizational, and action agencies operating in the Township.

4. Thirty-nine percent of Webster Township is included in soil class 1, 30 percent in class 2, and 32 percent in class 3, the classes being determined by the agricultural potentialities of the soil type.

5. One hundred and five personal interview cases are presented covering an area of 17,216 acres.

6. Eighty-five percent of those interviewed were owners and 15 percent were tenants. Fifty percent of the tenants are located on class 3 soil. Fifty-six percent of

the tenants were working on a share basis with the owner and the remainder were cash renters. Nineteen owners were renting and working land in addition to that parcel upon which they were living.

7. Sixty-five percent of the men followed the straight occupation of farming. The remaining 35 percent obtained their income from sources other than the farm and were mainly the more recent purchasers and those on the poorer soils.

8. Thirty percent of the farm operators or 34 individuals were 60 years or older.

9. Thirty percent of the people established residence in the township within the last five years. A trend of the poorer soil classes changing hands more rapidly was indicated.

10. The average size of the family raised (including the parents) in this sample is 4.4.

11. The average number supported by the farm including the hired help is 3.35 for soil class 1, 3.28 for soil class 2, and 2.89 for soil class 3.

12. Fifteen sons out of 86 over 21 and 12 out of 41 under 21 were helping their fathers on the farm. Only 5 sons over 21 from these Webster Township farms were managing their own farms and two were located in Webster Township.

13. Under present management 25 percent of the farms are able to support full time outside labor and 24 percent are dependent upon outside part time help.

14. Forty-nine percent of the farms support well kept up buildings and 7 percent were distinctly negligent.

15. Farm Radio programs were reaching approximately 40 percent of those interviewed and the Michigan State Agricultural College Radio Program has the strongest support from the farmers.

16. Even though the farmers were not making full use of the facilities and opportunities afforded by the State College and the County Agricultural Agent, both services have the strong backing from those interviewed. Most seemed well satisfied with their knowledge and ability as farmers but some indicated a desire for more information concerning spraying, feeding, fertilizer, and liming practices.

17. Farm magazines appeared to be more popular than technical publications because of the easily understood manner of presentation of factual material.

18. Fifty percent of the young men helping on the farm were 4-H Club members and two young men managing their own farm were members at one time.

19. The writer found that few men were willing to try out new ideas presented in print but were favorably

disposed to demonstrations.

20. Of the four federal agencies operating in this township only the Agricultural Adjustment Administration cooperators were numerous enough to facilitate a general evaluation of the program.

21. The AAA has accomplished much in respect to making the farmers soil conservation conscious and 70 percent of those interviewed were favorably disposed toward the program while 29 percent had major grievences. Many cooperators were not well informed as to the objectives and policies of the program and little or no provision appeared to be included for helping solve the problems attendant to crop acreage restrictions.

22. Seventy-one men interviewed erroneously thought that the AAA and the Soil Conservation Service were the same agency.

23. Fifteen individuals were somewhat acquainted with the Fenton and S. E. Livingston Soil Conservation Districts and one man owned farm land incorporated in the S. E. Livingston District. Eight men signified that they would like to incorporate their farm in such a district, 38 were passively interested, and 15 men thought only the "novice farmer" would be interested.

24. The strongest organization operating in the township was the Farm Bureau and 42 percent of the farmers were members.

25. The cooperative idea is liked by most of those interviewed and some would like to enlarge the scope of these cooperatives.

26. Dairying rated first numerically in the type of farming.

27. Out of 84 men using a definite crop rotation 72 stated that the rotation varied with the seasonal seeding failures.

28. The majority felt that the combination of rotating crops and the use of manure was sufficient to maintain the fertility of the soil.

29. Twenty-five men thought that crop yields were about the same for all fields and 56 stated they were not the same.

30. Sixteen men were plowing in a manner approaching the contour method, 4 others guessed that they would do likewise, and the remainder "just plowed".

