Supplementary table. Effect of different environmental treatments on five maize hybrids analyzed by JIP-test parameters. Data are shown as mean ± S.E.M. (n = 30). C – control, LL – low light, F – field, Co – cold, H – heat, SH – severe heat.

Treatment	Genotype	K	J	V_J	V_I	M_O	Sm	N
C	378	397.60 ± 2.52	554.60 ± 4.44	0.46 ± 0.00	0.81 ± 0.00	0.68 ± 0.01	20.65 ± 0.45	30.55 ± 0.66
LL	378	529.52 ± 3.97	798.84 ± 7.23	0.55 ± 0.00	0.83 ± 0.00	1.02 ± 0.01	17.44 ± 0.24	32.42 ± 0.36
F	378	492.92 ± 2.78	680.68 ± 5.33	0.45 ± 0.00	0.64 ± 0.00	0.71 ± 0.01	28.92 ± 0.52	45.37 ± 0.47
Co	378	591.53 ± 4.34	818.13 ± 7.06	0.62 ± 0.01	0.77 ± 0.00	1.00 ± 0.02	37.23 ± 0.48	60.00 ± 1.24
H	378	632.80 ± 6.49	886.98 ± 8.27	0.55 ± 0.01	0.73 ± 0.00	1.17 ± 0.02	19.70 ± 0.40	42.31 ± 1.08
SH	378	728.42 ± 14.13	954.67 ± 13.39	0.54 ± 0.01	0.64 ± 0.01	1.37 ± 0.03	26.38 ± 1.39	68.86 ± 4.61
C	444	356.80 ± 4.74	499.30 ± 7.50	0.45 ± 0.00	0.80 ± 0.00	0.63 ± 0.01	20.95 ± 0.19	29.55 ± 0.35
LL	444	488.54 ± 2.99	724.90 ± 4.37	0.53 ± 0.00	0.83 ± 0.00	0.91 ± 0.01	17.93 ± 0.18	30.68 ± 0.35
F	444	438.69 ± 2.30	597.03 ± 5.06	0.43 ± 0.01	0.61 ± 0.01	0.67 ± 0.02	36.52 ± 0.96	56.14 ± 1.16
Co	444	531.00 ± 5.37	732.68 ± 5.01	0.56 ± 0.01	0.74 ± 0.00	0.88 ± 0.01	34.11 ± 0.51	54.17 ± 1.40
H	444	612.08 ± 4.30	842.92 ± 6.86	0.57 ± 0.00	0.71 ± 0.00	1.28 ± 0.02	26.26 ± 0.43	58.57 ± 0.98
SH	444	636.01 ± 6.34	799.89 ± 7.56	0.51 ± 0.02	0.53 ± 0.02	1.58 ± 0.03	38.12 ± 2.09	125.67 ± 9.06
C	505	404.83 ± 2.33	568.67 ± 3.78	0.45 ± 0.00	0.81 ± 0.00	0.65 ± 0.01	19.78 ± 0.22	28.59 ± 0.38
LL	505	511.97 ± 4.40	752.11 ± 7.95	0.52 ± 0.00	0.83 ± 0.00	0.89 ± 0.02	18.24 ± 0.20	30.73 ± 0.28
F	505	476.03 ± 2.93	656.10 ± 6.05	0.45 ± 0.01	0.63 ± 0.00	0.68 ± 0.01	30.62 ± 0.59	45.83 ± 0.63
Co	505	576.23 ± 4.82	798.92 ± 7.82	0.58 ± 0.01	0.73 ± 0.00	0.89 ± 0.02	34.46 ± 0.40	52.99 ± 0.54
H	505	651.92 ± 10.85	887.87 ± 13.86	0.58 ± 0.01	0.74 ± 0.00	1.29 ± 0.03	22.09 ± 0.69	48.73 ± 1.83
SH	505	755.95 ± 10.98	938.25 ± 9.82	0.48 ± 0.02	0.54 ± 0.02	1.44 ± 0.03	35.89 ± 1.99	115.89 ± 9.58
