

Supplementary Files:

**Table S1.** Pairwise correlations among various growth, development, and physiological traits of 100 rice lines and genotypes. Measurements were taken at the harvest, 28 days after sowing.

	PH	TN	LN	LA	LDW	SDW	RDW	SHDW	RSR	TDW	LRL	RSA	ARD	RV	NRT	NRF	NRC	RCL	RN	SPAD	F <sub>o</sub>	F <sub>M</sub>	F <sub>V</sub>	F <sub>V</sub> /F <sub>M</sub>	
PH		0.481 ***	0.025 NS	0.62 ***	0.672 ***	0.617 ***	0.239 ***	0.685 ***	-0.560 ***	0.662 ***	0.351 ***	0.317 ***	0.181 ***	0.237 ***	0.042 NS	0.269 ***	0.395 ***	0.181 ***	0.536 ***	-0.108 ***	0.391 ***	0.428 ***	0.415 ***	-0.009 NS	
TN			0.057 NS	0.72 ***	0.729 ***	0.601 ***	0.516 ***	0.705 ***	-0.350 ***	0.722 ***	0.428 ***	0.515 ***	0.404 ***	0.528 ***	0.114 *	0.482 ***	0.470 ***	0.133 **	0.613 ***	-0.176 ***	0.334 ***	0.344 ***	0.316 ***	-0.033 NS	
LN				0.02 NS	-0.002 NS	-0.046 NS	-0.038 NS	-0.026 NS	0.018 NS	-0.030 NS	-0.039 NS	0.029 NS	0.072 NS	0.021 NS	0.023 NS	-0.046 NS	-0.020 NS	0.017 NS	-0.035 NS	-0.058 NS	0.018 NS	-0.002 NS	-0.007 NS	-0.018 NS	
LA					0.892 ***	0.728 ***	0.481 ***	0.858 ***	-0.526 ***	0.857 ***	0.361 ***	0.463 ***	0.377 ***	0.499 ***	0.101 *	0.410 ***	0.431 ***	0.119 **	0.655 ***	-0.191 ***	0.414 ***	0.430 ***	0.434 ***	0.017 NS	
LDW						0.766 ***	0.548 ***	0.935 ***	-0.562 ***	0.937 ***	0.488 ***	0.555 ***	0.390 ***	0.535 ***	0.141 ***	0.465 ***	0.536 ***	0.191 ***	0.708 ***	-0.126 **	0.408 ***	0.446 ***	0.441 ***	0.008 NS	
SDW							0.422 ***	0.945 ***	-0.676 ***	0.927 ***	0.360 ***	0.370 ***	0.237 ***	0.368 ***	0.059 NS	0.356 ***	0.468 ***	0.081 *	0.657 ***	-0.180 ***	0.439 ***	0.481 ***	0.442 ***	-0.039 NS	
RDW								0.513 ***	0.218 ***	0.621 ***	0.601 ***	0.708 ***	0.570 **	0.736 ***	0.162 ***	0.522 ***	0.390 ***	0.261 ***	0.407 ***	0.071 ***	0.113 ***	0.156 ***	0.131 ***	-0.044 NS	
SHDW									-0.661 ***	0.991 ***	0.448 ***	0.488 ***	0.330 ***	0.477 ***	0.105 **	0.434 ***	0.533 ***	0.143 ***	0.725 ***	-0.164 ***	0.451 ***	0.494 ***	0.470 ***	-0.017 NS	
RSR										-0.571 ***	-0.033 NS	0.001 NS	0.081 *	0.062 NS	0.004 NS	-0.055 *	-0.264 ***	0.029 NS	-0.464 ***	0.217 ***	-0.373 ***	-0.393 ***	-0.391 ***	-0.017 NS	
TDW											0.501 ***	0.553 ***	0.388 ***	0.547 **	0.120 ***	0.476 ***	0.546 ***	0.170 ***	0.724 ***	-0.139 ***	0.430 ***	0.475 ***	0.45 ***	-0.023 NS	
LRL												0.724 ***	0.225 ***	0.531 ***	0.335 ***	0.675 ***	0.670 ***	0.381 ***	0.404 **	0.117 **	0.094 *	0.143 ***	0.122 **	-0.042 NS	
RSA													0.695 ***	0.870 ***	0.204 ***	0.640 ***	0.438 ***	0.430 ***	0.429 ***	0.122 **	0.044 NS	0.098 **	0.095 **	-0.014 NS	
ARD														0.809 ***	-0.034 NS	0.272 ***	-0.039 NS	0.285 ***	0.292 ***	0.088 *	-0.024 NS	0.033 NS	0.037 NS	0.001 NS	
RV															0.116 **	0.523 ***	0.269 ***	0.286 ***	0.413 ***	0.086 *	0.045 NS	0.089 *	0.080 *	-0.020 NS	
NRT																0.296 ***	0.249 ***	0.020 NS	0.093 *	-0.041 NS	-0.024 NS	-0.027 NS	0.003 NS	0.047 NS	
NRF																	0.631 ***	0.286 ***	0.377 ***	0.006 NS	0.137 ***	0.142 ***	0.107 **	-0.056 NS	
NRC																		0.189 ***	0.501 ***	-0.072 NS	0.263 ***	0.288 ***	0.261 ***	-0.036 NS	
RCL																			0.095 *	0.265 ***	0.019 NS	0.022 NS	0.029 *	-0.013 NS	
RN																				-0.168 ***	0.380 ***	0.401 ***	0.355 ***	-0.051 *	
SPAD																						-0.149 **	-0.128 **	0.133 **	-0.018 NS
F <sub>o</sub>																							0.763 ***	0.617 ***	-0.194 ***
F <sub>M</sub>																								0.832 ***	-0.229 ***
F <sub>V</sub>																									0.322 ***

Significant level \*\*\*, \*\*, \*, and N.S means P-value < 0.001, 0.01, 0.05, and not significant.

**Table S2.** Drought stress effects on morpho-physiological parameters measured at the harvest, 28 days after sowing. Plant height (PH, cm plant<sup>-1</sup>), leaf area (LA, cm<sup>2</sup> plant<sup>-1</sup>), total dry weights (TDW, g plant<sup>-1</sup>), root surface area (RSA, cm<sup>2</sup> plant<sup>-1</sup>), root volume (RV, cm<sup>3</sup> plant<sup>-1</sup>), chlorophyll content (SPAD, units), and fluorescence (Fv/Fm).