31. Most barnyard manure was spread as fast as it accumulated and approximately 9-19 acres was the average covered per farmer.

32. Seven hundred and seven acres have been limed in the last ten years by 31 farmers, the largest <sup>re</sup>average having been covered within the last five years.

33. Sixty-seven men used commercial fertilizer mainly on small grains and covered 1610 acres last year.

34. Twenty-two percent of the total <sup>re</sup>acera<sup>ge</sup> was in permanent pasture and the same percentage was in the combined acera<sup>ge</sup> of hay and rotated pasture. Five percent of the men had improved all permanent pasture and 17 percent had improved some. Only 48 acres were planted specially for supplemental pasture.

35. Pasture for cattle rented on an area basis, and for sheep on a head basis, but no restrictions were made in either case as to the number of head or period of grazing.

36. Ten percent of the total area surveyed by interview is in woodlots, with an average of 16 acres per farmer. Seventy-two percent of the men were grazing their woodlots.

37. Thirty-five men were using wood alone as fuel, 41 were using wood in the kitchen range and coal for central heating. Two men had no woodlots and 17 others stated that they had no suitable firewood.

38. Twenty-two men feel that their woodlot will not supply their needs for 20 years longer and only 11 men were interested in planting trees.

39. Multiple use management of woodlots had hardly been considered and none had actually put it into practice.

40. Under proper regulation, as controlled hunting, 65 men thought that hunting and farming would go together



while only 11 men felt that the two were not compatible. Yet there was an evident lack of incentive on the part of the farmer to manage for wildlife.

41. Only 16 individuals could see any serious erosion problems in the township, 47 men recognized that gullies and washing occurred in their fields but appeared not to be particularly alarmed over it.

42. Some farmers would like to play a more important part in farm affairs but were suffering from an inferiority complex.

43. It was the general opinion that the type of farming engaged in is dependent upon the abilities of the farmer rather than what the farm is capable of supporting.

44. The majority of the farmers believe that there should be some sort of an over-all set-up that would encompass all farm activities.

A P P E N D I X

APPENDIX 1

Class of Ownership

Two-Way Distribution on Soil Classes

Class of Ownership	Soil Classes				Total
	1	2	3	No Info.	
Owners					
Managing Farm.....	31	16	22	1	70
Rent and work land in addition to home estate .....	9	5	5		19
Live on land and rent to others .....	6	2	2		10
Tenants .....	5	3	8		16
Idle Areas .....	5	3	1		9
Cases .....	47	24	33	1	105

APPENDIX 2

Years of Occupancy

Two Way Distribution on Soil Classes

Soil Class	Years on the Land				Total
	0-5	6-20	21-35	36+	
1 .....	12	14	7	14	47
2 .....	10	2	4	8	24
3 .....	11	5	6	11	33
No Information .....	1				1
Cases .....	34	21	17	33	105

Two Way Distribution on Age

Age	Years of Occupancy				Total
	0-5	6-20	21-35	36+	
19-34 .....	4	1	1	0	6
35-49 .....	9	7	2	9	27
50+ .....	21	12	13	24	70
No. Into. ....		1	1		2
Cases .....	34	21	17	33	105

APPENDIX 3

Present Occupation

Two Way Distribution on Soil Classes

Present Occupation	Soil Classes				Total
	1	2	3	No. Into.	
Farmer .....	33	14	21		68
Farmer plus other type of labor .....	3	6	5		14
Professional and Busi- ness .....	7	1	3		11
Laborer .....	0	1	2		3
Retired .....	3	2	2		7
No Information .....	7			1	2
Cases .....	47	24	33		105

