Supporting Information. Worthy, S. J., D. C. Laughlin, J. Zambrano, M. N. Umaña, C. Zhang, L. Lin, M. Cao, and N. G. Swenson. 2020. Alternative designs and tropical tree seedling growth performance landscapes. Ecology.

APPENDIX S2

Table S1. Deviance Information Criterion (DIC) and Bayesian *p*-values for all subsets of the "full" model (37) that included the three-way interaction log.lma*log.rmf*light. The DIC values in bold are the lowest value of all models following variable selection procedures indicating they are the best supported models.

	Model	**DIC**	**P value**
1	RGR ~ log.lma	3988	0.50191
2	RGR ~ log.rmf	3958	0.49973
3	RGR ~ light	3993	0.50187
4	RGR ~ initial size	3951	0.50077
5	RGR ~ log.lma + log.rmf	3950	0.5006
6	RGR ~ log.lma + light	3993	0.50009
7	RGR ~ log.lma + initial size	3926	0.50048
8	RGR ~ log.rmf + light	3972	0.49998
9	RGR ~ log.rmf + initial size	3894	0.50151
10	RGR ~ light + initial size	3936	0.50121
11	RGR ~ log.lma + log.rmf + light	3973	0.4991
12	RGR ~ log.lma + light + initial size	3916	0.50047
13	RGR ~ log.rmf + light + initial size	3913	0.50129
14	RGR ~ log.lma + log.rmf + initial size	3932	0.50078
15	RGR ~ log.lma + log.rmf + light + initial size	3904	0.49997
16	RGR ~ log.lma + light + log.lma*light	4001	0.49898
17	RGR ~ log.lma + light + initial size + log.lma*light	3915	0.50024
18	RGR ~ log.rmf + light + log.rmf*light	3954	0.50163
19	RGR ~ log.rmf + light + initial size + log.rmf*light	3912	0.49946
20	RGR ~ log.lma + log.rmf + log.lma*log.rmf	3973	0.50114
21	RGR ~ log.lma + log.rmf + initial size + log.lma*log.rmf	3909	0.50258
22	RGR ~ log.lma + log.rmf + light + log.lma*log.rmf	3968	0.50092
23	RGR ~ log.lma + log.rmf + light + initial size + log.lma*log.rmf	3923	0.50011
24	RGR ~ log.lma + log.rmf + light + log.lma*light	3965	0.50026
25	RGR ~ log.lma + log.rmf + light + initial size + log.lma*light	3895	0.50076
26	RGR ~ log.lma + log.rmf + light + log.rmf*light	3952	0.50133
27	RGR ~ log.lma + log.rmf + light + initial size + log.rmf*light	3904	0.50065
28	RGR ~ log.lma + log.rmf + light + log.lma*log.rmf + log.lma*light	3949	0.49987
29	RGR ~ log.lma + log.rmf + light + initial size + log.lma*log.rmf + log.lma*light	3910	0.50140
30	RGR ~ log.lma + log.rmf + light + log.lma*log.rmf + log.rmf*light	3947	0.50090
31	RGR ~ log.lma + log.rmf + light + initial size + log.lma*log.rmf + log.rmf*light	3893	0.50107
32	RGR ~ log.lma + log.rmf + light + log.lma*light + log.rmf*light	3953	0.49902
33	RGR ~ log.lma + log.rmf + light + initial size + log.lma*light + log.rmf*light	3909	0.50039
34	RGR ~ log.lma + log.rmf + light + log.lma*log.rmf + log.lma*light + log.rmf*light	3947	0.49950
35	RGR ~ log.lma + log.rmf + light + initial size + log.lma*log.rmf + log.lma*light + log.rmf*light	**3884**	**0.50071**
36	RGR ~ log.lma + log.rmf + light + log.lma*log.rmf + log.lma*light + log.rmf*light + log.lma*log.rmf*light	3938	0.49950

37	RGR ~ log.lma + log.rmf + light + log.lma*log.rmf + log.lma*light + log.rmf*light + log.lma*log.rmf*light + initial size	**3884**	**0.5008**

Table S2. Deviance Information Criterion (DIC) and Bayesian *p*-values for all subsets of the "full" model (37) that included the three-way interaction log.lma*log.rmf*Comp.1. The DIC values in bold are the lowest value of all models following variable selection procedures indicating they are the best supported models. DIC values with * are equally best supported models with ΔDIC < 5 of the lowest DIC value.

