Supplement to:

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Early planting and relay cropping: pathways to cope with heat and drought?

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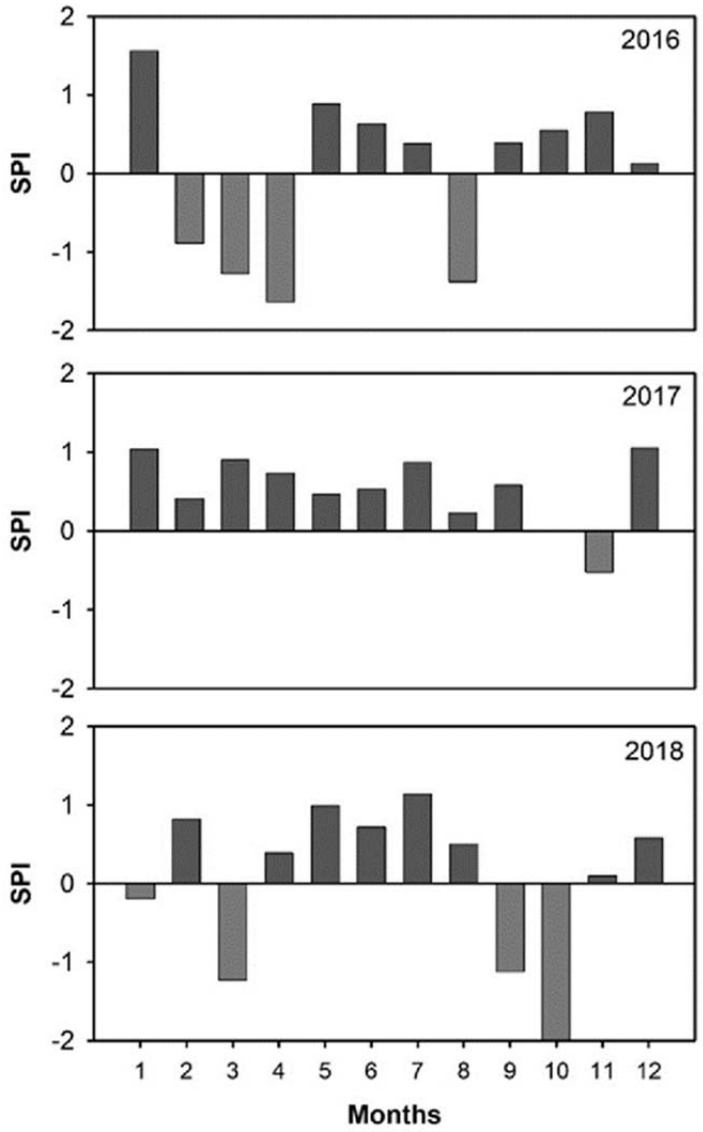
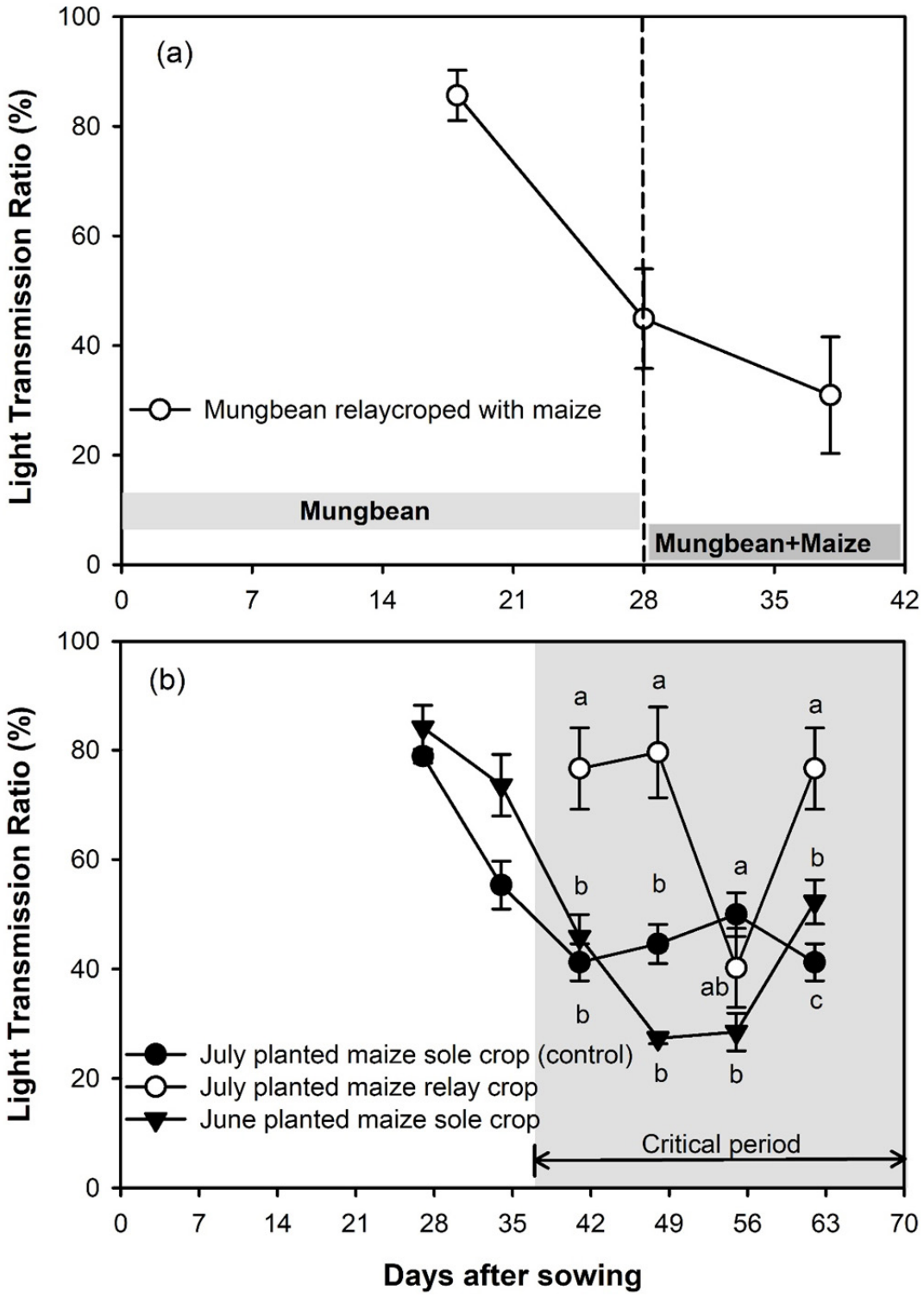
Supplementary Material



