

## Supplementary tables

**Table 1a.** Two-factor analysis of variance for the morphometric traits.

Traits	ASI	NOT	PH	EH	NOE	NOL	LL	LW	TL	TB	CL	CG	KRN	KPR	TW	SPY
MSG	3.58 ***	0.44 ***	1419.36 ***	708.54 ***	11.75 ***	4.97 ***	177.23 ***	1.76 ***	51.65 ***	0.30 ***	27.87 ***	35.74 ***	2.1 ***	1.59 ***	146.60 ***	3678.37 ***
MSE	188.24 ***	1.62 ***	228780.03 ***	47662.62 ***	19.97 ***	21.90 ***	3266.34 ***	0.69 ***	2581.30 ***	27.18 ***	113.61 ***	7.02 ***	0.34 **	2.53 ***	242.62 ***	101333.24 ***
MSGE	1.96 ***	0.05 **	950.70 ***	468.99 ***	1.33 ***	0.51 *	170.77 ***	0.97 ***	22.46 ***	0.48 ***	2.28 ***	0.82 ***	0.08 **	0.15 ***	4.16 ***	609.55 ***

**MSG** - mean sum of squares of genotypes, **MSE** - mean sum of squares of environment, **MSGE** - mean sum of squares of G×E, **ASI** - anthesis silking interval, **NOT** - no. of tillers, **PH** - plant height, **EH** - ear height, **NOE** - no. of ears, **NOL** - no. of leaves, **LL** - leaf length, **LW** - leaf width, **TL** - tassel length, **TB** - tassel branches, **CL** - cob length, **CG** - cob girth, **KRN** - kernel row number, **KPR** - kernels per row, **TW** - test weight, **SPY** - single plant yield. \* - significant at p < 0.05, \*\* - significant at p < 0.01, \*\*\* - significant at p < 0.001, ns – non-significant.

**Table 1b.** Two-factor analysis of variance for the physiological and biochemical traits

Traits	SPAD8	SPAD19	SPAD26	SPAD4R	LRS8	LRS19	LRS26	LRS4R	LSS	RWC	CF	CAT	POX	PRO
MSG	44.70 *	61.79 **	121.46 ***	150.42 ***	138.54 ***	191.44 ***	139.92 ***	74.10 ***	84.73 ***	83.35 ***	0.007 ***	0.0008 ***	40.44 ***	72.52 ***
MSE	1832.36 ***	11120.65 ***	13952.25 ***	7103.62 ***	17789.89 ***	21980.42 ***	27791.48 ***	3602.12 ***	13993.81 ***	33934.93 ***	0.173 ***	0.0009 ***	1004.33 ***	10047.04 ***
MSGE	22.86 ***	40.98 ***	58.95 ***	57.09 ***	147.86 ***	101.81 ***	131.33 ***	60.20 ***	49.90 ***	107.83 ***	0.004 ***	0.0006 ***	10.23 ***	78.36 ***

**MSG** - mean sum of squares of genotypes, **MSE** - mean sum of squares of environment, **MSGE** - mean sum of squares of G×E, **SPAD8**, **SPAD19**, **SPAD 26**, **SPAD4R** - SPAD at 8, 19, 26 days after drought induction and 4 days after rewatering, respectively, **LRS8**, **LRS19**, **LRS26**, **LRS4R** - leaf rolling score at 8, 19, 26 days after drought induction and 4 days after rewatering, respectively, **LSS** - leaf senescence score, **CF** - chlorophyll fluorescence, **RWC30** - relative water content, **CAT** - catalase activity, **POX** - peroxidase activity, **PRO** - proline content. \* - significant at p < 0.05, \*\* - significant at p < 0.01, \*\*\* - significant at p < 0.001, ns – non-significant.