	Model	**DIC**	**P value**
1	RGR ~ log.lma	3988	0.50191
2	RGR ~ log.rmf	3958	0.49973
3	RGR ~ Comp.1	4007	0.49967
4	RGR ~ initial size	3951	0.50077
5	RGR ~ log.lma + log.rmf	3950	0.5006
6	RGR ~ log.lma + Comp.1	3992	0.50153
7	RGR ~ log.lma + initial size	3926	0.50048
8	RGR ~ log.rmf + Comp.1	3988	0.50059
9	RGR ~ log.rmf + initial size	**3894**	**0.50151**
10	RGR ~ Comp.1 + initial size	3928	0.50051
11	RGR ~ log.lma + log.rmf + Comp.1	3963	0.50023
12	RGR ~ log.lma + Comp.1 + initial size	3916	0.50049
13	RGR ~ log.rmf + Comp.1 + initial size	3896*	0.50036*
14	RGR ~ log.lma + log.rmf + initial size	3932	0.50078
15	RGR ~ log.lma + log.rmf + Comp.1 + initial size	3899	0.49975
16	RGR ~ log.lma + Comp.1 + log.lma*Comp.1	3987	0.50201
17	RGR ~ log.lma + Comp.1 + initial size + log.lma*Comp.1	3915	0.50053
18	RGR ~ log.rmf + Comp.1 + log.rmf*Comp.1	3957	0.49948
19	RGR ~ log.rmf + Comp.1 + initial size + log.rmf*Comp.1	3901	0.50015
20	RGR ~ log.lma + log.rmf + log.lma*log.rmf	3973	0.50114
21	RGR ~ log.lma + log.rmf + initial size + log.lma*log.rmf	3909	0.50258
22	RGR ~ log.lma + log.rmf + Comp.1 + log.lma*log.rmf	3947	0.49873
23	RGR ~ log.lma + log.rmf + Comp.1 + initial size + log.lma*log.rmf	3902	0.50019
24	RGR ~ log.lma + log.rmf + Comp.1 + log.lma*Comp.1	3965	0.49992
25	RGR ~ log.lma + log.rmf + Comp.1 + initial size + log.lma*Comp.1	3899	0.49876
26	RGR ~ log.lma + log.rmf + Comp.1 + log.rmf*Comp.1	3958	0.50107
27	RGR ~ log.lma + log.rmf + Comp.1 + initial size + log.rmf*Comp.1	3907	0.50009
28	RGR ~ log.lma + log.rmf + Comp.1 + log.lma*log.rmf + log.lma*Comp.1	3955	0.50077
29	RGR ~ log.lma + log.rmf + Comp.1 + initial size + log.lma*log.rmf + log.lma*Comp.1	3913	0.50148
30	RGR ~ log.lma + log.rmf + Comp.1 + log.lma*log.rmf + log.rmf*Comp.1	3956	0.49945
31	RGR ~ log.lma + log.rmf + Comp.1 + initial size + log.lma*log.rmf + log.rmf*Comp.1	3925	0.50215
32	RGR ~ log.lma + log.rmf + Comp.1 + log.lma*Comp.1 + log.rmf*Comp.1	3958	0.50150
33	RGR ~ log.lma + log.rmf + Comp.1 + initial size + log.lma*Comp.1 + log.rmf*Comp.1	3901	0.49963
34	RGR ~ log.lma + log.rmf + Comp.1 + log.lma*log.rmf + log.lma*Comp.1 + log.rmf*Comp.1	3943	0.50159
35	RGR ~ log.lma + log.rmf + Comp.1 + initial size + log.lma*log.rmf + log.lma*Comp.1 + log.rmf*Comp.1	**3894**	**0.50017**
36	RGR ~ log.lma + log.rmf + Comp.1 + log.lma*log.rmf + log.lma*Comp.1 + log.rmf*Comp.1 + log.lma*log.rmf*Comp.1	3953	0.50047
37	RGR ~ log.lma + log.rmf + Comp.1 + log.lma*log.rmf + log.lma*Comp.1 + log.rmf*Comp.1 + log.lma*log.rmf*Comp.1 + initial size	3897*	0.50141*

Table S3. Deviance Information Criterion (DIC) and Bayesian *p*-values for all subsets of the "full" model (37) that included the three-way interaction log.mean.thickness*log.rmf*Comp.1. The DIC value in bold is the lowest value of all models following variable selection procedures indicating the best supported model.