Name	Country of origin	Genotype class	PH		LA		TDW		RSA		RV		SPAD		Fv/Fm	
			C	D	C	D	C	D	C	D	C	D	C	D	C	D
14CLPYT033	USA	B.L	16.9	12.4	212.6	121.4	4.6	2.5	694	694	7.8	7.2	36.07	39.90	0.72	0.67
14CLPYT108	USA	B.L	19.0	15.3	272.5	109.5	3.9	2.3	756	756	8.6	9.6	38.07	41.30	0.64	0.68
14CVPYT094	USA	B.L	18.3	12.8	303.0	102.5	4.7	2.1	964	964	11.9	8.0	38.13	41.57	0.58	0.64
14CVPYT144	USA	B.L	22.7	16.0	251.0	70.7	4.7	1.9	862	862	9.5	7.5	39.60	39.77	0.67	0.65
<b>COLORADO</b>	<b>USA</b>	<b>R.V</b>	17.3	9.5	245.1	131.2	3.8	2.3	597	597	7.0	6.6	36.77	39.10	0.66	0.63
Bowman	USA	R.V	19.5	13.0	286.1	117.7	4.8	2.5	995	995	11.2	9.0	42.67	40.93	0.68	0.68
CAFFEY	USA	R.V	20.9	13.6	278.4	90.6	4.8	2.4	1052	1052	12.1	9.8	38.27	41.77	0.57	0.86
CHENIERE	USA	R.V	18.5	14.0	238.0	93.6	4.3	1.7	911	911	10.3	5.9	35.10	38.50	0.68	0.89
CL Jazzman	USA	R.V	22.5	14.5	722.1	343.7	8.8	2.9	1572	1572	25.9	11.8	43.73	37.87	0.76	0.60
CL111	USA	R.V	24.0	16.6	322.9	103.8	4.5	2.5	868	868	10.2	9.8	37.03	41.97	0.67	0.70
CL142-AR	USA	R.V	23.7	16.3	255.8	92.9	4.0	2.7	887	887	10.8	10.5	39.47	43.40	0.71	0.68
CL151	USA	R.V	22.6	13.7	298.8	95.1	5.0	2.0	834	834	9.2	8.4	37.33	33.90	0.69	0.64
CL152	USA	R.V	22.0	13.3	346.0	119.9	5.2	2.6	986	986	10.7	7.7	33.90	37.87	0.58	0.67
CL163	USA	R.V	17.9	14.0	229.7	115.8	3.6	3.1	551	551	6.2	10.6	37.17	43.47	0.69	0.66
CL172	USA	R.V	20.2	16.9	292.4	82.3	4.6	2.3	815	815	9.5	8.0	38.63	42.13	0.73	0.64
CL271	USA	R.V	22.2	13.9	332.9	102.8	5.3	2.4	1088	1088	13.6	10.1	40.00	39.80	0.68	1.03
Cocodrie	USA	R.V	21.2	16.4	285.1	90.0	4.4	2.5	787	787	9.0	10.9	42.37	40.43	0.68	0.60
<b>NIPONBARE</b>	<b>Japan</b>	<b>G.D</b>	18.4	12.7	359.4	94.1	4.9	1.8	853	853	9.6	7.1	38.37	32.83	0.70	0.63
ANTONIO	USA	R.V	21.8	12.9	312.4	86.7	5.0	2.0	957	957	10.8	7.6	36.97	40.83	0.57	0.71
El Paso 144	USA	G.D	18.1	13.3	395.3	108.2	6.2	2.9	804	804	9.3	12.2	35.73	38.40	0.66	0.69
GSOR100390	USA	G.D	23.3	12.9	322.9	110.2	4.4	2.6	797	797	9.9	9.0	34.60	40.80	0.70	0.84
GSOR100417	USA	G.D	22.4	17.3	443.3	108.6	4.7	1.9	903	903	11.8	10.0	33.97	42.20	0.77	0.67
GSOR101758	USA	G.D	18.6	11.0	312.2	150.2	4.0	2.0	713	713	8.5	10.7	36.33	40.10	0.71	0.88
RU1104122	USA	R.V	20.8	15.0	271.1	112.1	4.2	3.0	884	884	10.1	11.1	36.07	41.23	0.66	0.84
CLJZMN	USA	R.V	24.5	18.5	297.0	143.2	4.6	2.8	864	864	10.1	11.2	35.87	41.07	0.69	0.59
<b>INIA Tacuari</b>	<b>S.A</b>	<b>G.D</b>	19.8	15.5	171.2	91.2	3.4	2.7	524	524	5.1	10.5	38.33	42.60	0.70	0.82
IRGA409	Brazil	R.V	22.0	16.5	362.0	116.9	4.3	2.7	965	965	13.5	11.0	42.57	42.43	0.67	0.75
JES	USA	R.V	19.5	12.6	266.1	90.0	4.7	2.9	813	813	10.5	10.3	38.60	40.67	0.80	0.65
JUPITER	USA	R.V	18.4	13.0	476.2	107.7	6.6	2.5	1151	1151	16.4	9.6	42.87	43.40	0.68	0.87
LA 2008	USA	B.L	20.2	14.6	200.6	56.9	4.1	1.5	659	659	8.0	4.7	42.60	40.10	0.68	0.62
LA 2134	USA	B.L	22.7	16.8	316.0	80.6	4.3	2.8	874	874	10.2	6.6	37.37	39.23	0.68	0.67
LAKAST	USA	R.V	20.0	13.3	274.9	101.6	4.2	2.7	877	877	10.3	10.6	39.70	43.80	0.44	0.65