C	Drava	411.90 ± 3.17	572.37 ± 4.50	0.46 ± 0.00	0.82 ± 0.00	0.69 ± 0.01	19.19 ± 0.19	28.66 ± 0.32
LL	Drava	514.05 ± 5.56	756.33 ± 8.49	0.54 ± 0.00	0.84 ± 0.00	0.98 ± 0.01	18.03 ± 0.24	32.71 ± 0.38
F	Drava	469.62 ± 3.00	633.35 ± 3.84	0.44 ± 0.01	0.63 ± 0.00	0.66 ± 0.01	33.46 ± 0.57	49.16 ± 0.69
Co	Drava	599.98 ± 6.75	830.52 ± 9.44	0.60 ± 0.01	0.75 ± 0.00	0.90 ± 0.02	37.20 ± 0.46	56.11 ± 0.94
H	Drava	651.22 ± 7.61	897.67 ± 10.67	0.53 ±0.01	0.69 ± 0.01	1.15 ± 0.03	23.33 ± 0.74	50.14 ± 1.62
SH	Drava	786.42 ± 11.93	1003.73 ± 11.07	0.52 ± 0.01	0.61 ± 0.02	1.40 ± 0.02	30.40 ± 1.80	87.02 ± 7.25
C	Veli	365.13 ± 4.07	512.13 ± 6.45	0.43 ± 0.00	0.78 ± 0.00	0.62 ± 0.01	21.89 ± 0.31	31.58 ± 0.43
LL	Veli	495.81 ± 3.34	734.20 ± 5.53	0.51 ± 0.00	0.81 ± 0.00	0.90 ± 0.01	19.78 ± 0.15	34.57 ± 0.35
F	Veli	481.65 ± 2.65	662.93 ± 4.21	0.44 ±0.00	0.62 ± 0.00	0.67 ± 0.01	33.88 ± 0.53	51.83 ± 0.75
Co	Veli	559.62 ± 3.93	774.97 ± 7.47	0.57 ± 0.01	0.72 ± 0.00	0.91 ± 0.01	37.12 ± 0.66	59.53 ±1.05
H	Veli	627.67 ± 7.19	891.83 ± 11.34	0.53 ±0.01	0.73 ± 0.00	1.11 ± 0.02	21.42 ± 0.43	45.01 ± 0.90

SH	Veli	764.07 ± 15.94	999.85 ± 16.11	0.56 ± 0.01	0.69 ± 0.01	1.49 ± 0.03	22.12 ± 0.90	59.20 ± 3.21

Treatment	Genotype	DI_o/RC	ET_o/RC	RE_o/RC	φ_{P0}	ψ_{E0}	RC/ABS	PI_{ABS}
C	378	0.41 ± 0.00	0.80 ± 0.01	0.29 ± 0.01	0.78 ± 0.00	0.54 ± 0.00	0.53 ± 0.00	2.27 ± 0.04
LL	378	0.51 ± 0.00	0.84 ± 0.01	0.31 ± 0.01	0.79 ± 0.00	0.45 ± 0.00	0.42 ± 0.00	1.29 ± 0.04
F	378	0.44 ± 0.01	0.87 ± 0.01	0.57 ± 0.01	0.78 ± 0.00	0.55 ± 0.00	0.50 ± 0.01	2.23 ± 0.06
Co	378	0.64 ± 0.02	0.61 ± 0.01	0.37 ± 0.01	0.72 ± 0.00	0.38 ± 0.01	0.45 ± 0.01	0.71 ± 0.03
H	378	0.80 ± 0.03	0.97 ± 0.02	0.59 ± 0.01	0.73 ± 0.01	0.45 ± 0.01	0.34 ± 0.01	0.82 ± 0.04
SH	378	1.43 ± 0.08	1.19 ± 0.04	0.95 ± 0.05	0.65 ± 0.01	0.46 ± 0.01	0.26 ± 0.01	0.46 ± 0.04
C	444	0.37 ± 0.00	0.78 ± 0.01	0.29 ± 0.00	0.79 ± 0.00	0.55 ± 0.00	0.56 ± 0.01	2.67 ± 0.04
LL	444	0.47 ± 0.00	0.80 ± 0.01	0.29 ± 0.00	0.79 ± 0.00	0.47 ± 0.00	0.46 ± 0.00	1.50 ± 0.02