	Model	**DIC**	**P value**
1	RGR ~ log.mean.thick	3990	0.50090
2	RGR ~ log.rmf	3958	0.49973
3	RGR ~ Comp.1	4007	0.49967
4	RGR ~ initial size	3951	0.50077
5	RGR ~ log.mean.thick + log.rmf	3977	0.50035
6	RGR ~ log.mean.thick + Comp.1	3991	0.50021
7	RGR ~ log.mean.thick + initial size	3936	0.49928
8	RGR ~ log.rmf + Comp.1	3988	0.50059
9	RGR ~ log.rmf + initial size	3894	0.50151
10	RGR ~ Comp.1 + initial size	3928	0.50051
11	RGR ~ log.mean.thick + log.rmf + Comp.1	3966	0.50000
12	RGR ~ log.mean.thick + Comp.1 + initial size	3940	0.50022
13	RGR ~ log.rmf + Comp.1 + initial size	3896	0.50036
14	RGR ~ log.mean.thick + log.rmf + initial size	3919	0.50062
15	RGR ~ log.mean.thick + log.rmf + Comp.1 + initial size	3910	0.50211
16	RGR ~ log.mean.thick + Comp.1 + log.mean.thick*Comp.1	3989	0.50113
17	RGR ~ log.mean.thick + Comp.1 + initial size + log.mean.thick*Comp.1	3938	0.50077
18	RGR ~ log.rmf + Comp.1 + log.rmf*Comp.1	3957	0.49948
19	RGR ~ log.rmf + Comp.1 + initial size + log.rmf*Comp.1	3901	0.50015
20	RGR ~ log.mean.thick + log.rmf + log.mean.thick*log.rmf	3978	0.50140
21	RGR ~ log.mean.thick + log.rmf + initial size + log.mean.thick*log.rmf	3908	0.49953
22	RGR ~ log.mean.thick + log.rmf + Comp.1 + log.mean.thick*log.rmf	3972	0.49949
23	RGR ~ log.mean.thick + log.rmf + Comp.1 + initial size + log.mean.thick*log.rmf	3899	0.49882
24	RGR ~ log.mean.thick + log.rmf + Comp.1 + log.mean.thick*Comp.1	3960	0.50078
25	RGR ~ log.mean.thick + log.rmf + Comp.1 + initial size + log.mean.thick*Comp.1	3910	0.50000
26	RGR ~ log.mean.thick + log.rmf + Comp.1 + log.rmf*Comp.1	3977	0.50416
27	RGR ~ log.mean.thick + log.rmf + Comp.1 + initial size + log.rmf*Comp.1	3905	0.49994
28	RGR ~ log.mean.thick + log.rmf + Comp.1 + log.mean.thick*log.rmf + log.mean.thick*Comp.1	3982	0.49938
29	RGR ~ log.mean.thick + log.rmf + Comp.1 + initial size + log.mean.thick*log.rmf + log.mean.thick*Comp.1	3911	0.49977
30	RGR ~ log.mean.thick + log.rmf + Comp.1 + log.mean.thick*log.rmf + log.rmf*Comp.1	3973	0.4942
31	RGR ~ log.mean.thick + log.rmf + Comp.1 + initial size + log.mean.thick*log.rmf + log.rmf*Comp.1	3886	0.50077
32	RGR ~ log.mean.thick + log.rmf + Comp.1 + log.mean.thick*Comp.1 + log.rmf*Comp.1	3942	0.50155
33	RGR ~ log.mean.thick + log.rmf + Comp.1 + initial size + log.mean.thick*Comp.1 + log.rmf*Comp.1	3910	0.50064
34	RGR ~ log.mean.thick + log.rmf + Comp.1 + log.mean.thick*log.rmf + log.mean.thick*Comp.1 + log.rmf*Comp.1	3963	0.49997

35	RGR ~ log.mean.thick + log.rmf + Comp.1 + initial size + log.mean.thick*log.rmf + log.mean.thick*Comp.1 + log.rmf*Comp.1	3911	0.50041
36	RGR ~ log.mean.thick + log.rmf + Comp.1 + log.mean.thick*log.rmf + log.mean.thick*Comp.1 + log.rmf*Comp.1 + log.mean.thick*log.rmf*Comp.1	3944	0.49896
37	RGR ~ log.mean.thick + log.rmf + Comp.1 + log.mean.thick*log.rmf + log.mean.thick*Comp.1 + log.rmf*Comp.1 + log.mean.thick*log.rmf*Comp.1 + initial size	**3856**	**0.50029**

Table S4. Deviance Information Criterion (DIC) and Bayesian *p*-values for all subsets of the "full" model (37) that included the three-way interaction log.mean.thickness*log.smf*Comp.1. The DIC value in bold is the lowest value of all models following variable selection procedures indicating the best supported model. DIC values with * are equally best supported models with ΔDIC < 5 of the lowest DIC value.