MERMENTAU	USA	R.V.	22.1	16.8	247.0	107.7	4.3	2.4	872	872	10.7	10.0	35.77	37.43	0.64	0.49
Presidio	USA	R.V.	22.2	14.2	290.8	106.5	3.6	2.6	483	483	4.4	8.6	35.60	38.60	0.81	0.87
Rex	USA	R.V.	19.5	13.7	299.1	115.0	5.3	2.6	969	969	11.1	11.5	39.27	41.30	0.83	0.63
RoyJ	USA	R.V.	22.8	14.3	361.0	90.3	6.7	2.5	1138	1138	14.2	8.1	40.47	40.53	0.60	0.65
RU0603075	USA	Has	16.3	9.2	520.6	188.3	6.0	2.9	1338	1338	21.6	12.6	36.07	41.37	0.74	0.55
RU1201024	USA	B.L.	20.2	13.5	302.6	130.4	4.2	2.7	840	840	9.8	10.4	41.30	45.10	0.73	0.65
RU1201047	USA	B.L.	23.7	15.1	246.1	103.4	4.2	2.3	798	798	9.0	9.2	35.80	43.63	0.71	0.65
RU1201136	USA	B.L.	19.8	13.8	249.3	71.5	4.5	2.2	702	702	7.7	7.1	37.67	42.83	0.69	0.73
RU1204156	USA	B.L.	19.2	13.8	282.6	89.5	4.5	2.7	659	659	8.0	10.0	35.43	34.27	0.70	0.64
RU1204197	USA	KM.	22.3	15.3	262.2	131.5	4.8	3.3	912	912	10.0	11.1	38.37	39.73	0.69	0.67
RU1301084	USA	B.L.	20.1	14.3	254.8	96.3	5.6	2.2	763	763	8.5	10.1	40.30	45.73	0.66	0.66
RU1301093	USA	B.L.	21.0	16.5	279.7	80.3	4.5	2.9	729	729	9.0	11.5	43.10	45.40	0.65	0.69
RU1301102	USA	B.L.	18.4	13.3	202.9	96.0	3.5	2.5	874	874	9.2	6.4	39.00	43.57	0.69	0.65
RU1302192	USA	B.L.	23.5	16.8	369.7	108.9	5.2	2.9	988	988	12.7	10.6	40.43	43.33	0.77	0.59
RU1303138	USA	B.L.	17.2	10.9	629.1	177.9	6.6	2.9	1487	1487	22.7	12.4	33.43	39.60	0.75	0.61
RU1303181	USA	B.L.	21.2	17.0	269.7	87.1	4.0	2.5	748	748	8.1	11.0	39.47	42.07	0.66	0.53
RU1304114	USA	B.L.	19.1	14.7	358.9	105.6	4.5	2.7	849	849	9.5	9.5	38.50	38.33	0.70	0.64
RU1304122	USA	B.L.	24.5	16.8	404.9	128.6	6.0	2.7	1120	1120	13.5	13.5	39.70	42.10	0.68	0.66
RU1304154	USA	B.L.	22.7	17.9	327.8	99.1	5.2	2.7	985	985	12.5	11.9	41.03	39.27	0.81	0.89
RU1304156	USA	B.L.	24.2	15.0	323.4	84.4	5.0	2.6	799	799	8.7	11.4	38.13	43.83	0.71	0.86
RU1305001	USA	B.L.	23.8	12.3	316.1	84.9	4.8	2.9	1149	845	14.1	9.6	41.07	42.97	0.70	0.65
RU1401067	USA	B.L.	21.8	16.8	280.0	90.7	4.1	2.4	675	835	7.6	10.9	41.60	41.70	0.70	0.68
RU1401070	USA	B.L.	21.5	14.7	186.7	68.1	4.0	2.1	808	669	8.7	7.0	41.50	44.23	0.72	0.80
RU1401090	USA	B.L.	21.7	14.1	191.6	95.1	4.2	2.0	794	623	8.9	7.1	39.03	39.23	0.68	0.98
RU1401099	USA	B.L.	20.4	15.9	296.9	91.5	4.7	2.7	880	856	10.4	10.7	40.30	41.97	0.72	0.68
RU1401102	USA	B.L.	24.7	18.0	287.0	177.3	5.0	3.2	868	800	9.5	11.0	36.67	42.13	0.68	0.53
RU1401145	USA	B.L.	20.5	17.4	156.0	92.1	3.7	2.9	586	870	7.0	10.9	40.17	45.23	0.70	0.78
RU1401161	USA	B.L.	21.9	13.7	295.9	91.7	4.0	2.4	772	804	8.2	8.8	38.47	36.43	0.79	0.84
RU1401164	USA	B.L.	24.2	15.0	356.3	106.4	5.4	2.3	1127	622	15.4	8.4	37.60	42.63	0.67	0.83
RU1402005	USA	B.L.	20.9	13.2	340.9	109.7	5.2	2.9	801	766	9.4	10.5	42.13	40.87	0.62	0.61
RU1402031	USA	B.L.	23.1	13.9	277.1	90.5	4.4	2.6	915	625	10.3	8.4	38.87	41.10	0.68	0.66
RU1402065	USA	B.L.	21.1	14.3	216.0	106.8	4.9	2.5	953	733	12.0	9.0	40.00	41.83	0.69	0.66
RU1402115	USA	B.L.	21.8	15.5	345.8	101.8	4.9	2.6	967	610	12.7	9.4	41.43	39.07	0.70	0.62
RU1402131	USA	B.L.	23.0	15.1	408.4	142.7	5.6	2.9	1085	1045	12.4	12.8	38.97	40.37	0.70	0.61
RU1402134	USA	B.L.	23.8	17.4	391.2	98.6	4.7	2.4	899	866	10.0	10.1	34.93	41.53	0.65	0.78
RU1402149	USA	B.L.	21.3	13.1	195.3	88.0	3.9	2.3	669	847	6.9	9.5	37.13	42.07	0.67	0.68
RU1402174	USA	B.L.	17.2	14.0	243.1	97.3	3.1	2.2	403	673	4.5	9.7	33.67	40.30	1.04	0.78

