Supplementary Materials

Title: Integrating Infiltration Holes into Ridge–Furrow Systems Enhances Drought Resilience and Yield of Maize in Semi-Arid China

List of Authors:

Jiwei Gao [1,2,3], Ke Wang [1,4], Xiaoyuan Zhang [1,5], Gaoliang Li [1,6],

Guogang Wang [1], Zitong Zhang [1] and Jiyong Zheng [1,2,3,*]

Institute or laboratory of origin:

1. College of Natural Resources and Environment, Northwest A&F University, Xianyang 712100, China

2 College of Soil and Water Conservation Science and Engineering, Northwest A&F University, Xianyang 712100, China

3 State Key Laboratory of Soil and Water Conservation and Desertification Control, Northwest A&F University, Xianyang 712100, China

4 Institute of Eco-Environment and Industrial Technology, Shanxi Agricultural University, Taiyuan 030031, China

5 Institute of Organic Dryland Farming, Shanxi Agricultural University, Taiyuan 030031, China

6 Henan Province Key Laboratory of Efficient Crop Production and Food Quality Safety, Zhoukou Normal University, Zhoukou 466001, China

* Correspondence: zhjy@ms.iswc.ac.cn; Tel.: +86-132-0188-7791; Fax: +86-29-8701-2210

Table S1 Dynamic variation of soil water storage during two growing seasons of maize. Values are mean ± *SE*. Different lowercase letters indicate significant differences among all treatments at $P < 0.05$.

Fig. S1 Calibration curve of neutron probe. y is soil volumetric water content; x is the rate of the measured value of the neutron probe to the standard value; R^2 is the coefficient; R is the measured value of the neutron probe, and Rs is the standard value of the neutron probe.

Table S1 Dynamic variation of soil water storage during two growing seasons of maize.

Year	Soil layer (cm)	Treatment	Maize growth stages				
			Seedling	Jointing	Silking	Filling	Maturity
2021	0-50	CK	122.23 ± 3.10a	92.88 ± 1.01b	74.75 ± 8.35a	76.15 ± 6.86a	142.48 ± 5.73a
		CWC	113.93 ± 0.90b	76.80 ± 3.58c	54.71 ± 4.50b	69.82 ± 4.22a	132.77 ± 4.60a
		DWC	119.55 ± 1.26ab	103.27 ± 1.36a	68.24 ± 3.64ab	59.76 ± 1.85a	140.31 ± 3.87a
		DWCR	115.98 ± 3.02ab	101.26 ± 0.83a	79.42 ± 4.61a	68.51 ± 7.68a	140.37 ± 1.06a
	50-200	CK	366.20 ± 2.80a	355.95 ± 2.00ab	240.55 ± 1.53a	246.42 ± 3.74a	355.35 ± 1.87a
		CWC	358.00 ± 3.86a	324.69 ± 6.99c	196.81 ± 5.34b	224.32 ± 6.75b	312.70 ± 6.16b
		DWC	361.37 ± 6.05a	368.28 ± 3.02a	203.79 ± 8.28b	172.25 ± 5.86d	343.38 ± 9.66a
		DWCR	364.72 ± 3.26a	350.54 ± 2.56b	236.54 ± 2.06a	198.07 ± 5.63c	357.99 ± 3.89a
	200-300	CK	215.15 ± 7.12b	222.29 ± 7.25a	227.95 ± 4.24ab	229.62 ± 4.58a	197.89 ± 7.28a
		CWC	231.30 ± 5.18a	224.46 ± 11.15a	213.85 ± 9.92b	224.69 ± 3.91a	210.45 ± 10.35a
		DWC	220.94 ± 1.88ab	237.79 ± 1.58a	207.62 ± 8.17b	173.75 ± 1.11b	191.50 ± 4.75a
		DWCR	235.39 ± 2.14a	225.23 ± 12.57a	241.44 ± 7.27a	214.75 ± 7.76a	206.67 ± 6.10a
2022	0-50cm	CK	112.29 ± 1.66ab	129.15 ± 3.30b	94.25 ± 4.53a	104.34 ± 2.94a	102.20 ± 5.16a
		CWC	106.37 ± 2.34b	103.00 ± 0.30c	106.77 ± 5.46a	104.18 ± 3.53a	109.62 ± 2.78a
		DWC	114.05 ± 1.04a	127.54 ± 2.32b	103.17 ± 5.65a	98.31 ± 8.79a	109.34 ± 1.63a
		DWCR	111.44 ± 2.80ab	140.33 ± 3.74a	93.82 ± 0.76a	112.15 ± 3.17a	104.12 ± 2.79a
	50-200cm	CK	386.51 ± 6.42a	481.71 ± 0.86a	319.72 ± 6.80c	329.72 ± 4.01a	218.21 ± 4.39ab
		CWC	364.93 ± 10.58a	399.79 ± 2.40c	363.79 ± 3.61a	339.92 ± 5.06a	220.71 ± 0.45a
		DWC	380.37 ± 7.20a	457.35 ± 7.18b	344.52 ± 0.74b	298.11 ± 2.52b	204.98 ± 4.49b
		DWCR	367.42 ± 13.14a	471.19 ± 4.94ab	293.08 ± 3.68d	335.18 ± 5.47a	204.25 ± 6.24b
	200-300cm	CK	210.46 ± 5.03a	309.76 ± 1.97a	256.95 ± 1.61c	275.33 ± 4.13a	204.42 ± 2.10b

