

# **Supplementary Tables**

**S1.** Distribution of very early (MG000) and early (MG00) soybean cultivars grown over the five years of trials (2017-2021). Number of entries per trial and number of trials per year are summarized at the bottom.

Cultivars MG00	2017	2018	2019	2020	2021	Cultivars MG000	2017	2018	2019	2020	2021
ABIOLA				X	X	ALICIA				X	X
ACARDIA				X	X	AURELINA			X	X	X
ACHILLEA					X	CANTATE PZO				X	X
ADELFA				X	X	ES COLLECTOR					X
ALBENGA			X	X		ES COMANDOR	X	X	X	X	X
ALTONA				X	X	ES COMPOSITOR				X	X
AMIATA			X	X	X	ES FAVOR			X	X	
ANGELICA	X	X	X	X		ES GOVERNOR			X	X	X
ASUKA	X					ES NAVIGATOR	X				
ATACAMA			X	X	X	GALICE		X	X		
BETTINA	X	X				HERTA PZO	X				
CORALINE	X	X				NESSIE PZO					X
DAKOTA				X	X	OAC ERIN	X				
ES ADVISOR	X					OBELIX	X	X	X	X	X
ES DIRECTOR			X	X		REGINA	X	X	X		
ES LIBERATOR				X	X	RGT SALSA				X	X
ES MENTOR		X	X	X	X	RGT SATELIA				X	X
ES PROFESSOR			X	X	X	RGT SHOUNA	X	X	X	X	
MARQUISE	X					RGT SIGMA				X	X
MERIDIAN PZO		X				RGT SPHINXA			X	X	
POCAHONTAS					X	SAHARA					X
RGT SAKUSA			X	X	X	SG ANSER	X				
RGT SIROCA	X	X	X	X	X	SIRELIA	X	X	X	X	X
RGT STUMPA	X	X	X	X	X	SOLENA	X	X	X	X	
RGT SVELA	X	X				STEPSA					X
SOLENA	X	X	X			SULTANA	X	X	X	X	
SOPRANA	X	X	X	X		TOURMALINE	X	X			
TIMOR PZO				X	X	VIOLA	X	X			
YAKARI			X	X		Entries	13	10	12	16	15
Entries	11	10	13	19	15	Trials	11	12	13	13	18
Trials	9	8	7	9	12						

**S2.** Maturity groups 00 and 000 (MG00 and MG000, respectively) genetic coefficients used for the simulation of MG00 and MG000 environments, respectively. The genetic coefficients correspond to the Critical Short-Day Length (CSDL) below which reproductive development progresses with no daylength effect (hour), the slope of the relative response of development to photoperiod with time (hour-1) (PPSEN), the time between plant emergence and flower appearance (photothermal days) (EM-FL), the time between first flower and first pod (photothermal days) (FL-SH), the time between first flower and first seed (photothermal days) (FL-SD), time between first seed and physiological maturity (photothermal days) (SD-PM) and the time between first flower and end of leaf expansion (photothermal days) (FL-LF).

Maturity Groups	Genetic coefficients						
	CSDL	PPSEN	EM-FL	FL-SH	FL-SD	SD-PM	FL-LF
MG 000	14.60	0.129	15.5	5	12	29.5	26
MG 00	14.35	0.148	16.0	5	12	30.0	26