RU1402189	USA	B.L.	23.1	18.2	253.8	115.7	4.0	2.8	728	861	7.9	10.5	36.93	41.93	0.68	0.62
RU1402195	USA	B.L.	23.6	19.9	396.8	140.1	4.4	2.9	700	924	8.1	10.8	40.33	41.03	0.70	0.64
RU1403107	USA	B.L.	18.1	13.8	229.2	77.8	3.8	1.9	702	585	7.3	8.3	39.03	40.10	0.68	0.64
RU1403126	USA	B.L.	16.6	11.9	434.6	119.0	5.1	2.5	1094	721	14.6	8.5	38.47	41.73	0.70	0.66
RU1404122	USA	B.L.	17.5	14.5	209.3	98.8	3.6	1.9	632	761	7.5	9.4	43.23	43.73	0.70	0.65
RU1404154	USA	B.L.	22.5	17.0	313.0	83.0	5.0	2.1	809	615	8.8	6.3	39.53	38.87	0.66	0.84
RU1404156	USA	B.L.	19.8	13.8	260.9	90.1	3.7	2.3	733	753	7.6	8.3	39.27	37.97	0.69	0.67
RU1404157	USA	B.L.	19.1	12.4	169.5	100.6	2.6	2.3	659	655	7.4	7.5	35.60	35.10	0.64	0.51
RU1404191	USA	B.L.	20.7	12.8	369.2	72.1	4.8	2.2	893	569	10.6	8.2	40.17	44.13	0.79	0.62
RU1404193	USA	B.L.	25.8	17.1	259.8	118.9	4.0	2.7	845	919	9.5	11.7	36.60	40.97	0.71	0.62
RU1404194	USA	B.L.	21.1	16.4	189.3	115.3	3.4	2.1	613	663	5.5	7.1	45.90	43.03	0.64	0.64
RU1404196	USA	B.L.	14.8	13.3	85.8	86.9	2.6	1.5	399	649	3.9	7.1	33.73	37.57	0.82	0.66
RU1404198	USA	B.L.	20.3	17.2	273.2	123.5	4.6	2.7	564	755	5.3	9.2	37.07	38.93	0.68	0.84
RU1504083	USA	B.L.	19.8	14.3	261.2	118.5	4.4	2.4	764	482	7.9	5.3	39.23	38.97	0.70	0.66
RU1504100	USA	B.L.	21.7	13.5	330.4	85.4	4.8	2.6	989	892	12.4	10.3	43.00	41.20	0.48	0.45
RU1504114	USA	B.L.	24.1	14.2	303.4	83.8	4.6	2.0	873	620	10.0	5.6	40.03	38.03	0.66	0.68
RU1504122	USA	B.L.	21.1	15.6	291.8	106.6	5.5	3.1	879	823	10.1	9.3	38.10	42.03	0.63	0.65
RU1504154	USA	B.L.	22.9	16.7	242.7	115.7	4.7	2.8	948	869	11.1	10.3	38.13	41.27	0.67	0.65
RU1504156	USA	B.L.	19.2	15.7	240.4	93.0	4.2	2.6	697	801	8.3	9.2	36.53	43.90	0.71	0.92
RU1504157	USA	B.L.	23.5	15.3	290.8	88.6	4.9	2.4	924	646	10.6	7.3	36.10	40.87	0.70	0.56
RU1504186	USA	B.L.	21.4	15.3	261.1	119.6	4.4	2.9	762	977	8.2	11.0	39.60	41.80	0.69	0.64
RU1504191	USA	B.L.	22.2	14.6	277.3	93.5	4.3	2.4	864	819	10.1	9.1	38.30	42.20	0.79	0.85
RU1504193	USA	B.L.	22.9	16.1	266.5	98.5	4.2	2.3	794	986	9.7	12.3	40.50	39.80	0.79	0.62
RU1504194	USA	B.L.	20.6	12.5	174.6	40.1	3.7	1.6	622	446	6.3	4.3	39.80	41.57	0.66	0.91
RU1504196	USA	B.L.	22.8	14.5	377.9	106.3	4.5	2.5	881	857	10.3	9.3	38.63	44.13	0.71	0.88
RU1504197	USA	B.L.	18.4	12.5	290.4	109.7	4.6	2.6	888	877	10.2	11.1	42.93	43.10	0.70	0.60
RU1504198	USA	B.L.	20.7	12.7	255.3	69.8	3.9	2.1	782	744	8.9	7.6	42.23	41.67	0.66	0.59
Sabine	USA	R.V.	20.1	12.8	183.4	87.0	3.8	2.7	736	778	8.0	9.3	43.63	41.20	0.64	0.69
Taggart	USA	R.V.	20.5	13.5	226.6	106.0	4.6	2.4	816	875	9.5	10.9	41.30	42.77	0.68	0.67
Thad	USA	R.V.	19.3	12.4	258.5	100.4	4.9	2.3	864	757	9.5	8.8	39.80	43.47	0.70	0.69
N-22	India	G.D	25.5	20.0	234.2	150.3	4.7	3.4	830	1172	10.5	14.7	37.67	42.30	0.58	0.66
		Mean	21.0	14.7	294.3	105.9	4.6	2.5	845	788	10.0	9.4	38.78	41.00	0.69	0.69
		Genotypes	***	***	***	***	***	***	**	*	***	**	***	**	*	NS
		Gen. × Treatment	NS		**		*		NS		*		NS		NS	

Abbreviations: C = control, D = drought, B.L. = breeding lines, R.V. = released variety, and G.D. = genetic donor, Gen = genotypes. Significant level \*\*\*, \*\*, and N.S means P-value < 0.001, 0.01, 0.05, and not significant.

Table S3: Drought stress effects on morphological parameters measured viz tiller number (TN, no. plant<sup>-1</sup>), leaf number (LN, no. plant<sup>-1</sup>), leaf dry weight (LDW, g plant<sup>-1</sup>), stem dry weight (SDW, g plant<sup>-1</sup>), and shoot dry weight (SHDW, g plant<sup>-1</sup>). Measurements were made at harvesting time, 28 days after sowing.