APPENDIX 4

Present and Previous Occupations

Two Way Distribution on Years of Occupancy

Years on the Land

Occupation	0-5		6-20		21-35		36+		Total
	Present	Previous	Present	Previous	Present	Previous	Present	Previous	
Farmer	16	17	16	10	10	13	26	26	
Farmer, plus other labor	6	1	4	0	3	1	1	1	
Professional and Business	9	13	1	8	1	1	0	0	
Laborer	1	3	0	2	1	0	1	1	
Retired	2	0	0	0	1	0	4	1	
No Infor- mation	0	0	0	1	1	2	1	4	
Total	34	34	21	21	17	17	33	33	105

APPENDIX 4 (Continued)

Two Way Distribution on Age

Occupation	Age								No Infor- mation	Total
	19-34		35-49		50+		Previous	Present		
	Present	Previous	Present	Previous	Present	Previous				
Farmer	4	6	18	17	46	43				
Farmer, plus other labor	1	0	5	0	8	3				
Professional and Business	0	0	3	8	8	15				
Laborer	1	0	1	2	1	3				
Retired	0	0	0	0	7	2				
No Infor- mation	0	0	0	0	2	4				
Total	6	6	27	27	70	70	2		105	

APPENDIX 5

Number Supported by Farm

Two Way Distribution on Soil Class

Number Supported by the Farm	Soil Class							
	1		2		3		No Information	
	Cases	Total	Cases	Total	Cases	Total	Cases	Total
1	3	3	4	4	1	1		
2	13	26	1	2	11	22	1	
3	8	24	8	24	6	18		
4	9	36	2	8	2	8		
5	2	10	3	15	2	10		
6	3	18	0		1	6		
7			0		1	7		
8	1	8	0		0			
9	1	9	0		2	18		
No In-formation	7		6		7		1	
Average per Class	3.35		3.28		2.89			



APPENDIX 6

Sons Helping on the Farm

Two way Distribution on Soil Classes

Number of Sons	Soil Class						No Infor- mation
	1		2		3		
	Cases	Total	Cases	Total	Cases	Total	
1	14	14	9	9	9	9	1
2					1	2	
3	1	3					
None	32		15		23		
Cases	47	17	24	9	33	11	

APPENDIX 7

Mechanical Equipment

Two Way Distributions on Age, Years of Occupancy and Soil Classes

	Age				Years of Occupancy				Soil Classes				No Information
	19-34	34-49	50+	No Information	0-5	6-20	21-35	36+	1	2	3	4	
Use all mechanical equipment .....	1	3	2	1	2	1	2	2	2	2	1	4	
Use mechanical equipment and horse .....	4	20	33		18	10	9	20	25	16	15	1	
Use horse and hand .....	1	4	26		10	10	3	8	15	4	12		
No Information			9	1	4	0	3	3	5	3	2		
Cases .....	6	27	70	2	34	21	17	33	47	24	33	1	

APPENDIX 8

Major Income from Sources Outside the Farm

Two Way Distribution on Age, Years of Occupancy and Soil Classes

	Age				Years of Occupancy				Soil Classes				No Information
	19-34	34-49	50+	No Information	0-5	6-20	21-35	36+	1	2	3	No Information	
Received Outside Aid	3	8	24	1	16	6	6	8	12	9	15		
Cases Total	6	27	70	2	34	21	17	33	47	24	33	1	
Percent	50	30	34		47	29	35	24	25	37	40		

APPENDIX 9

Future of the Farm

Two Way Distribution on Age

	19-34	35-49	50+	No Infor- mation	Total
Continue in family ..	6	21	43		
Will sell .....			13		
Will rent .....		4	9		
No information .....		2	5	2	
Cases .....	6	27	70	2	105

APPENDIX 10

Present Enterprise

Two Way Distribution on Age, Years of Occupancy and Soil Classes

	Age				Years of Occupancy				Soil Classes			
	19-34	35-49	50+	No Information	0-5	6-20	21-35	36+	1	2	3	No Information
Dairy	5	21	32		15	18	9	17	29	12	17	1
Cattle	1	6	16		7	2	6	8	9	6	8	
Sheep	4	15	23		7	12	8	16	24	7	12	
Truck	0	0	2		2		0			1	1	
Poultry	2	8	16		8	8	3	7	11	7	8	
Hogs	4	13	27		12	12	9	12	24	11	10	
Grain		1	6		2	1	1	3	2	4	1	
Investment	1	3	21		13	4	3	5	12	3	10	
No Information				2								
Cases	6	27	70		34	21	17	33	47	24	33	1

