

1 **SUPPLEMENTARY TABLES**

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 3 **Table S1.** Comparisons of standardized major axis regression slopes from primary bivariate
 4 relationships presented for all possible comparisons of the three growth stages (Late-Veg.,
 5 Early-Rep., and Late-Rep.) measured on field-grown plants and those grown in controlled
 6 growth chambers (Chamber). Pair-wise differences in slopes were assessed by likelihood ratio
 7 tests with significance corrected for multiple comparisons using the Sidak correction.
 8 Comparisons with differing slopes are indicated: * indicates $p < 0.05$, ** $p < 0.01$, and ***
 9 $p < 0.001$.

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Slope Comparison:		Chamber vs. Late-Veg.	Chamber vs. Early-Rep.	Chamber vs. Late-Rep.	Late-Veg. vs. Early-Rep.	Late-Veg. vs. Late-Rep.	Early-Rep. vs. Late-Rep.
<i>Trait 1</i>	<i>Trait 2</i>						
A_N	g_m	*		***			
A_N	g_s			*			
A_N	J_{cal}	***	**				
g_m	g_{s-co2}						
g_m	J_{cal}	***	*	***			
A_N/g_s	g_m	*					
g_m	<i>LMA</i>						

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18 **Table S2.** Cultivars used in this study along with their maturity group status and the source of
 19 seeds. Abbreviations used on figure axes and in legends are included for clarity. MG is soybean
 20 maturity group.
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Cultivar	Figure Abbreviations	MG	Seed Source
Garden Soy 21	GS21	2	NGRP ^B
Garden Soy 22 ^A	GS22	2	NGRP
Garden Soy 24	GS24	2	NGRP
Garden Soy 31 ^A	GS31	3	NGRP
Garden Soy 32 ^A	GS32	3	NGRP
Garden Soy 41 ^A	GS41	4	NGRP
Garden Soy 42 ^A	GS42	4	NGRP
Garden Soy 43 ^A	GS43	4	NGRP
Lanco ^A	Lanc	4	Southern Exposure Seed Exchange ^C
Mikawashima ^A	Mika	0	NGRP
Vinton 81	Vint	2	Urban Farmer ^D
Wyandot	Wyan	3	DKG Seed Farms ^E

^A Designates cultivars used for field plantings. ^BUnited States Department of Agriculture, Agricultural Research Service, National Genetic Resources Program. ^CMineral, Virginia, USA. ^DWestfield, Indiana, USA. ^EOrville, OH, USA.

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