Name	Country of origin	Genotype class	TN		LN		LDW		SDW		SHDW	
			C	D	C	D	C	D	C	D	C	D
14CLPYT033	USA	B.L.	6.7	5.0	3.0	3.3	1.5	1.0	2.4	1.2	3.9	2.2
14CLPYT108	USA	B.L.	7.3	5.7	3.0	3.0	1.7	0.9	1.6	0.9	3.3	1.7
14CVPYT094	USA	B.L.	7.7	4.3	3.0	3.0	2.0	0.7	1.9	0.7	3.8	1.5
14CVPYT144	USA	B.L.	7.3	4.7	3.0	3.0	2.0	0.6	2.0	0.9	4.0	1.5
COLORADO	USA	R.V	7.0	4.3	3.0	3.0	1.5	1.0	1.6	0.8	3.1	1.8
Bowman	USA	R.V	8.0	4.0	3.0	3.0	2.0	0.8	1.9	1.0	3.9	1.9
CAFFEY	USA	R.V	7.0	4.7	3.0	3.3	2.2	0.9	1.9	0.9	4.1	1.7
CHENIERE	USA	R.V	9.0	4.0	3.0	3.0	1.7	0.5	1.9	0.9	3.6	1.4
CL Jazzman	USA	R.V	13.0	6.3	3.0	3.0	3.9	1.2	3.3	0.8	7.1	2.1
CL111	USA	R.V	8.0	5.7	3.3	3.0	2.0	0.9	1.7	0.9	3.8	1.8
CL142-AR	USA	R.V	8.0	4.7	3.0	3.3	1.6	1.0	1.6	1.0	3.2	2.0
CL151	USA	R.V	8.7	5.7	3.3	3.0	2.1	0.6	2.2	0.7	4.3	1.3
CL152	USA	R.V.	9.3	4.3	3.7	3.0	2.1	0.7	2.2	1.1	4.3	1.8
CL163	USA	R.V.	5.0	5.3	3.0	3.0	1.4	1.0	1.6	1.3	3.0	2.3
CL172	USA	R.V.	7.7	5.0	3.3	3.3	1.7	0.7	2.2	1.0	3.9	1.7
CL271	USA	R.V.	8.7	5.7	3.3	3.0	2.4	1.0	2.1	0.7	4.5	1.7
Cocodrie	USA	R.V.	6.0	4.3	2.7	3.0	2.1	0.6	1.8	1.1	3.9	1.7
NIPONBARE	Japan	G.D.	7.7	5.0	3.0	3.0	2.1	0.8	2.0	0.6	4.1	1.4
ANTONIO	USA	R.V.	6.7	3.3	3.0	3.0	2.1	0.8	2.2	0.6	4.3	1.4
El Paso 144	USA	G.D.	13.0	5.3	3.0	3.0	2.5	1.0	2.8	1.1	5.2	2.2
GSOR100390	USA	G.D.	8.3	5.0	3.0	3.0	2.0	0.8	1.8	1.1	3.8	1.9
GSOR100417	USA	G.D.	10.0	5.3	3.0	3.0	2.1	1.0	1.9	0.3	4.0	1.3
GSOR101758	USA	G.D.	8.0	6.7	2.7	3.0	1.6	1.1	1.9	0.3	3.4	1.3
RU1104122	USA	R.V.	6.7	5.7	3.0	3.3	1.8	1.1	1.7	1.1	3.5	2.2
CLJZMN	USA	R.V.	7.7	6.0	3.3	3.3	2.1	1.0	1.8	1.0	3.9	2.1
INIA Tacuari	S.A	G.D.	6.0	4.3	3.0	3.3	1.3	1.0	1.5	1.0	2.8	2.0
IRGA409	Brazil	R.V.	10.7	5.3	3.3	2.7	1.7	1.0	1.7	1.0	3.4	2.0
JES	USA	R.V.	6.0	5.0	3.0	2.7	1.7	0.9	2.2	1.1	3.9	2.0
JUPITER	USA	R.V.	9.3	5.0	3.3	3.0	2.7	0.9	3.0	1.0	5.6	1.9
LA 2008	USA	B.L.	6.7	3.0	3.0	3.3	1.8	0.5	1.6	0.7	3.4	1.2
LA 2134	USA	B.L.	8.7	5.7	3.0	3.3	1.7	1.0	1.9	1.1	3.7	2.1
LAKAST	USA	R.V.	7.0	5.3	3.0	3.0	1.6	0.9	1.8	1.1	3.4	2.0
MERMENTAU	USA	R.V.	7.0	6.0	3.0	3.0	1.7	0.9	1.9	0.9	3.6	1.7
Presidio	USA	R.V.	7.0	5.3	3.0	3.0	1.6	0.9	1.5	0.9	3.1	1.8
Rex	USA	R.V.	6.3	4.3	3.0	3.3	2.2	1.0	2.3	0.9	4.5	1.8
RoyJ	USA	R.V.	9.0	4.7	3.0	3.3	2.7	0.8	3.0	1.1	5.7	1.9
RU0603075	USA	Has	12.7	8.0	3.0	3.0	2.5	1.1	2.6	1.1	5.0	2.2
RU1201024	USA	B.L.	6.7	6.0	3.0	2.7	1.9	1.0	1.6	1.0	3.4	2.0
RU1201047	USA	B.L.	5.0	4.7	3.0	3.0	1.7	0.9	1.8	0.8	3.5	1.7
RU1201136	USA	B.L.	7.0	3.3	3.3	3.0	1.4	0.7	2.4	0.9	3.8	1.5
RU1204156	USA	B.L.	7.7	6.3	3.3	3.0	1.6	0.7	2.3	1.3	3.8	2.0
RU1204197	USA	KM.	7.0	7.0	3.0	3.3	1.8	1.2	2.2	1.2	4.0	2.4
RU1301084	USA	B.L.	6.7	4.3	3.0	3.0	1.9	0.9	2.7	0.6	4.6	1.5
RU1301093	USA	B.L.	6.0	4.7	3.0	3.0	1.9	1.1	1.9	1.1	3.7	2.2
RU1301102	USA	B.L.	7.0	5.7	3.0	3.0	1.2	0.8	1.6	1.1	2.7	2.0
RU1302192	USA	B.L.	8.0	5.7	3.0	3.0	2.2	1.0	2.2	1.2	4.3	2.2
RU1303138	USA	B.L.	13.3	8.0	3.0	3.0	3.0	1.1	2.5	1.1	5.5	2.2
RU1303181	USA	B.L.	6.3	4.7	3.0	3.3	1.6	0.9	1.8	0.9	3.4	1.8
RU1304114	USA	B.L.	8.7	5.0	3.0	2.7	1.9	0.9	1.8	1.2	3.7	2.1
RU1304122	USA	B.L.	8.0	6.0	3.0	2.7	2.4	1.0	2.6	0.8	5.1	1.9
RU1304154	USA	B.L.	8.3	6.0	3.0	3.3	2.2	1.0	2.2	0.9	4.3	1.9
RU1304156	USA	B.L.	7.7	5.3	3.0	3.0	2.1	1.0	2.1	0.9	4.2	1.9
RU1305001	USA	B.L.	7.7	5.3	3.0	2.7	2.1	1.1	1.8	1.0	3.9	2.1
RU1401067	USA	B.L.	6.7	4.3	3.3	3.3	1.5	0.9	2.1	0.8	3.5	1.7
RU1401070	USA	B.L.	5.7	5.3	3.0	3.3	1.5	0.7	1.9	0.8	3.4	1.5
RU1401090	USA	B.L.	8.7	4.7	3.0	3.0	1.7	0.7	1.9	0.8	3.6	1.5
RU1401099	USA	B.L.	8.0	5.3	3.3	3.0	1.9	0.8	2.1	1.2	4.0	2.0
RU1401102	USA	B.L.	7.3	4.7	3.0	3.3	1.9	1.2	2.5	1.4	4.3	2.6
RU1401145	USA	B.L.	6.7	5.7	3.0	3.3	1.3	0.9	1.7	1.2	3.0	2.1
RU1401161	USA	B.L.	6.3	6.0	3.3	3.0	1.6	0.8	1.8	0.9	3.4	1.7
RU1401164	USA	B.L.	10.7	5.7	3.0	3.0	2.2	0.9	2.4	0.9	4.7	1.7
RU1402005	USA	B.L.	8.7	5.0	3.0	3.0	2.2	1.1	2.2	1.1	4.4	2.2
RU1402031	USA	B.L.	6.7	4.7	3.0	3.0	1.8	0.7	1.9	1.4	3.7	2.1
RU1402065	USA	B.L.	8.7	5.3	3.0	3.0	1.8	1.0	2.3	0.9	4.1	1.9