	Model	**DIC**	**P value**
1	RGR ~ log.mean.thick	3990	0.50090
2	RGR ~ log.smf	3934	0.50026
3	RGR ~ Comp.1	4007	0.49967
4	RGR ~ initial size	3951	0.50077
5	RGR ~ log.mean.thick + log.smf	3907	0.50106
6	RGR ~ log.mean.thick + Comp.1	3991	0.50021
7	RGR ~ log.mean.thick + initial size	3936	0.49928
8	RGR ~ log.smf + Comp.1	3940	0.50058
9	RGR ~ log.smf + initial size	3883	0.49913
10	RGR ~ Comp.1 + initial size	3928	0.50051
11	RGR ~ log.mean.thick + log.smf + Comp.1	3925	0.50046
12	RGR ~ log.mean.thick + Comp.1 + initial size	3940	0.50022
13	RGR ~ log.smf + Comp.1 + initial size	3888	0.49944
14	RGR ~ log.mean.thick + log.smf + initial size	3878	0.49877
15	RGR ~ log.mean.thick + log.smf + Comp.1 + initial size	3892	0.50181
16	RGR ~ log.mean.thick + Comp.1 + log.mean.thick*Comp.1	3989	0.50113
17	RGR ~ log.mean.thick + Comp.1 + initial size + log.mean.thick*Comp.1	3938	0.50077
18	RGR ~ log.smf + Comp.1 + log.smf*Comp.1	3920	0.50123
19	RGR ~ log.smf + Comp.1 + initial size + log.smf*Comp.1	3882	0.49969
20	RGR ~ log.mean.thick + log.smf + log.mean.thick*log.smf	3924	0.49962
21	RGR ~ log.mean.thick + log.smf + initial size + log.mean.thick*log.smf	**3868**	**0.50087**
22	RGR ~ log.mean.thick + log.smf + Comp.1 + log.mean.thick*log.smf	3929	0.50049
23	RGR ~ log.mean.thick + log.smf + Comp.1 + initial size + log.mean.thick*log.smf	3883	0.50014
24	RGR ~ log.mean.thick + log.smf + Comp.1 + log.mean.thick*Comp.1	3921	0.49898
25	RGR ~ log.mean.thick + log.smf + Comp.1 + initial size + log.mean.thick*Comp.1	3873	0.50111
26	RGR ~ log.mean.thick + log.smf + Comp.1 + log.smf*Comp.1	3920	0.50025
27	RGR ~ log.mean.thick + log.smf + Comp.1 + initial size + log.smf*Comp.1	3890	0.50057
28	RGR ~ log.mean.thick + log.smf + Comp.1 + log.mean.thick*log.smf + log.mean.thick*Comp.1	3928	0.49924
29	RGR ~ log.mean.thick + log.smf + Comp.1 + initial size + log.mean.thick*log.smf + log.mean.thick*Comp.1	3889	0.49988
30	RGR ~ log.mean.thick + log.smf + Comp.1 + log.mean.thick*log.smf + log.smf*Comp.1	3911	0.49996
31	RGR ~ log.mean.thick + log.smf + Comp.1 + initial size + log.mean.thick*log.smf + log.smf*Comp.1	3878	0.50081
32	RGR ~ log.mean.thick + log.smf + Comp.1 + log.mean.thick*Comp.1 + log.smf*Comp.1	3927	0.49977
33	RGR ~ log.mean.thick + log.smf + Comp.1 + initial size + log.mean.thick*Comp.1 + log.smf*Comp.1	3881	0.49919
34	RGR ~ log.mean.thick + log.smf + Comp.1 + log.mean.thick*log.smf + log.mean.thick*Comp.1 + log.smf*Comp.1	3927	0.50150

35	RGR ~ log.mean.thick + log.smf + Comp.1 + initial size + log.mean.thick*log.smf + log.mean.thick*Comp.1 + log.smf*Comp.1	3873	0.50048
36	RGR ~ log.mean.thick + log.smf + Comp.1 + log.mean.thick*log.smf + log.mean.thick*Comp.1 + log.smf*Comp.1 + log.mean.thick*log.smf*Comp.1	3941	0.49840
37	RGR ~ log.mean.thick + log.smf + Comp.1 + log.mean.thick*log.smf + log.mean.thick*Comp.1 + log.smf*Comp.1 + log.mean.thick*log.smf*Comp.1 + initial size	3872*	0.50099*

Table S5. Deviance Information Criterion (DIC) and Bayesian *p*-values for all subsets of the "full" model (37) that included the three-way interaction log.mean.thickness*log.ssl*Comp.2. The DIC value in bold is the lowest value of all models following variable selection procedures indicating the best supported model.