F	444	0.44 ± 0.01	0.88 ± 0.01	0.61 ± 0.01	0.78 ± 0.00	0.57 ± 0.01	0.51 ± 0.00	2.44 ± 0.08
Co	444	0.56 ± 0.02	0.71 ± 0.02	0.41 ± 0.01	0.74 ± 0.00	0.44 ± 0.01	0.48 ± 0.01	1.09 ± 0.03
H	444	0.96 ± 0.03	0.96 ± 0.01	0.66 ± 0.01	0.70 ± 0.01	0.43 ± 0.00	0.31 ± 0.01	0.59 ± 0.03
SH	444	2.38 ± 0.14	1.57 ± 0.08	1.54 ± 0.09	0.58 ± 0.01	0.49 ± 0.02	0.19 ± 0.01	0.28 ± 0.02
C	505	0.38 ± 0.00	0.79 ± 0.01	0.28 ± 0.00	0.79 ± 0.00	0.55 ± 0.00	0.55 ± 0.00	2.57 ± 0.04
LL	505	0.47 ± 0.01	0.80 ± 0.01	0.28 ± 0.00	0.78 ± 0.00	0.48 ± 0.00	0.46 ± 0.00	1.53 ± 0.05
F	505	0.42 ± 0.01	0.83 ± 0.01	0.55 ± 0.00	0.78 ± 0.00	0.55 ± 0.01	0.52 ± 0.01	2.35 ± 0.08
Co	505	0.54 ± 0.01	0.65 ± 0.01	0.41 ± 0.00	0.74 ± 0.00	0.42 ± 0.01	0.48 ± 0.01	1.02 ± 0.03
H	505	1.12 ± 0.10	0.91 ± 0.01	0.57 ± 0.01	0.68 ± 0.01	0.42 ± 0.01	0.31 ± 0.01	0.57 ± 0.05
SH	505	2.35 ± 0.19	1.65 ± 0.09	1.47 ± 0.10	0.58 ± 0.01	0.52 ± 0.02	0.20 ± 0.01	0.33 ± 0.03
C	Drava	0.43 ± 0.00	0.80 ± 0.00	0.27 ± 0.00	0.78 ± 0.00	0.54 ± 0.00	0.52 ± 0.00	2.15 ± 0.03
LL	Drava	0.54 ± 0.01	0.84 ± 0.01	0.29 ± 0.00	0.77 ± 0.00	0.46 ± 0.00	0.43 ± 0.00	1.24 ± 0.03
F	Drava	0.44 ± 0.01	0.82 ± 0.01	0.54 ± 0.01	0.77 ± 0.00	0.56 ± 0.01	0.53 ± 0.01	2.30 ± 0.07
Co	Drava	0.55 ± 0.01	0.61 ± 0.01	0.38 ± 0.01	0.73 ± 0.00	0.40 ± 0.01	0.49 ± 0.01	0.93 ± 0.03
H	Drava	0.86 ± 0.04	1.01 ± 0.01	0.66 ± 0.01	0.72 ± 0.01	0.47 ± 0.01	0.34 ± 0.01	0.80 ± 0.05
SH	Drava	1.77 ± 0.12	1.35 ± 0.07	1.11 ± 0.08	0.62 ± 0.01	0.48 ± 0.01	0.23 ± 0.01	0.36 ± 0.02
C	Veli	0.36 ± 0.00	0.82 ± 0.01	0.32 ± 0.00	0.80 ± 0.00	0.57 ± 0.00	0.56 ± 0.00	2.99 ± 0.05
LL	Veli	0.48 ± 0.00	0.85 ± 0.01	0.33 ± 0.00	0.79 ± 0.00	0.49 ± 0.00	0.45 ± 0.00	1.58 ± 0.03
F	Veli	0.42 ± 0.01	0.87 ± 0.01	0.59 ± 0.01	0.79 ± 0.00	0.56 ± 0.00	0.51 ± 0.00	2.51 ± 0.08
Co	Veli	0.58 ± 0.01	0.69 ± 0.01	0.44 ± 0.01	0.74 ± 0.00	0.43 ± 0.01	0.46 ± 0.01	0.99 ± 0.03
H	Veli	0.71 ± 0.01	0.99 ± 0.02	0.58 ± 0.01	0.75 ± 0.00	0.47 ± 0.01	0.36 ± 0.00	0.95 ± 0.03
SH	Veli	1.53 ± 0.09	1.15 ± 0.03	0.82 ± 0.04	0.64 ± 0.01	0.44 ± 0.01	0.25 ± 0.01	0.38 ± 0.03