

TABLES

TABLE 1. Physical properties of the experimental soil

Soil type	Clay % (<0.002)	Silt % (0.02–0.002)	Sand % (2–0.02)	Bulk density g/cm ³	θ_s cm ³ /cm ³
Topsoil	26.43	64.15	9.42	1.35	0.067
Subsoil	62.54	33.16	4.3	1.43	0.083
Yellow River sediment	3.8	18.28	77.92	1.5	0.024

TABLE 2. Cumulative infiltration fitting of various treatments by the Kostiakov Model

Treatments	k	n	R^2	$RRMSE$	NSE
CK1	1.0837	0.4273	0.9997	0.0195	0.9972
CK2	0.7412	0.4533	0.9969	0.0348	0.9971
T1	0.9335	0.4251	0.9966	0.0568	0.9943
T2	0.6981	0.4722	0.9985	0.0286	0.9965
T3	1.0208	0.4175	0.9983	0.0549	0.9937
T4	0.9949	0.4238	0.9950	0.0427	0.9895
T5	0.8159	0.4536	0.9980	0.0253	0.9984
T6	0.7640	0.4630	0.9991	0.0244	0.9981
T7	0.5791	0.4968	0.9989	0.0241	0.9986

TABLE 3. Cumulative evaporation fitting of each treatment by the polynomial function

Treatments	a	b	c	R^2	$RRMSE$	NSE
CK1	−0.0210	1.2661	−0.8022	0.9967	0.0185	0.9858
CK2	−0.0202	0.3408	−1.2711	0.9947	0.0140	0.9895
T1	−0.0231	1.3566	−1.2139	0.9952	0.0391	0.9876
T2	−0.0223	1.3541	−1.2539	0.9944	0.0349	0.9882
T3	−0.0217	1.3431	−1.1983	0.9954	0.0326	0.9884
T4	−0.0212	1.3476	−1.2197	0.9954	0.0321	0.9888
T5	−0.2270	1.3450	−1.1779	0.9948	0.0059	0.9875
T6	−0.0230	1.3546	−1.2083	0.9949	0.0109	0.9870
T7	−0.0232	0.1362	−1.1779	0.9946	0.0072	0.9877

Treatments		10 cm	30 cm	45 cm	65 cm	85 cm	105 cm
OM g/kg	CK1	18.31±1.74a	16.80±0.99a	16.10±0.99a	17.15±1.18a	15.11±1.80a	14.98±3.3a
	CK2	13.06±2.82b	9.52±2.45b	7.03±2.87b	5.97±1.51c	4.84±1.25b	3.80±0.84b
	T4	15.68±2.82ab	9.34±2.45b	8.34±1.87b	12.88±2.31ab	4.13±0.41b	3.83±1.59b
	T6	16.51±3.26ab	10.37±2.25b	9.37±2.24b	12.52±4.10b	4.82±1.48b	4.52±2.62b
TN g/kg	CK1	1.69±0.37a	1.46±0.12a	1.26±0.13a	1.11±0.15b	1.20±0.11a	1.18±0.19a
	CK2	1.34±0.20a	0.79±0.25b	0.64±0.21b	0.57±0.11c	0.53±0.05b	0.42±0.12b
	T4	1.35±0.22a	0.86±0.14b	0.62±0.15b	1.26±0.14ab	0.55±0.07b	0.67±0.12b
	T6	1.44±0.17a	0.95±0.24b	0.73±0.24b	1.42±0.27a	0.60±0.17b	0.57±0.32b
AK g/kg	CK1	268.79±31.25a	252.73±31.25a	242.71±34.78a	200.51±18.79a	178.34±14.47a	165.10±18.36a
	CK2	165.71±31.99c	68.4±15.42c	62.4±25.12b	53.71±4.65b	50.77±2.74c	45.64±7.47b
	T4	198.63±28.09bc	83.15±10.96c	65.1±10.21b	202.73±13.51a	57.55±11.26bc	52.72±7.71b
	T6	206.13±16.18b	120.38±31.25b	72.38±8.62b	206.87±10.89a	69.95±3.79b	56.68±10.55b
AP g/kg	CK1	25.77±3.14a	22.82±3.62a	21.17±3.54a	13.91±0.75a	11.07±1.49a	12.05±1.96a
	CK2	19.25±3.43a	13.97±1.71c	6.57±1.7b	6.21±2.39c	4.27±1.47b	4.99±1.29b
	T4	23.38±2.76a	11.71±2.61c	7.61±2.61b	9.69±0.63b	4.29±1.01b	5.54±1.37b
	T6	25.77±3.14a	15.84±1.47b	8.41±1.47b	11.01±1.07ab	5.57±0.83b	5.36±1.71b

TABLE 4. Major nutrients distribution on field soil profile