Supplementary materials

Table S1 Field management for CT and NT during 2014–2016.

Management	2014	2015	2016
Maize Cultivar	XDH78	XDH78	XDH78
Tillage Date	15–Apr	15–Apr	18–Apr
Tillage depth	30 cm	30 cm	30 cm
Fertilization date	17–Apr	8–May	27–Apr
Fertilization application	N: 257 Kg·ha^{-1} P: 105 Kg·ha^{-1} K:15 Kg·ha^{-1}	N: 257 Kg·ha^{-1} P: 105 Kg·ha^{-1} K:15 Kg·ha^{-1}	N: 257 Kg·ha^{-1} P: 105 Kg·ha^{-1} K:15 Kg·ha^{-1}
Planting date	20–Apr	20–May	6–May
Planting density	50000 seed ha^{-1}	50000 seed ha^{-1}	50000 seed ha^{-1}
Row spacing	90 cm	90 cm	90 cm
In-row spacing	40 cm	40 cm	40 cm
Weed control	Thifensulfuron-methyl (120 g ha^{-1})	Thifensulfuron-methyl(120 g ha^{-1})	Thifensulfuron-methyl(120 g ha^{-1})
Harvest date	10–Sep	7–Oct	3–Oct

Note: Information of Tillage Date and Tillage depth are for CT.

Table S2 Statistical evaluations of measured and simulated soil water content in different layers for CT and NT during 2014–2016.

Depth (cm)	Year	CT Simulated ($cm^3\ cm^{-3}$)	CT Measured ($cm^3\ cm^{-3}$)	RMSE	d	E	NT Simulated ($cm^3\ cm^{-3}$)	NT Measured ($cm^3\ cm^{-3}$)	RMSE	d	E
	2014	0.12	0.10				0.14	0.12			
10	2015	0.15	0.13	0.07	0.88	0.02	0.15	0.10	0.08	0.81	0.03
	2016	0.10	0.09				0.10	0.08			
	2014	0.15	0.14				0.15	0.12			
30	2015	0.19	0.15	0.06	0.80	0.02	0.19	0.14	0.06	0.83	0.04
	2016	0.13	0.11				0.13	0.12			
	2014	0.11	0.09				0.11	0.11			
50	2015	0.15	0.10	0.09	0.42	0.03	0.15	0.14	0.05	0.90	0.00
	2016	0.10	0.10				0.10	0.13			
	2014	0.11	0.07				0.09	0.08			
70	2015	0.15	0.11	0.07	0.73	0.03	0.15	0.13	0.05	0.89	0.01
	2016	0.10	0.10				0.10	0.10			
	2014	0.10	0.09				0.08	0.06			
90	2015	0.14	0.12	0.06	0.81	0.01	0.14	0.12	0.03	0.95	0.02
	2016	0.10	0.09				0.10	0.10			