Supplementary Tables

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Development of Spring Wheat Germplasm against Water Deficit Conditions

Table S1a. Mean performance of crosses (L × T) under normal conditions

	Crosses	PH	FLA	NSS	NGS	TGW	NTP
F1 HYBRIDS	L1 × T1	99.50	39.05	23.64	67.65	54.04	21.57
	L1 × T2	101.50	41.85	24.64	64.65	57.04	23.57
	L1 × T3	103.50	38.85	24.64	65.65	56.04	22.57
	L2 × T1	100.50	40.85	25.64	65.65	52.04	22.57
	L2 × T2	98.50	41.85	24.64	63.65	52.04	20.57
	L2 × T3	104.50	41.85	23.64	63.65	55.04	23.57
	L3 × T1	103.50	41.05	24.64	64.65	52.04	22.57
	L3 × T2	108.50	44.05	27.64	71.65	58.04	25.57
	L3 × T3	99.50	37.05	21.64	68.65	51.04	24.57
	L4 × T1	98.50	36.66	21.64	62.65	49.04	20.57
	L4 × T2	99.50	40.05	23.64	69.65	52.04	23.57
	L4 × T3	101.50	42.05	21.64	64.65	51.04	24.57
	L5 × T1	103.50	41.05	22.64	69.65	52.04	22.57
	L5 × T2	105.50	42.05	26.64	69.65	57.04	24.57
	L5 × T3	99.50	39.05	22.64	65.65	51.04	24.57
	L6 × T1	99.50	38.05	23.64	65.65	56.04	23.57
	L6 × T2	98.50	41.05	23.64	68.65	52.04	22.57
	L6 × T3	98.50	40.05	24.64	65.65	51.04	23.57
	L7 × T1	99.50	40.05	24.64	67.65	56.04	22.57
	L7 × T2	100.50	39.05	22.64	64.65	51.04	20.57
	L7 × T3	98.50	37.05	21.64	63.65	50.04	20.57
	L8 × T1	99.50	38.05	26.64	63.65	52.04	21.57
	L8 × T2	98.50	41.05	23.64	64.65	54.04	22.57
	L8 × T3	99.50	37.05	22.64	64.65	53.04	23.57

Table S1b. Mean performance of crosses (L × T) under normal conditions

	Crosses	GYP	BYP	HI	RWC	CMT	TCC
F1 HYBRIDS	L1 × T1	39.00	73.49	51.61	78.48	63.74	59.84
	L1 × T2	37.00	72.49	49.61	79.48	62.74	61.84
	L1 × T3	36.00	74.49	49.63	81.48	63.74	60.84
	L2 × T1	37.00	71.49	50.30	77.48	62.74	58.84
	L2 × T2	38.00	70.49	52.40	79.48	61.74	62.84
	L2 × T3	38.00	73.49	50.28	80.48	60.74	58.84
	L3 × T1	39.00	72.49	52.32	81.48	62.74	60.84
	L3 × T2	42.00	76.49	55.02	82.48	66.74	63.84
	L3 × T3	40.00	74.49	52.24	77.48	63.74	58.84
	L4 × T1	36.00	70.49	47.61	77.48	60.74	57.84
	L4 × T2	41.00	72.49	49.63	80.48	62.74	58.84
	L4 × T3	37.00	73.49	48.94	81.48	65.74	62.84
	L5 × T1	40.00	74.49	52.24	79.48	62.74	57.84
	L5 × T2	41.00	75.49	53.67	81.48	63.74	60.84
	L5 × T3	38.00	73.49	50.28	80.48	60.74	59.84
	L6 × T1	40.00	73.49	52.94	78.48	61.74	57.84
	L6 × T2	37.00	74.49	53.55	78.48	65.74	61.84
	L6 × T3	40.00	73.49	52.94	80.48	62.74	60.84
	L7 × T1	38.00	71.49	51.67	79.48	61.74	57.84
	L7 × T2	39.00	75.49	50.25	81.48	64.74	62.84
	L7 × T3	36.00	70.49	48.29	77.48	60.74	57.84
	L8 × T1	39.00	72.49	52.32	78.48	64.74	58.84
	L8 × T2	41.00	73.49	53.44	78.48	62.74	59.84
	L8 × T3	40.00	72.49	52.85	80.48	65.74	61.84