Suppl. Mat. Fig. 1 Standardized Precipitation Index (SPI) of the last three years for the experimental site at Wang Thong district, Phitsanulok province, Thailand. It was generated from 50 years of historical weather data at the location using National Drought Mitigation Center - SPI Generator 1.7.5.0. (Edwards & McKee, 1997).

Note: SPI > 2 = extremely wet, SPI 1.50 - 1.99 = very wet, SPI 1.0 – 1.49 = moderately wet, SPI (-0.99) – 0.99 = near normal, SPI (-0.1) – (-1.49) = moderately dry, SPI (-1.5) – (-1.99) = severely dry and SPI > (-2) = extremely dry



Suppl. Mat. Fig. 2 Light transmission ratio (LTR) of mungbean-maize relay-cropping before and after integration of mungbeans into the system (a) and LTR as affected by cropping pattern (b). Data were collected during 2018 at Wang Thong district, Phitsanulok province, Thailand.

Note: ns = not significant at P<0.05; data points with different letters at the same sampling time indicate significant differences using LSD (P<0.05); vertical bars = standard error (SE).

Suppl. Mat. Tab. 1 Soil properties of the experimental site at Wang Thong district, Phitsanulok province, Thailand.

Slope position	Chemical properties					Texture			Bulk density ($g\ cm^{-3}$)
	pH (H_2O)	EC (dS/m)	OM (%)	P_{av} ($mg\ kg^{-1}$)	K_{ex} ($mg\ kg^{-1}$)	Clay (%)	Sand (%)	Silt (%)	
Top	4.7	0.23	1.4	9.9	60.7	23.6	49.1a	27.3	1.59b
Mid	5.0	0.24	1.4	16.7	81.0	28.1	35.6b	36.4	1.66ab
Bottom	4.9	0.34	1.6	17.5	67.0	29.6	44.9ab	25.5	1.72a
***F*-test**	ns	ns	ns	ns	ns	ns	*	ns	*
C.V.	7.5	35.7	10.3	38.8	32.9	24.3	16.7	23.5	4.5

Note: ns = not significant, * = significant different at P<0.05; values followed by different letters are significantly different (P<0.05) for slope position.

Reference:

Edwards, D. C., & McKee, T. B. (1997). *Characteristics of 20th century drought in the United States at multiple time scales*. Colorado. http://weather.uwyo.edu/upperair/sounding.html