	Model	**DIC**	**P value**
1	RGR ~ log.mean.thick	3990	0.50090
2	RGR ~ log.ssl	3940	0.5004
3	RGR ~ Comp.2	3991	0.49973
4	RGR ~ initial size	3951	0.50077
5	RGR ~ log.mean.thick + log.ssl	3920	0.49925
6	RGR ~ log.mean.thick + Comp.2	3997	0.49872
7	RGR ~ log.mean.thick + initial size	3936	0.49928
8	RGR ~ log.ssl + Comp.2	3948	0.50145
9	RGR ~ log.ssl + initial size	3914	0.50104
10	RGR ~ Comp.2 + initial size	3939	0.50053
11	RGR ~ log.mean.thick + log.ssl + Comp.2	3920	0.50044
12	RGR ~ log.mean.thick + Comp.2 + initial size	3920	0.50097
13	RGR ~ log.ssl + Comp.2 + initial size	3920	0.49951
14	RGR ~ log.mean.thick + log.ssl + initial size	3921	0.50024
15	RGR ~ log.mean.thick + log.ssl + Comp.2 + initial size	3930	0.49978
16	RGR ~ log.mean.thick + Comp.2 + log.mean.thick*Comp.2	3987	0.50002
17	RGR ~ log.mean.thick + Comp.2 + initial size + log.mean.thick*Comp.2	3928	0.50135
18	RGR ~ log.ssl + Comp.2 + log.ssl*Comp.2	3918	0.50079
19	RGR ~ log.ssl + Comp.2 + initial size + log.ssl*Comp.2	3925	0.49748
20	RGR ~ log.mean.thick + log.ssl + log.mean.thick*log.ssl	3943	0.50141
21	RGR ~ log.mean.thick + log.ssl + initial size + log.mean.thick*log.ssl	3915	0.50067
22	RGR ~ log.mean.thick + log.ssl + Comp.2 + log.mean.thick*log.ssl	3939	0.50132
23	RGR ~ log.mean.thick + log.ssl + Comp.2 + initial size + log.mean.thick*log.ssl	3937	0.49929
24	RGR ~ log.mean.thick + log.ssl + Comp.2 + log.mean.thick*Comp.2	3967	0.50145
25	RGR ~ log.mean.thick + log.ssl + Comp.2 + initial size + log.mean.thick*Comp.2	3928	0.50214
26	RGR ~ log.mean.thick + log.ssl + Comp.2 + log.ssl*Comp.2	3933	0.5008
27	RGR ~ log.mean.thick + log.ssl + Comp.2 + initial size + log.ssl*Comp.2	3920	0.47965
28	RGR ~ log.mean.thick + log.ssl + Comp.2 + log.mean.thick*log.ssl + log.mean.thick*Comp.2	3940	0.50106
29	RGR ~ log.mean.thick + log.ssl + Comp.2 + initial size + log.mean.thick*log.ssl + log.mean.thick*Comp.2	3945	0.50103
30	RGR ~ log.mean.thick + log.ssl + Comp.2 + log.mean.thick*log.ssl + log.ssl*Comp.2	3911	0.50060
31	RGR ~ log.mean.thick + log.ssl + Comp.2 + initial size + log.mean.thick*log.ssl + log.ssl*Comp.2	3957	0.49973
32	RGR ~ log.mean.thick + log.ssl + Comp.2 + log.mean.thick*Comp.2 + log.ssl*Comp.2	3927	0.50082
33	RGR ~ log.mean.thick + log.ssl + Comp.2 + initial size + log.mean.thick*Comp.2 + log.ssl*Comp.2	3921	0.50133
34	RGR ~ log.mean.thick + log.ssl + Comp.2 + log.mean.thick*log.ssl + log.mean.thick*Comp.2 + log.ssl*Comp.2	3950	0.50037
35	RGR ~ log.mean.thick + log.ssl + Comp.2 + initial size + log.mean.thick*log.ssl + log.mean.thick*Comp.2 + log.ssl*Comp.2	3931	0.50009

