

**Table S1.** Geographical location of the research fields and their average annual rainfall and temperature

<b>Parameters</b>	<b>Unit</b>	<b>Mahidasht</b>	<b>Kermanshah</b>
Latitude	° N	34.13	34.33
Longitude	° E	46.43	47.10
Elevation	m	1365	1323
Mean annual temperature	°C	13.9	15.6
Annual precipitation	mm	390	410

**Table S2.** Average monthly weather parameters during the implementation of research projects

Place, year	Weather parameter	Maximum temperature (°C)	Minimum temperature (°C)	Sunshine hours (h)	Wind speed (m/s)	Precipitation (mm)	Relative humidity (%)
Mahidasht, 2011	May	30.4	11.7	8.7	3.5	41	40.7
	June	37.0	15.7	10.1	4.1	0	23.7
	July	39.2	17.8	10.7	3.7	0	18.0
	Aug.	36.1	15.3	10.8	3.7	0	21.0
	Sep.	30.3	10.5	9.7	4.0	0	25.0
Kermanshah, 2012	May	27.3	9.4	7.3	3.1	18	41.2
	June	38.8	8.9	7.6	3.3	0	24
	July	40.6	10.0	7.8	3.1	0	21
	Aug.	41.9	14.9	10.3	3.4	0	17
	Sep.	40.2	10.1	8.8	3.6	0	16
Kermanshah, 2015	May	32.0	6.7	8.3	0.9	0	22.9
	June	35.0	13.0	9.7	1.4	0	19.6
	July	38.3	17.0	10.2	1.2	0	18.9
	Aug.	39.1	17.1	9.9	1.1	0	17.2
	Sep.	35.0	14.1	10.3	1.1	0	22.1

**Table S3.** Soil physical characteristics of the research farms

Research farm	Soil depth (cm)	Soil texture	Volumetric soil moisture (%) at		
			Saturation	Field capacity	Permanent wilting point
Razi University (Kermanshah)	0-30	Clay Loam	48.4	34.7	20.1
	30-60	Clay Loam	48.7	37.4	22.6
	60-90	Clay	47.9	39.2	25.2
Agricultural Organization (Mahidasht)	0-30	Sandy Clay	50.0	34.0	22.0
	30-60	Sandy Clay	51.0	34.0	22.0
	60-90	Sandy Clay	50.0	34.0	23.0