Table S2a. Mean performance of crosses (L × T) under drought conditions

	Crosses	PH	FLA	NSS	NGS	TGW	NTP
F1 HYBRIDS	L1 × T1	79.50	29.05	23.64	54.65	40.04	17.07
	L1 × T2	82.50	32.05	22.64	52.65	39.04	17.27
	L1 × T3	81.50	30.05	22.84	51.65	40.04	16.57

	L2 × T1	80.50	34.05	22.84	54.65	37.04	16.62
	L2 × T2	82.50	31.05	23.94	51.65	38.04	17.47
	L2 × T3	80.50	30.05	24.24	54.65	37.04	16.67
	L3 × T1	80.50	31.05	20.64	51.65	40.04	17.77
	L3 × T2	83.50	35.05	24.64	55.65	44.04	20.47
	L3 × T3	78.50	31.05	22.64	53.85	43.04	17.57
	L4 × T1	82.50	33.05	23.64	53.19	39.04	16.97
	L4 × T2	79.50	32.05	22.64	53.85	41.04	17.27
	L4 × T3	78.50	31.05	20.64	52.65	40.04	17.77
	L5 × T1	81.50	33.05	22.64	51.65	42.04	18.37
	L5 × T2	79.50	31.05	20.64	52.15	43.04	15.57
	L5 × T3	78.50	29.05	20.64	51.65	37.04	14.65
	L6 × T1	82.50	31.05	23.64	53.65	39.04	16.57
	L6 × T2	81.50	31.05	20.64	52.65	38.04	15.57
	L6 × T3	79.50	30.05	20.64	51.65	38.04	17.57
	L7 × T1	78.50	33.05	20.64	53.65	39.04	17.37
	L7 × T2	79.50	31.05	23.64	52.65	40.04	18.47
	L7 × T3	80.50	34.05	22.64	51.65	42.04	18.77
	L8 × T1	82.50	30.05	23.64	54.65	43.04	16.47
	L8 × T2	81.50	31.05	22.64	52.65	39.04	16.97
	L8 × T3	82.50	33.05	22.64	51.65	38.04	17.87

Table S2b. Mean performance of crosses (L × T) under drought conditions

	Crosses	**GYP**	**BYP**	**HI**	**RWC**	**CMT**	**TCC**
F1 HYBRIDS	L1 × T1	29.00	49.49	56.66	65.48	56.21	49.55
	L1 × T2	27.00	51.49	50.72	66.48	56.52	51.89
	L1 × T3	28.00	49.49	54.70	65.98	57.46	49.78
	L2 × T1	30.00	51.49	56.38	63.98	57.77	51.52
	L2 × T2	27.00	50.49	51.71	64.18	56.76	51.19
	L2 × T3	29.00	51.49	54.49	63.88	56.68	50.95
	L3 × T1	29.00	50.49	55.56	63.78	56.10	49.97
	L3 × T2	31.00	52.49	57.48	67.48	59.87	53.66