36	RGR ~ log.mean.thick + log.ssl + Comp.2 + log.mean.thick*log.ssl + log.mean.thick*Comp.2 + log.ssl*Comp.2 + log.mean.thick*log.ssl*Comp.2	**3895**	**0.50018**
37	RGR ~ log.mean.thick + log.ssl + Comp.2 + log.mean.thick*log.ssl + log.mean.thick*Comp.2 + log.ssl*Comp.2 + log.mean.thick*log.ssl*Comp.2 + initial size	3906	0.50171

Table S6. Deviance Information Criterion (DIC) and Bayesian *p*-values for all subsets of the "full" model (37) that included the three-way interaction log.lma*log.smf*light. The DIC value in bold is the lowest value of all models following variable selection procedures indicating the best supported model. DIC values with * are equally best supported models with ΔDIC < 5 of the lowest DIC value.

	Model	**DIC**	**P value**
1	RGR ~ log.lma	3988	0.50191
2	RGR ~ log.smf	3934	0.50026
3	RGR ~ Light	3993	0.50187
4	RGR ~ initial size	3951	0.50077
5	RGR ~ log.lma + log.smf	3927	0.5003
6	RGR ~ log.lma + Light	3993	0.50009
7	RGR ~ log.lma + initial size	3926	0.50048
8	RGR ~ log.smf + Light	3943	0.50133
9	RGR ~ log.smf + initial size	3887	0.50117
10	RGR ~ Light + initial size	3936	0.50121
11	RGR ~ log.lma + log.smf + Light	3931	0.50136
12	RGR ~ log.lma + Light + initial size	3916	0.50047
13	RGR ~ log.smf + Light + initial size	3902	0.50055
14	RGR ~ log.lma + log.smf + initial size	3874	0.50086
15	RGR ~ log.lma + log.smf + Light + initial size	3892	0.50201
16	RGR ~ log.lma + Light + log.lma*Light	3991	0.50116
17	RGR ~ log.lma + Light + initial size + log.lma*Light	3930	0.49992
18	RGR ~ log.smf + Light + log.smf*Light	3922	0.50056
19	RGR ~ log.smf + Light + initial size + log.smf*Light	3884	0.50002
20	RGR ~ log.lma + log.smf + log.lma*log.smf	3916	0.5004
21	RGR ~ log.lma + log.smf + initial size + log.lma*log.smf	3870	0.50057
22	RGR ~ log.lma + log.smf + Light + log.lma*log.smf	3905	0.50024
23	RGR ~ log.lma + log.smf + Light + initial size + log.lma*log.smf	3866*	0.50109*
24	RGR ~ log.lma + log.smf + Light + log.lma*Light	3925	0.50084
25	RGR ~ log.lma + log.smf + Light + initial size + log.lma*Light	3895	0.50096
26	RGR ~ log.lma + log.smf + Light + log.smf*Light	3910	0.50094
27	RGR ~ log.lma + log.smf + Light + initial size + log.smf*Light	3893	0.50024
28	RGR ~ log.lma + log.smf + Light + log.lma*log.smf + log.lma*Light	3912	0.50097
29	RGR ~ log.lma + log.smf + Light + initial size + log.lma*log.smf + log.lma*Light	**3863**	**0.50042**
30	RGR ~ log.lma + log.smf + Light + log.lma*log.smf + log.smf*Light	3897	0.50082
31	RGR ~ log.lma + log.smf + Light + initial size + log.lma*log.smf + log.smf*Light	3881	0.50040
32	RGR ~ log.lma + log.smf + Light + log.lma*Light + log.smf*Light	3915	0.50079
33	RGR ~ log.lma + log.smf + Light + initial size + log.lma*Light + log.smf*Light	3885	0.50070
34	RGR ~ log.lma + log.smf + Light + log.lma*log.smf + log.lma*Light + log.smf*Light	3893	0.50137
35	RGR ~ log.lma + log.smf + Light + initial size + log.lma*log.smf + log.lma*Light + log.smf*Light	3897	0.50090
36	RGR ~ log.lma + log.smf + Light +.log.lma*log.smf + log.lma*Light + log.smf*Light + log.lma*log.smf*Light	3918	0.49943
37	RGR ~ log.lma + log.smf + Light + log.lma*log.smf + log.lma*Light + log.smf*Light + log.lma*log.smf*Light + initial size	3868	0.50027

Table S7. Deviance Information Criterion (DIC) and Bayesian *p*-values for all subsets of the "full" model (37) that included the three-way interaction log.lma*log.rmf*Comp.2. The DIC value in bold is the lowest value of all models following variable selection procedures indicating the best supported model.

