

Table S3. The minimum and maximum correlation values for corn (country level) between residuals (differences between estimated and HCSO yield data) and different meteorological parameters ( $d_b$  and  $d_e$  are the starting and ending days of averaging, respectively).

Met parameter	$d_b-d_e$	Correlation (%)	Correlation ( $R^2$ )
$T_{\min-}$	240–260	–49.06	0.241
$T_{\min+}$	180–200	42.91	0.184
$T_{\max-}$	250–270	–50.43	0.254
$T_{\max+}$	180–200	47.44	0.225
$Prec-$	180–200	–39.68	0.157
$Prec+$	140–160	40.71	0.166
$Rad-$	250–270	–42.38	0.180
$Rad+$	160–200	50.38	0.254
$SWC_1-$	190–210	–26.18	0.069
$SWC_1+$	150–170	42.72	0.182
$SWC_2-$	190–210	–16.12	0.026
$SWC_2+$	150–170	36.79	0.135
$SWC_3-$	230–250	–1.67	0.000
$SWC_3+$	160–180	27.24	0.074