**Table 2.** Selection differential for the mean performance of hybrids under different moisture conditions.

Trait	Factor	Xo	Xs	SG	SG %	Sense	Goal	Trait	Factor	Xo	Xs	SG	SG %	Sense	Goal
Well-watered								Water-stressed							
Morphometric															
NOE	FA1	32.30	24.80	-7.02	-21.7	↑	No	ASI	FA1	5.75	4.81	-0.78	-13.50	↓	Yes
LW		7.12	7.80	0.65	9.18	↑	Yes	TL		20.80	22.80	1.87	9.01	↓	No
TL		29.50	30.70	0.79	2.66	↓	No	CL		7.57	8.69	1.07	14.20	↑	Yes
CL		9.40	12.50	3.06	32.5	↑	Yes	CG		4.98	6.60	1.60	32.20	↑	Yes
CG		5.43	8.62	3.16	58.1	↑	Yes	KRN		4.01	5.43	1.39	34.70	↑	Yes
KRN		4.42	8.65	4.13	93.6	↑	Yes	KPR		11.00	14.00	2.86	25.90	↑	Yes
KPR		13.20	19.50	6.11	46.2	↑	Yes	TW		11.80	15.60	3.68	31.10	↑	Yes
TW		14.50	20.00	5.37	37.1	↑	Yes	SPY		42.10	72.90	29.20	69.30	↑	Yes
PH	FA2	217.0	226.00	7.87	3.63	↑	Yes	NOT	FA2	1.96	2.46	0.48	24.30	↑	Yes
EH		114.0	122.00	7.90	6.95	↑	Yes	NOE		23.70	24.80	1.04	4.40	↑	Yes
NOT	FA3	2.63	2.52	-0.10	-3.80	↑	No	NOL	FA3	24.30	30.30	5.42	22.30	↑	Yes
NOL		33.20	28.90	-3.65	-11.00	↑	No	LL		72.40	78.00	5.31	7.33	↑	Yes
TB		25.00	25.20	0.15	0.61	↓	No	LW		6.98	6.95	-0.03	-0.44	↑	No
SPY		96.70	133.00	34.50	35.60	↑	Yes	TB		16.80	15.50	-1.23	-7.33	↓	Yes
ASI	FA4	3.40	3.04	-0.32	-9.41	↓	Yes	PH	FA4	135.00	156.00	20.30	15.10	↑	Yes
LL		82.20	86.80	4.36	5.31	↑	Yes	EH		76.20	80.80	4.48	5.89	↑	Yes
Physiological & biochemical															
LRS26	FA1	1.31	1.16	-0.10	-7.69	↓	Yes	LRS8	FA1	3.22	2.34	-0.75	-23.30	↓	Yes
LRS4R		1.22	1.21	-0.01	-0.76	↓	Yes	LRS19		3.29	2.68	-0.54	-16.30	↓	Yes
LSS		1.28	1.04	-0.20	-16.00	↓	Yes	LRS26		3.55	2.94	-0.47	-13.20	↓	Yes
SPAD4R	FA2	47.20	50.20	2.48	5.26	↑	Yes	CAT	FA2	0.05	0.07	0.02	35.00	↑	Yes
RWC30		86.00	86.10	0.05	0.06	↑	Yes	LRS4R		2.05	2.05	-0.001	-0.04	↓	Yes
POX	FA3	7.60	10.20	2.55	33.50	↑	Yes	POX	FA3	13.00	17.10	3.84	29.40	↑	Yes
CF		0.78	0.78	0.0001	0.04	↑	Yes	PRO		21.50	32.30	10.60	49.50	↑	Yes
PRO	FA4	4.31	4.81	0.49	11.50	↑	Yes	SPAD8	FA4	45.10	45.50	0.10	0.21	↑	Yes
SPAD19		55.00	56.30	0.66	1.19	↑	Yes	SPAD19		36.90	38.70	0.61	1.65	↑	Yes

SPAD26		51.70	51.10	-0.47	-0.91	↑	No	SPAD4R		32.70	38.20	4.81	14.7	↑	Yes
LRS19		1.26	1.52	0.20	15.80	↓	No	CF		0.71	0.74	0.02	3.11	↑	Yes
CAT	FA5	0.04	0.06	0.02	40.40	↑	Yes	RWC30		54.40	57.60	3.08	5.66	↑	Yes
SPAD8		52.50	52.80	0.05	0.09	↑	Yes	SPAD26		31.50	33.30	1.51	4.79	↑	Yes
LRS8	FA6	1.37	1.15	-0.18	-13.40	↓	Yes	LSS	FA4	4.31	3.69	-0.54	-12.50	↓	Yes

**Xo** - population mean, **Xs** - mean of selected genotypes, **SG** - selection gain, **SG%** - selection gain percentage, ↓ - decrease, ↑ - increase, **ASI** - anthesis silking interval, **NOT** - no. of tillers, **PH** - plant height, **EH** - ear height, **NOE** - no. of ears, **NOL** - no. of leaves, **LL** - leaf length, **LW** - leaf width, **TL** - tassel length, **TB** - tassel branches, **CL** - cob length, **CG** - cob girth, **KRN** - kernel row number, **KPR** - kernels per row, **TW** - test weight, **SPY** - single plant yield, **SPAD8**, **SPAD19**, **SPAD 26**, **SPAD4R** - SPAD at 8, 19, 26 days after drought induction and 4 days after rewatering respectively, **LRS8**, **LRS19**, **LRS26**, **LRS4R** - leaf rolling score at 8, 19, 26 days after drought induction and 4 days after rewatering respectively, **LSS** - leaf senescence score, **CF** - chlorophyll fluorescence, **RWC30** - relative water content, **CAT** - catalase activity, **POX** - peroxidase activity, **PRO** - proline content.