	Model	**DIC**	**P value**
1	RGR ~ log.lma	3988	0.50191
2	RGR ~ log.rmf	3958	0.49973
3	RGR ~ Comp.2	3991	0.49973
4	RGR ~ initial size	3951	0.50077
5	RGR ~ log.lma + log.rmf	3950	0.5006
6	RGR ~ log.lma + Comp.2	3988	0.49967
7	RGR ~ log.lma + initial size	3926	0.50048
8	RGR ~ log.rmf + Comp.2	3960	0.49095
9	RGR ~ log.rmf + initial size	3894	0.50151
10	RGR ~ Comp.2 + initial size	3939	0.50053
11	RGR ~ log.lma + log.rmf + Comp.2	3956	0.50121
12	RGR ~ log.lma + Comp.2 + initial size	3928	0.50092
13	RGR ~ log.rmf + Comp.2 + initial size	3893	0.49997
14	RGR ~ log.lma + log.rmf + initial size	3932	0.50078
15	RGR ~ log.lma + log.rmf + Comp.2 + initial size	3907	0.49967
16	RGR ~ log.lma + Comp.2 + log.lma*Comp.2	3996	0.50056
17	RGR ~ log.lma + Comp.2 + initial size + log.lma*Comp.2	3925	0.50007
18	RGR ~ log.rmf + Comp.2 + log.rmf*Comp.2	3951	0.49981
19	RGR ~ log.rmf + Comp.2 + initial size + log.rmf*Comp.2	3903	0.50141
20	RGR ~ log.lma + log.rmf + log.lma*log.rmf	3973	0.50114
21	RGR ~ log.lma + log.rmf + initial size + log.lma*log.rmf	3909	0.50258
22	RGR ~ log.lma + log.rmf + Comp.2 + log.lma*log.rmf	3976	0.50256
23	RGR ~ log.lma + log.rmf + Comp.2 + initial size + log.lma*log.rmf	3894	0.50072
24	RGR ~ log.lma + log.rmf + Comp.2 + log.lma*Comp.2	3971	0.50123
25	RGR ~ log.lma + log.rmf + Comp.2 + initial size + log.lma*Comp.2	3895	0.50104
26	RGR ~ log.lma + log.rmf + Comp.2 + log.rmf*Comp.2	3949	0.49967
27	RGR ~ log.lma + log.rmf + Comp.2 + initial size + log.rmf*Comp.2	3897	0.50079
28	RGR ~ log.lma + log.rmf + Comp.2 + log.lma*log.rmf + log.lma*Comp.2	3961	0.50006
29	RGR ~ log.lma + log.rmf + Comp.2 + initial size + log.lma*log.rmf + log.lma*Comp.2	3903	0.49991
30	RGR ~ log.lma + log.rmf + Comp.2 + log.lma*log.rmf + log.rmf*Comp.2	3951	0.50187
31	RGR ~ log.lma + log.rmf + Comp.2 + initial size + log.lma*log.rmf + log.rmf*Comp.2	**3883**	**0.50093**
32	RGR ~ log.lma + log.rmf + Comp.2 + log.lma*Comp.2 + log.rmf*Comp.2	3969	0.50031
33	RGR ~ log.lma + log.rmf + Comp.2 + initial size + log.lma*Comp.2 + log.rmf*Comp.2	3889	0.50078
34	RGR ~ log.lma + log.rmf + Comp.2 + log.lma*log.rmf + log.lma*Comp.2 + log.rmf*Comp.2	3967	0.50039
35	RGR ~ log.lma + log.rmf + Comp.2 + initial size + log.lma*log.rmf + log.lma*Comp.2 + log.rmf*Comp.2	3896	0.50079
36	RGR ~ log.lma + log.rmf + Comp.2 + log.lma*log.rmf + log.lma*Comp.2 + log.rmf*Comp.2 + log.lma*log.rmf*Comp.2	3948	0.50077
37	RGR ~ log.lma + log.rmf + Comp.2 + log.lma*log.rmf + log.lma*Comp.2 + log.rmf*Comp.2 + log.lma*log.rmf*Comp.2 + initial size	3902	0.49930

Table S8. Deviance Information Criterion (DIC) and Bayesian *p*-values for all subsets of the "full" model (37) that included the three-way interaction log.lar*log.lmf*Comp.2. The DIC value in bold is the lowest value of all models following variable selection procedures indicating they best supported model.