RU1402115	USA	B.L.	8.0	5.3	3.0	3.0	2.2	0.9	1.9	0.9	4.1	1.9	
RU1402131	USA	B.L.	9.0	7.7	3.0	3.3	2.4	1.3	2.4	0.8	4.8	2.1	
RU1402134	USA	B.L.	8.3	5.7	3.0	3.0	2.1	1.0	1.9	0.7	4.0	1.7	
RU1402149	USA	B.L.	6.7	6.3	3.0	3.0	1.3	0.8	2.0	0.8	3.3	1.6	
RU1402174	USA	B.L.	7.0	5.0	3.0	3.0	1.4	0.9	1.3	0.7	2.7	1.6	
RU1402189	USA	B.L.	6.3	6.0	3.3	3.0	1.6	1.0	1.8	1.1	3.4	2.1	
RU1402195	USA	B.L.	8.0	6.7	3.0	3.3	2.3	1.2	1.6	1.0	3.9	2.2	
RU1403107	USA	B.L.	6.3	4.7	3.0	3.3	1.3	0.9	1.9	0.5	3.1	1.4	
RU1403126	USA	B.L.	10.3	5.7	3.3	3.0	1.9	0.8	2.3	1.1	4.2	1.9	
RU1404122	USA	B.L.	6.3	5.3	3.0	3.3	1.3	0.8	1.6	0.5	2.9	1.3	
RU1404154	USA	B.L.	6.7	4.3	2.7	3.0	2.3	0.8	2.0	0.8	4.3	1.7	
RU1404156	USA	B.L.	6.3	3.7	3.0	2.7	1.5	0.7	1.6	1.0	3.1	1.7	
RU1404157	USA	B.L.	6.0	3.7	3.0	2.7	1.1	0.7	1.1	1.0	2.1	1.6	
RU1404191	USA	B.L.	8.0	4.7	3.0	2.7	2.3	0.9	1.7	0.7	4.1	1.6	
RU1404193	USA	B.L.	7.0	6.0	3.0	3.0	1.7	1.1	1.6	0.9	3.3	1.9	
RU1404194	USA	B.L.	6.7	4.3	3.0	3.0	1.4	0.7	1.5	0.9	2.9	1.6	
RU1404196	USA	B.L.	6.7	5.7	3.0	3.0	0.6	0.6	1.5	0.4	2.1	1.0	
RU1404198	USA	B.L.	7.3	5.3	3.0	3.3	1.7	1.0	2.0	1.0	3.7	1.9	
RU1504083	USA	B.L.	5.3	5.7	2.7	3.0	1.7	0.7	1.9	1.1	3.6	1.8	
RU1504100	USA	B.L.	7.0	5.7	3.0	3.0	1.9	0.8	2.0	0.9	3.9	1.7	
RU1504114	USA	B.L.	8.3	3.3	3.0	3.3	2.0	0.9	2.0	0.7	4.0	1.6	
RU1504122	USA	B.L.	9.0	5.7	3.0	3.0	2.3	1.0	2.5	1.5	4.8	2.4	
RU1504154	USA	B.L.	8.3	5.7	3.0	3.0	1.6	1.0	2.1	1.1	3.8	2.0	
RU1504156	USA	B.L.	6.0	4.7	3.0	3.0	1.7	0.9	1.9	1.0	3.6	2.0	
RU1504157	USA	B.L.	8.0	4.7	3.0	3.0	1.9	1.0	2.2	0.9	4.2	1.9	
RU1504186	USA	B.L.	7.3	5.7	3.0	3.0	1.6	1.0	2.2	1.1	3.8	2.1	
RU1504191	USA	B.L.	8.3	5.7	3.3	2.7	1.8	0.9	1.8	0.9	3.6	1.7	
RU1504193	USA	B.L.	6.3	5.3	3.0	3.0	1.6	1.0	1.9	0.6	3.5	1.6	
RU1504194	USA	B.L.	5.7	3.7	2.7	3.0	1.3	0.4	1.8	0.9	3.1	1.3	
RU1504196	USA	B.L.	8.0	5.0	3.0	3.3	2.1	0.9	1.7	0.9	3.8	1.8	
RU1504197	USA	B.L.	7.3	6.0	3.0	3.0	2.0	0.9	1.8	0.9	3.8	1.9	
RU1504198	USA	B.L.	7.3	3.7	3.0	3.3	1.6	0.7	1.7	0.8	3.3	1.5	
Sabine	USA	R.V.	8.0	4.7	3.0	3.0	1.2	0.9	1.9	1.2	3.1	2.1	
Taggart	USA	R.V.	6.3	4.7	3.0	3.0	1.7	0.9	2.2	0.9	3.9	1.7	
Thad	USA	R.V.	6.7	5.7	3.0	3.3	2.0	0.8	2.2	0.9	4.1	1.7	
N-22	India	G.D	7.7	6.7	3.0	3.3	1.4	1.3	2.5	1.1	4.0	2.4	
			<b>Mean</b>	<b>7.7</b>	<b>5.2</b>	<b>3.0</b>	<b>3.1</b>	<b>1.8</b>	<b>0.9</b>	<b>2.0</b>	<b>0.9</b>	<b>3.8</b>	<b>1.8</b>
			<b>Genotypes</b>	<b>***</b>	<b>*</b>	<b>NS</b>	<b>NS</b>	<b>***</b>	<b>*</b>	<b>NS</b>	<b>***</b>	<b>**</b>	<b>***</b>
<b>Gen. X Treatment</b>				<b>*</b>	<b>NS</b>		<b>**</b>		<b>NS</b>		<b>*</b>		

Abbreviations: C=control, D=drought, B.L. = breeding lines, R.V. = released variety, and G.D. = genetic donor, Gen= genotypes. Significant level \*\*\*, \*\*,\*, and N.S means P-value < 0.001, 0.01, 0.05, and not significant.

Table S4. Drought stress effects on root parameters viz cumulative root length (RCL, cm plant<sup>-1</sup>), average root diameter (ARD, mm plant<sup>-1</sup>), number of root tips (NRT, no. plant<sup>-1</sup>), number of root forks (NRF, no. plant<sup>-1</sup>), number of root crossings (NRC, no. plant<sup>-1</sup>), longest root length (LRL, cm plant<sup>-1</sup>), number of roots (RN, no. plant<sup>-1</sup>), root dry weight (RDW, g plant<sup>-1</sup>), and root-shoot ratio (RSR). Measurements were taken at harvesting time, 28 days after sowing.

