



Supplementary information

Table S1. Main and interactive effects of the year (Y), temperature (T), and precipitation (P) on the soil water content (SWC) and soil temperature (ST).

	df	SWC		ST	
		F	P	F	P
Y	2	27.31	<0.001	459.90	<0.001
T	1	11.50	<0.01	1.54	0.22
P	1	53.92	<0.001	37.27	<0.001
Y×T	2	0.02	0.98	3.13	0.05
Y×P	2	4.40	<0.05	0.04	0.96
T×P	1	3.95	0.05	13.49	<0.01
Y×T×P	2	0.00	1.00	1.06	0.36

Note: The values of $P < 0.05$ are bolded.



Figure S1. The layout of the plots (A) and the plot photo (B).

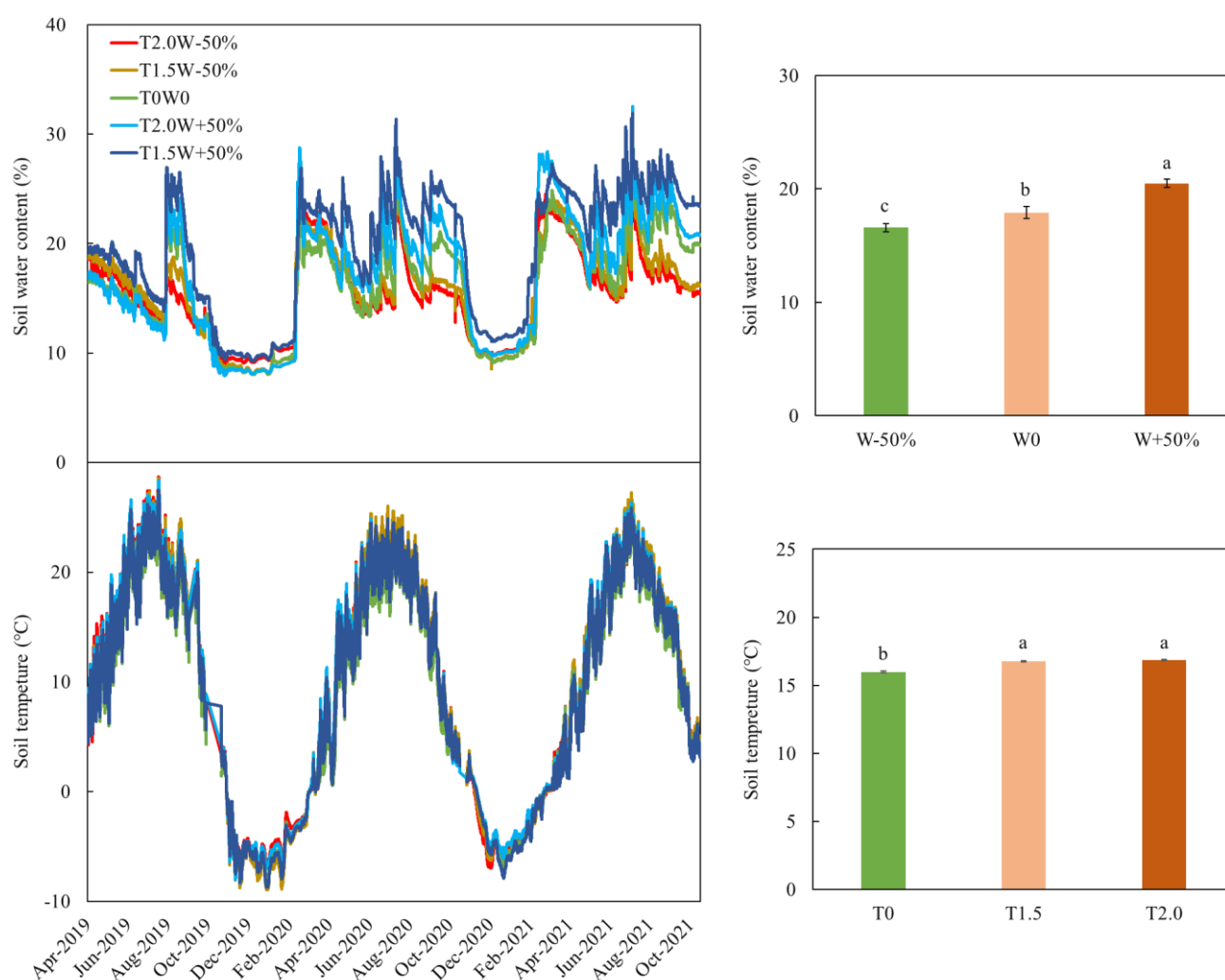


Figure S2. Soil water content (A) and soil temperature (B) of each treatment during the experimental period (from April 18, 2019, to November 2, 2021) and the effects of precipitation and temperature treatments on the soil water content (C) and soil temperature (D) of the three growing seasons (from May to November) (means \pm SE). W0: ambient precipitation, W+50%: 50% precipitation addition, W-50%: 50% precipitation reduction; T0: ambient temperature, T1.5: 1.5 °C warming, T2.0: 2.0 °C warming. The different lowercase letters show significant differences among precipitation and temperature treatments ($P < 0.05$).