	L3 × T3	30.00	50.49	57.17	63.68	57.62	49.90
	L4 × T1	28.00	48.49	55.81	64.68	57.42	52.30
	L4 × T2	27.00	48.49	53.81	65.18	58.61	51.47
	L4 × T3	28.00	50.49	55.81	65.58	57.98	51.02
	L5 × T1	29.00	49.49	56.66	64.98	57.46	49.46
	L5 × T2	27.00	49.49	52.74	65.28	56.30	51.61
	L5 × T3	27.00	48.49	50.72	63.48	55.72	49.30
	L6 × T1	29.00	49.49	56.66	64.08	55.82	49.50
	L6 × T2	30.00	50.49	57.48	66.28	56.58	52.09
	L6 × T3	28.00	50.49	53.63	64.58	57.76	49.52
	L7 × T1	28.00	49.49	52.74	66.08	56.29	50.60
	L7 × T2	30.00	50.49	57.48	64.38	58.93	51.42
	L7 × T3	29.00	49.49	56.66	65.38	55.73	50.67
	L8 × T1	28.00	50.49	53.63	65.78	55.98	51.54
	L8 × T2	27.00	51.49	53.63	63.58	56.50	51.88
	L8 × T3	30.00	50.49	57.48	66.48	57.02	50.11

Table S3a. Specific combining ability of F1 hybrids (L × T) under normal conditions

	Crosses	**PH**	**FLA**	**NSS**	**NGS**	**TGW**	**NTP**
F1 HYBRIDS	L1 × T1	-1.92*	-1.86ns	-0.92*	1.38*	-1.46*	0.29ns
	L1 × T2	-0.54ns	1.3ns	-0.04ns	-2.13*	1.29*	-0.58ns
	L1 × T3	2.21ns	0.55ns	0.96*	0.75*	0.17ns	0.29ns
	L2 × T1	-0.33ns	-0.07ns	0.75*	1.04*	-0.79*	0.63ns
	L2 × T2	-3.21*	-1.09ns	-0.38ns	-1.46*	-1.04*	-1.25*
	L2 × T3	3.54*	1.16ns	-0.38ns	0.42ns	1.83*	0.63ns
	L3 × T1	0ns	0.93ns	-0.25ns	-3.96*	-3.46*	-1.38*
	L3 × T2	4.13*	1.91ns	2.63*	2.54*	2.29*	1.75*
	L3 × T3	-4.13*	-2.84*	-2.38*	1.42*	1.17*	-0.38ns
	L4 × T1	-1ns	-0.73ns	-0.92*	-1.96*	-0.13ns	-0.04ns
	L4 × T2	-0.88ns	-1.76ns	0.96*	2.54*	0.63*	0.08ns
	L4 × T3	1.88ns	2.49*	-0.04ns	-0.58*	-0.5*	-0.04ns
	L5 × T1	1ns	0.93ns	-0.58ns	1.71*	0.21ns	-0.71ns

	L5 × T2	2.13ns	-0.09ns	0.29ns	-0.79*	-1.04*	0.42ns
	L5 × T3	-3.13*	-0.84ns	0.29ns	-0.92*	0.83*	0.29ns
	L6 × T1	1ns	-1.07ns	1.42*	-1.29*	3.21*	1.63*
	L6 × T2	-0.88ns	-0.09ns	-1.71*	1.21*	-1.04*	0.75ns
	L6 × T3	-0.13ns	1.16ns	0.29ns	0.08ns	-2.17*	-2.38*
	L7 × T1	0.33ns	1.93ns	-1.58*	3.38*	3.21*	0.63ns
	L7 × T2	0.46ns	-1.09ns	-0.71ns	-2.13*	-2.04*	-1.25*
	L7 × T3	-0.79ns	-0.84ns	2.29*	-1.25*	-1.17*	0.63ns
	L8 × T1	0.67ns	-0.07ns	2.08*	-0.29ns	-0.79*	-1.04*
	L8 × T2	-1.21ns	0.91ns	-1.04*	0.21ns	0.96*	0.08ns
	L8 × T3	0.54ns	-0.84ns	-1.04*	0.08ns	-0.17ns	0.96*

Table S3b. Specific combining ability of F1 hybrids (L × T) under normal conditions

