

Table S1. Weather data during the period of experimentation

Month	Minimum temperature (°C)		Maximum temperature (°C)		Monthly rainfall (mm)	
	2017	2018	2017	2018	2017	2018
July	28.1	28	39.9	40.2	40	25
August	27.7	27.5	38.8	38.7	30	35
September	25	25.2	37.7	37.9	08	05
October	19.2	18.3	35	35.5	03	15

Table S2. Significance **terms** for irrigation, potassium, maize hybrids and year on 1000 grain weight, grain yield, **biological yield**, **water productivity** and drought susceptibility index as obtained in Layyah, Pakistan.

Source of variance	1000 grain weight (g)	Grain yield (kg ha <sup>-1</sup> )	Biological yield (kg ha <sup>-1</sup> )	Water productivity	Drought susceptibility index
Year (Y)	24.5 <sup>ns</sup>	12.9 <sup>ns</sup>	9.18 <sup>ns</sup>	12.47 <sup>ns</sup>	4.06 <sup>ns</sup>
Irrigation (I)	2316.17**	4521.43**	3247.45**	2657.12**	2794.09**
Potassium (K)	124.42**	239.22**	351.88**	249.77**	142.66**
Hybrid (H)	99.09 <sup>ns</sup>	82.35**	64.02**	87.16**	106.34**
I × K	14.39**	32.42**	21.00**	36.98**	24.22**
I × H	4.72*	5.29*	2.44*	11.42**	2.99*
I × Y	0.65 <sup>ns</sup>	0.02 <sup>ns</sup>	0.35 <sup>ns</sup>	0.12 <sup>ns</sup>	0.49 <sup>ns</sup>
H × K	1.09 <sup>ns</sup>	0.45*	0.33*	1.99*	0.53 <sup>ns</sup>
H × Y	0.22 <sup>ns</sup>	0.43 <sup>ns</sup>	0.76 <sup>ns</sup>	0.27 <sup>ns</sup>	0.49 <sup>ns</sup>
K × Y	0.22 <sup>ns</sup>	0.66 <sup>ns</sup>	0.88 <sup>ns</sup>	1.02 <sup>ns</sup>	1.01 <sup>ns</sup>
I × K × H	0.42 <sup>ns</sup>	0.36 <sup>ns</sup>	0.77 <sup>ns</sup>	0.62 <sup>ns</sup>	0.91 <sup>ns</sup>
I × K × Y	0.57 <sup>ns</sup>	0.26 <sup>ns</sup>	0.11 <sup>ns</sup>	0.45 <sup>ns</sup>	0.66 <sup>ns</sup>
Y × K × H	0.71 <sup>ns</sup>	0.98 <sup>ns</sup>	0.29 <sup>ns</sup>	0.93 <sup>ns</sup>	1.18 <sup>ns</sup>
I × H × Y	0.45 <sup>ns</sup>	0.34 <sup>ns</sup>	0.55 <sup>ns</sup>	0.79 <sup>ns</sup>	0.06 <sup>ns</sup>
I × K × H × Y	0.53 <sup>ns</sup>	0.39 <sup>ns</sup>	0.82 <sup>ns</sup>	0.37 <sup>ns</sup>	0.52 <sup>ns</sup>
CV (%)	9.72	6.45	14.32	12.11	8.48

<sup>ns</sup> not significant

\* Significant at the 0.05 probability level.

\*\* Significant at the 0.01 probability level.