CWC	213.82 ± 5.10a	280.46 ± 2.36b	306.15 ± 0.37a	276.46 ± 2.71a	257.08 ± 3.18a
DWC	213.89 ± 9.86a	300.17 ± 5.40a	273.91 ± 2.39b	245.97 ± 3.04b	176.98 ± 2.62d
DWCR	213.05 ± 3.47a	314.71 ± 9.28a	242.72 ± 3.45d	255.10 ± 8.73b	190.45 ± 4.34c

Note: Values are mean ± *SE*. Different lowercase letters indicate significant differences among all treatments at $P < 0.05$.

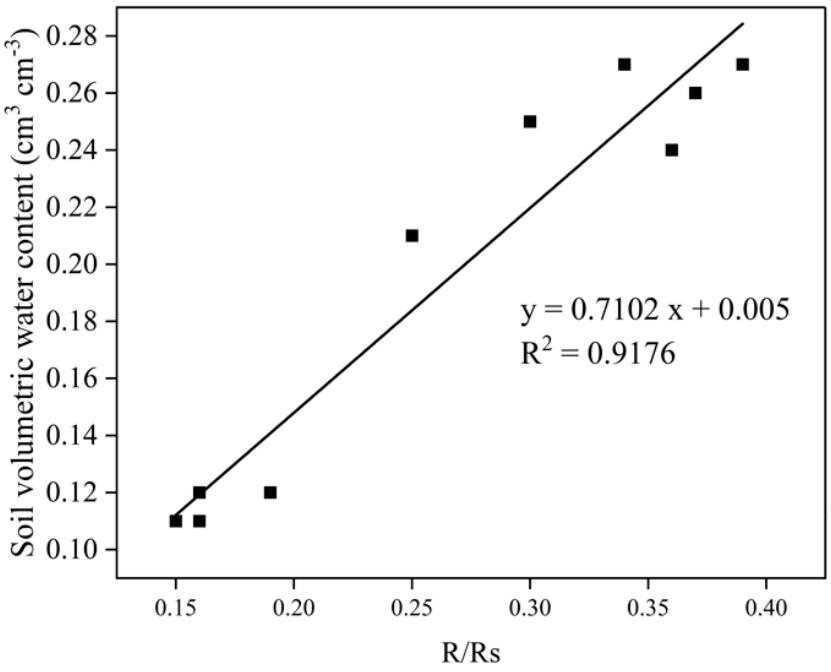


Fig. S1 Calibration curve of neutron probe.

Note: y is soil volumetric water content; x is the rate of the measured value of the neutron probe to the standard value; R^2 is the coefficient; R is the measured value of the neutron probe, and Rs is the standard value of the neutron probe.