Name	RCL		ARD		NRT		NRF		NRC		LRL		NR		RDW		RSR	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
<b>14CLPYT033</b>	6041	3397	0.4	0.4	31758	20908	68558	45785	4712	2494	40	46	54	22	0.7	0.3	0.2	0.1
<b>14CLPYT108</b>	5270	5394	0.5	0.5	36543	32795	59218	62470	4343	4027	46	47	46	33	0.6	0.6	0.2	0.4
<b>14CVPYT094</b>	6242	4302	0.5	0.4	29504	27114	72833	73910	6262	5039	47	47	47	34	0.9	0.6	0.2	0.4
<b>14CVPYT144</b>	6260	4571	0.4	0.4	38393	26787	75391	37629	7105	2703	44	46	49	30	0.7	0.5	0.2	0.3
<b>COLORADO</b>	5901	4087	0.4	0.4	34943	45111	30764	84610	10209	5917	39	48	73	29	0.6	0.5	0.2	0.3
<b>Bowman</b>	7184	5729	0.5	0.4	30939	33218	79284	67015	10186	4874	52	46	43	42	0.9	0.6	0.2	0.3
<b>CAFFEY</b>	7377	6167	0.5	0.5	32550	30728	82116	72517	9745	5307	49	44	52	32	0.7	0.6	0.2	0.4
<b>CHENIERE</b>	6480	3136	0.4	0.4	38025	18491	90928	28846	8995	2342	46	43	52	27	0.7	0.3	0.2	0.2
<b>CL Jazzman</b>	7719	6199	0.6	0.5	42080	35988	98635	77855	8460	5338	51	50	69	35	1.7	0.8	0.2	0.4
<b>CLI11</b>	6172	5558	0.5	0.5	32586	33571	73663	63238	8263	4118	48	50	53	27	0.7	0.7	0.2	0.4
<b>CL142-AR</b>	5879	5628	0.5	0.5	34831	29363	70911	61635	5763	4028	53	50	43	29	0.8	0.7	0.3	0.4
<b>CL151</b>	6027	5109	0.4	0.4	30265	21258	69514	69820	8127	4850	49	43	47	27	0.7	0.7	0.2	0.5
<b>CL152</b>	7248	6370	0.4	0.4	40278	40359	94284	70310	9055	5349	47	43	53	42	0.8	0.8	0.2	0.5
<b>CL163</b>	5625	6200	0.4	0.5	36794	34950	43964	68106	5408	4704	47	55	46	27	0.6	0.8	0.2	0.4
<b>CL172</b>	5825	5977	0.5	0.4	34546	27188	81129	54776	8348	4838	44	52	51	28	0.6	0.6	0.2	0.4
<b>CL271</b>	6993	5055	0.5	0.5	31395	25237	93078	58762	9236	4209	50	49	73	35	0.8	0.7	0.2	0.4
<b>Cocodrie</b>	5630	6399	0.4	0.5	33545	33564	66235	79882	5735	5395	51	49	47	29	0.5	0.8	0.1	0.5
<b>NIPONBARE</b>	6139	5131	0.4	0.4	33959	44868	69209	58252	5655	3895	42	43	65	34	0.8	0.4	0.2	0.3
<b>ANTONIO</b>	6909	4947	0.4	0.4	39350	41717	86597	49798	8472	3453	46	47	54	35	0.7	0.6	0.2	0.4
<b>El Paso 144</b>	7290	6259	0.4	0.5	31847	26864	101535	85439	8972	6223	51	50	55	32	1.0	0.8	0.2	0.3
<b>GSOR100390</b>	7023	6137	0.5	0.4	27327	32512	78000	76030	6088	5665	49	50	51	39	0.6	0.8	0.2	0.4
<b>GSOR100417</b>	5685	5339	0.5	0.5	35984	47327	81110	60166	6344	3841	40	50	55	43	0.7	0.7	0.2	0.5
<b>GSOR101758</b>	4777	4925	0.5	0.5	22618	35597	68255	65031	4176	3782	43	43	49	34	0.6	0.7	0.2	0.5
<b>RU1104122</b>	6285	6284	0.5	0.5	35498	31532	69487	72876	8219	5154	47	46	61	32	0.7	0.8	0.2	0.4
<b>CLJZMN</b>	6105	5725	0.5	0.5	44233	31747	75392	72771	8243	4844	48	47	55	39	0.7	0.8	0.2	0.4
<b>INIA Tacuari</b>	6311	6429	0.4	0.5	29196	26821	52647	79214	8097	5822	48	53	45	26	0.6	0.7	0.2	0.3
<b>IRGA409</b>	5803	5716	0.5	0.5	28347	36644	86001	73409	6551	4779	54	54	48	33	0.9	0.7	0.3	0.3
<b>JES</b>	5218	5885	0.5	0.5	26679	30797	62148	71870	4973	4824	51	52	34	23	0.7	0.9	0.2	0.4
<b>JUPITER</b>	6565	6056	0.5	0.5	37192	27008	114342	67663	7295	5071	56	52	71	30	1.0	0.6	0.2	0.3
<b>LA 2008</b>	5779	3349	0.4	0.4	34126	21804	50404	31498	5362	2316	48	39	40	26	0.7	0.3	0.2	0.3
<b>LA 2134</b>	6026	5683	0.5	0.4	42621	28870	85662	74463	7125	5172	43	44	62	26	0.6	0.7	0.2	0.3
<b>LAKAST</b>	5947	6152	0.5	0.5	26579	27815	62119	70781	5407	5155	48	49	49	32	0.8	0.7	0.2	0.4
<b>MERMENTAU</b>	5727	6331	0.5	0.4	32272	33286	65393	79066	4950	6088	41	52	63	30	0.8	0.7	0.2	0.4
<b>Presidio</b>	5331	5936	0.3	0.4	41565	34805	69114	54080	5015	4186	46	46	43	23	0.5	0.8	0.2	0.4
<b>Rex</b>	6777	6031	0.5	0.5	30130	41999	64889	68233	9429	4819	51	51	59	44	0.8	0.8	0.2	0.4
<b>RoyJ</b>	7352	5408	0.5	0.4	29153	35800	74966	58404	8932	3963	47	46	72	28	1.0	0.6	0.2	0.3
<b>RU0603075</b>	6705	5345	0.6	0.5	43374	43138	95602	80475	8449	4884	47	44	66	37	1.0	0.6	0.2	0.3
<b>RU1201024</b>	5778	5946	0.5	0.5	27668	39538	69135	66852	5743	4393	46	47	48	36	0.8	0.7	0.2	0.4
<b>RU1201047</b>	5612	5254	0.5	0.5	26485	26557	59965	57973	5052	4223	49	54	38	30	0.7	0.6	0.2	0.4
<b>RU1201136</b>	5300	4911	0.4	0.4	20912	24851	46063	49444	4512	3623	49	50	46	25	0.7	0.6	0.2	0.4
<b>RU1204156</b>	4371	6099	0.5	0.4	28734	28895	54823	56391	6796	5173	42	43	56	31	0.6	0.8	0.2	0.4
<b>RU1204197</b>	6835	7182	0.4	0.4	35127	28760	88884	89898	9329	8555	50	51	51	43	0.8	0.8	0.2	0.4
<b>RU1301084</b>	6859	6027	0.4	0.5	31602	41481	71340	63121	8167	4217	53	50	62	38	1.0	0.7	0.2	0.5
<b>RU1301093</b>	4938	5636	0.5	0.5	24344	33795	45382	61397	3888	4281	48	47	52	34	0.8	0.7	0.2	0.3
<b>RU1301102</b>	6664	4683	0.4	0.4	33505	35040	100896	48855	10176	3410	50	43	53	42	0.8	0.5	0.3	0.3
<b>RU1302192</b>	6138	5956	0.5	0.5	28019	32047	91038	70093	9028	4940	52	50	57	37	0.8	0.7	0.2	0.3
<b>RU1303138</b>	7891	6035	0.6	0.5	37536	45647	111293	76638	9703	5372	52	43	77	41	1.1	0.7	0.2	0.3
<b>RU1303181</b>	5544	5149	0.4	0.5	31829	21817	63272	66739	5275	4088	50	47	44	33	0.6	0.7	0.2	0.4
<b>RU1304114</b>	6105	5286	0.4	0.5	30465	23699	99701	59316	8058	4429	42	48	61	27	0.7	0.7	0.2	0.3
<b>RU1304122</b>	7569	5963	0.5	0.5	34389	29399	140774	78169	14381	6032	49	49	49	42	1.0	0.8	0.2	0.4
<b>RU1304154</b>	6304	5861	0.5	0.5	36738	28035	76104	77051	5381	5081	47	49	61	40	0.8	0.8	0.2	0.4
<b>RU1304156</b>	6647	5841	0.4	0.4	35151	36203	95739	69377	8224	4146	48	47	45	23	0.8	0.7	0.2	0.4
<b>RU1305001</b>	7482	6568	0.5	0.4	29797	43435	107388	68004	8274	5215	51	44	55	27	0.9	0.8	0.2	0.4
<b>RU1401067</b>	5126	5153	0.4	0.5	28948	27572	79793	56595	8847	3672	42	46	49	34	0.6	0.8	0.2	0.5
<b>RU1401070</b>	6013	5156	0.4	0.4	32415	37780	66326	50458	6224	4992	53	51	42	25	0.6	0.6	0.2	0.4
<b>RU1401090</b>	5659	4381	0.4	0.4	30363	32690	60077	47756	5164	2999	51	50	42	20	0.6	0.5	0.2	0.3
<b>RU1401099</b>	5979	5559	0.5	0.5	25809	31867	70521	61887	6358	4059	49	51	42	31	0.8	0.7	0.2	0.3
<b>RU1401102</b>	6311	6228	0.4	0.4	32882	33409	66861	76018	4955	4621	46	48	59	34	0.7	0.6	0.2	0.2
<b>RU1401145</b>	4694	5562	0.4	0.5	22772	40820	51459	62671	3113	5076	42	49	48	31	0.7	0.8	0.2	0.4
<b>RU1401161</b>	5757	5835	0.4	0.4	30581	34938	59192	63311	5431	4631	50	51	44	33	0.7	0.7	0.2	0.4
<b>RU1401164</b>	6742	4414	0.5	0.4	31391	28624	98540	53231	7567	3760	48	41	59	31	0.8	0.6	0.2	0.3