	Crosses	**GYP**	**BYP**	**HI**	**RWC**	**TCC**
F1 HYBRIDS	L1 × T1	1.25*	1.79*	0.44*	-0.5*	0.46*
	L1 × T2	0.12ns	-0.08ns	0.24*	-0.75*	-0.04ns
	L1 × T3	-1.38*	-1.71*	-0.68*	1.25*	-0.42*
	L2 × T1	-1.08*	0.13ns	-1.58*	-0.83*	0.13ns
	L2 × T2	0.79*	-1.75*	2.32*	-0.08ns	1.63*
	L2 × T3	0.29ns	1.63*	-0.74*	0.92*	-1.75*
	L3 × T1	-1.75*	-1.54*	-1.23*	1.83*	1.46*
	L3 × T2	2.12*	1.58*	1.68*	1.58*	1.96*
	L3 × T3	-0.38*	-0.04ns	-0.45*	-3.42*	-3.42*
	L4 × T1	2.58*	0.79*	2.94*	-0.17ns	-0.21ns
	L4 × T2	-1.54*	-2.08*	-0.66*	-0.42*	-1.71*
	L4 × T3	-1.04*	1.29*	-2.28*	0.58*	1.92*
	L5 × T1	-0.08ns	0.46*	-0.44*	0.83*	-0.21ns
	L5 × T2	1.79*	0.58*	1.97*	-1.42*	0.29*
	L5 × T3	-1.71*	-1.04*	-1.53*	0.58*	-0.08ns
	L6 × T1	0.58*	0.13ns	0.67*	0.5*	-1.21*
	L6 × T2	-1.54*	0.25ns	-2.2*	-1.75*	1.29*
	L6 × T3	0.96*	-0.38*	1.53*	1.25*	-0.08ns

	L7 × T1	-1.75*	-1.88*	-1.04*	-0.83*	-0.54*
	L7 × T2	0.12ns	1.25*	-0.67*	1.92*	-2.04*
	L7 × T3	1.62*	0.63*	1.7*	-1.08*	2.58*
	L8 × T1	0.25ns	0.13ns	0.23*	-0.83*	0.13ns
	L8 × T2	-1.88*	0.25ns	-2.68*	0.92*	-1.38*
	L8 × T3	1.62*	-0.38*	2.45*	-0.08ns	1.25*

Table S4a. Specific combining ability of F1 hybrids (L × T) under water stress conditions

	Crosses	**PH**	**FLA**	**NSS**	**NGS**	**TGW**	**NTP**
F1 HYBRIDS	L1 × T1	-1.92*	-1.58*	0.42*	1.16*	0.29ns	0.83*
	L1 × T2	0.83*	1.42*	-0.59*	-0.24*	-0.96*	0.8*
	L1 × T3	1.08*	0.17ns	0.17ns	-0.92*	0.67*	-1.62*
	L2 × T1	-0.92*	2.08*	-1.01*	0.49*	-0.38*	-0.21ns
	L2 × T2	0.83*	-0.92*	0.08ns	-1.9*	0.38*	0.41*
	L2 × T3	0.08ns	-1.17*	0.94*	1.41*	0ns	-0.19ns
	L3 × T1	-0.58*	-1.58*	-2.18*	-2.57*	-2.38*	-0.75*
	L3 × T2	2.17*	2.42*	1.81*	2.03*	1.38*	1.72*
	L3 × T3	-1.58*	-0.83*	0.37*	0.54*	1*	-0.98*
	L4 × T1	2.08*	0.75*	1.15*	-0.55*	-1.04*	-0.28*
	L4 × T2	-1.17*	-0.25*	0.14ns	0.72*	0.71*	-0.21ns
	L4 × T3	-0.92*	-0.5*	-1.3*	-0.17*	0.33*	0.49*
	L5 × T1	1.42*	1.75*	1.15*	-1.01*	0.96*	1.62*
	L5 × T2	-0.83*	-0.25*	-0.86*	0.1ns	1.71*	-1.41*
	L5 × T3	-0.58*	-1.5*	-0.3ns	0.91*	-2.67*	-0.21ns
	L6 × T1	1.08*	0.08ns	1.82*	0.83*	0.96*	0.09ns
	L6 × T2	-0.17ns	0.08ns	-1.19*	-0.57*	-1.29*	-1.14*
	L6 × T3	-0.92*	-0.17ns	-0.63*	-0.26*	0.33*	1.06*
	L7 × T1	-1.25*	0.08ns	-1.85*	0.49*	-1.38*	-0.75*
	L7 × T2	-0.5*	-1.92*	1.14*	0.1ns	-0.63*	0.12ns
	L7 × T3	1.75*	1.83*	0.7*	-0.59*	2*	0.62*
	L8 × T1	0.08ns	-1.58*	0.49*	1.16*	2.96*	-0.55*
	L8 × T2	-1.17*	-0.58*	-0.53*	-0.24*	-1.29*	-0.28*