	Model	**DIC**	**P value**
1	RGR ~ log.lar	3854	0.50050
2	RGR ~ log.lmf	3890	0.49940
3	RGR ~ Comp.2	3991	0.49973
4	RGR ~ initial size	3951	0.50077
5	RGR ~ log.lar + log.lmf	3855	0.50116
6	RGR ~ log.lar + Comp.2	3870	0.50036
7	RGR ~ log.lar + initial size	3847	0.50026
8	RGR ~ log.lmf + Comp.2	3882	0.50072
9	RGR ~ log.lmf + initial size	3835	0.50025
10	RGR ~ Comp.2 + initial size	3939	0.50053
11	RGR ~ log.lar + log.lmf + Comp.2	3852	0.49946
12	RGR ~ log.lar + Comp.2 + initial size	3824	0.50193
13	RGR ~ log.lmf + Comp.2 + initial size	3828	0.49953
14	RGR ~ log.lar + log.lmf + initial size	3833	0.50053
15	RGR ~ log.lar + log.lmf + Comp.2 + initial size	3829	0.50145
16	RGR ~ log.lar + Comp.2 + log.lar*Comp.2	3867	0.49972
17	RGR ~ log.lar + Comp.2 + initial size + log.lar*Comp.2	3815	0.50003
18	RGR ~ log.lmf + Comp.2 + log.lmf*Comp.2	3914	0.50038
19	RGR ~ log.lmf + Comp.2 + initial size + log.lmf*Comp.2	3838	0.50021
20	RGR ~ log.lar + log.lmf + log.lar*log.lmf	3828	0.50100
21	RGR ~ log.lar + log.lmf + initial size + log.lar*log.lmf	3833	0.50068
22	RGR ~ log.lar + log.lmf + Comp.2 + log.lar*log.lmf	3834	0.50024
23	RGR ~ log.lar + log.lmf + Comp.2 + initial size + log.lar*log.lmf	3806	0.50168
24	RGR ~ log.lar + log.lmf + Comp.2 + log.lar*Comp.2	3861	0.50088
25	RGR ~ log.lar + log.lmf + Comp.2 + initial size + log.lar*Comp.2	3838	0.50105
26	RGR ~ log.lar + log.lmf + Comp.2 + log.lmf*Comp.2	3846	0.50141
27	RGR ~ log.lar + log.lmf + Comp.2 + initial size + log.lmf*Comp.2	3822	0.50036
28	RGR ~ log.lar + log.lmf + Comp.2 + log.lar*log.lmf + log.lar*Comp.2	3835	0.50078
29	RGR ~ log.lar + log.lmf + Comp.2 + initial size + log.lar*log.lmf + log.lar*Comp.2	**3788**	**0.49968**
30	RGR ~ log.lar + log.lmf + Comp.2 + log.lar*log.lmf + log.lmf*Comp.2	3830	0.50154
31	RGR ~ log.lar + log.lmf + Comp.2 + initial size + log.lar*log.lmf + log.lmf*Comp.2	3821	0.50155
32	RGR ~ log.lar + log.lmf + Comp.2 + log.lar*Comp.2 + log.lmf*Comp.2	3867	0.50077
33	RGR ~ log.lar + log.lmf + Comp.2 + initial size + log.lar*Comp.2 + log.lmf*Comp.2	3825	0.49968
34	RGR ~ log.lar + log.lmf + Comp.2 + log.lar*log.lmf + log.lar*Comp.2 + log.lmf*Comp.2	3823	0.49960
35	RGR ~ log.lar + log.lmf + Comp.2 + initial size + log.lar*log.lmf + log.lar*Comp.2 + log.lmf*Comp.2	3805	0.50085
36	RGR ~ log.lar + log.lmf + Comp.2 + log.lar*log.lmf + log.lar*Comp.2 + log.lmf*Comp.2 + log.lar*log.lmf*Comp.2	3831	0.50157
37	RGR ~ log.lar + log.lmf + Comp.2 + log.lar*log.lmf + log.lar*Comp.2 + log.lmf*Comp.2 + log.lar*log.lmf*Comp.2 + initial size	3805	0.49977