APPENDIX 11

Present Farm Enterprise

Two Way Distribution on Present Occupation

Enterprise	Present Occupation					No Information
	Farmer	Farmer and Other	Professional and Business	Laborer	Retired	
Dairy	46	6	4		2	1
Cattle	19	1	2			1
Sheep	37	3		1	1	1
Truck	2					
Poultry	20	3	3			
Hogs	37	3	4			1
Grain	7					
Investment	4	7	7	2	5	
Cases	68	14	11	3	7	2

APPENDIX 12

Cooperating Agencies

Two Way Distributions on Age, Years of Land, Soil Classes

	Age				Years of Occupancy				Soil Classes			
	19-34	35-49	50+	No Information	0-5	6-20	21-35	36+	1	2	3	No Information
Farm Security Clinets			1					1				1
National Farm Loan Clients.....		1	9		4	1	2	3	3	4	2	1
Production Credit Clients .....		3	2		4	0	0	1	2	2	1	
Cooperators with AAA	4	18	35		15	14	11	17	29	13	15	
Was a cooperater.....	1	2	15		7	4	1	6	8	5	5	
Never was a cooperater	1	4	10		4	3	4	7	5	4	7	
Think AAA ok .....	4	16	43		17	15	10	23	21	15	18	1
Thinks AAA not ok.....	2	8	17		9	6	5	7	11	7	9	
No information.....	0	3	10		8		2	3	5	2	6	
Cases.....	6	27	70		34	21	17	33	47	24	33	1

APPENDIX 13

Crop Yields

Two Way Distribution on Age and Soil Classes

	Age				Soil Class			
	19-34	35-49	50+	No Information	1	2	3	No Information
Yields are the same in all fields .....	2	6	17		11	8	6	
Yields are not the same in all fields .....	4	19	32	1	23	13	19	1
because of:								
Organic matter								
Erosion Depletion								
Weather	1	10	17	1	15	4	10	
Commercial Fert.								
Use	2	6	6		8	3	3	
Soil	2	6	12		7	8	5	
Manure	2	6	18		13	4	8	1
No information .....		1	22	1	13	3	8	
Cases .....	6	27	70	2	47	24	33	1



APPENDIX 14

Farm Acreage Data

	Soil Class			Total
	1	2	3	
Total acreage operation .....	7,960	3,909	5,392	17,261
average .....	175	150	160	
Total acres in farm unit .....	7,389	3,706	5,136	16,231
average .....	165	143	155	
Acres rented other than own farm living on or tenant .....	1,048	294	404	1,746
Acres in woods .....	791	347	509	1,647
average .....	18	13	16	
Acres in permanent pasture .....	1,627	836	1,353	3,816
average .....	39	33	44	
Acres in rotated pasture and hay .....	1,780	762	1,169	3,711
average .....	40	29	35	
Acres cropped .....	2,255	1,125	1,521	4,901
average .....	50	43	46	
Crops (acres) .....	818	430	539	1,787
corn .....	359	220	275	854
wheat .....	777	403	472	1,652
oats .....	77	44	41	162
barley 1 .....	86	18	28	132
soybeans .....	71	47	56	174
navy beans .....				10
sorgo .....				48
rye .....	3	16	32	19
rye and barley .....	19			14
oats and barley .....				45
garden truck .....	10			44
hay---for sale .....	30			44
sudan grass .....	29			44
Acres limed in last 10 years .....	317	110	280	707
Percent of total favorable area .....	7.8%	5.8%	9.6%	
Acres on which Comm. Fert. was used last year .....	839	438	333	1,610

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