	L8 × T3	1.08*	2.17*	0.04ns	-0.92*	-1.67*	0.82*

Table S4b. Specific combining ability of F1 hybrids (L × T) under water stress conditions

	Crosses	**GYP**	**BYP**	**HI**	**RWC**	**CMT**	**TCC**
F1 HYBRIDS	L1 × T1	0.92*	-0.33ns	2.11*	0.51*	-0.03ns	-0.26ns
	L1 × T2	-0.71*	0.92*	-2.29*	1.01*	-0.67*	0.45ns
	L1 × T3	-0.21ns	-0.58*	0.18ns	-1.52*	0.71*	-0.19ns
	L2 × T1	1.25*	0.67*	1.67*	0.14ns	1.19*	0.9*
	L2 × T2	-1.38*	-1.08*	-1.47*	-0.16ns	-0.77*	-1.06*
	L2 × T3	0.13ns	0.42*	-0.19ns	0.02ns	-0.41*	0.16ns
	L3 × T1	-1.08*	-0.33ns	-1.7*	-1.02*	-1.28*	-0.61ns
	L3 × T2	1.29*	0.92*	1.45*	2.18*	1.54*	1.45*
	L3 × T3	-0.21ns	-0.58*	0.25*	-1.15*	-0.27*	-0.84*
	L4 × T1	0.25ns	0.33ns	0.15ns	-0.29ns	-0.1ns	1.3*
	L4 × T2	-0.38ns	-0.42*	-0.32*	-0.29ns	0.14ns	-1.16*
	L4 × T3	0.13ns	0.08ns	0.17ns	0.58*	-0.05ns	-0.14ns
	L5 × T1	0.92*	0ns	1.8*	-0.26ns	1.26*	-0.81*
	L5 × T2	-0.71*	-0.75*	-0.59*	-0.46ns	-0.85*	-0.29ns
	L5 × T3	-0.21ns	0.75*	-1.21*	0.72*	-0.42*	1.1*
	L6 × T1	-0.08ns	-0.33ns	0.22*	-0.72*	-0.41*	-0.27ns
	L6 × T2	1.29*	-0.08ns	2.57*	0.98*	-0.6*	0.69*
	L6 × T3	-1.21*	0.42*	-2.79*	-0.25ns	1.02*	-0.42ns
	L7 × T1	-1.75*	0ns	-3.41*	0.98*	-0.59*	0.3ns
	L7 × T2	1.63*	0.25ns	2.87*	-1.22*	1.67*	-0.51ns
	L7 × T3	0.13ns	-0.25ns	0.54*	0.25ns	-1.09*	0.21ns
	L8 × T1	-0.42ns	0ns	-0.83*	0.68*	-0.03ns	-0.53ns
	L8 × T2	-1.04*	0.25ns	-2.21*	-2.03*	-0.46*	0.42ns
	L8 × T3	1.46*	-0.25ns	3.04*	1.35*	0.5*	0.11ns