RU1402005	5571	6507	0.5	0.4	31656	29392	63647	13078	6420	7374	43	43	54	29	0.8	0.7	0.2	0.3
RU1402031	6530	5708	0.5	0.4	34059	40013	72977	54008	8420	5312	51	40	43	32	0.7	0.6	0.2	0.3
RU1402065	6006	4766	0.5	0.5	38037	23424	92428	53332	7916	3621	51	43	63	32	0.8	0.6	0.2	0.3
RU1402115	6039	5955	0.5	0.4	37939	28999	81259	73678	6956	5675	48	39	64	31	0.8	0.7	0.2	0.4
RU1402131	7605	6811	0.5	0.5	35181	35032	113164	87864	10315	5920	50	49	57	25	0.8	0.9	0.2	0.4
RU1402134	6447	5976	0.4	0.5	32752	42093	78096	68525	7086	4608	43	44	55	29	0.7	0.7	0.2	0.4
RU1402149	5188	6016	0.4	0.4	27483	37050	58986	70881	5233	4795	47	50	43	24	0.6	0.7	0.2	0.4
RU1402174	2985	5392	0.4	0.4	16928	28757	36099	73206	2805	3720	47	49	49	27	0.4	0.6	0.2	0.4
RU1402189	5468	5628	0.4	0.5	31059	26915	65699	67998	6983	4357	47	47	43	33	0.6	0.7	0.2	0.3
RU1402195	4854	6330	0.5	0.5	28259	34494	34795	71442	8239	5585	45	49	51	43	0.5	0.7	0.1	0.3
RU1403107	6753	4178	0.4	0.4	38290	26595	76407	41575	10347	2954	43	47	55	36	0.7	0.5	0.2	0.3
RU1403126	6532	4892	0.5	0.5	22839	28394	83546	59875	6285	4088	55	46	77	36	0.9	0.6	0.2	0.3
RU1404122	4261	5068	0.5	0.5	25497	39265	58721	53259	5383	3409	42	48	38	28	0.7	0.6	0.3	0.5
RU1404154	6218	4803	0.4	0.4	25607	34838	70793	48565	6922	3877	45	50	38	26	0.8	0.4	0.2	0.3
RU1404156	5688	5475	0.4	0.4	27317	35010	56081	65313	5132	4618	45	43	54	26	0.6	0.6	0.2	0.3
RU1404157	4736	4870	0.4	0.4	36871	35874	50252	77871	4146	4530	47	38	49	28	0.5	0.7	0.2	0.4
RU1404191	6098	4079	0.5	0.4	37397	38782	85908	60946	6782	4480	46	41	54	23	0.8	0.6	0.2	0.4
RU1404193	5985	5755	0.4	0.5	42759	29338	68448	67882	5467	4301	48	51	49	38	0.7	0.7	0.2	0.4
RU1404194	6166	4971	0.3	0.4	35612	21290	83833	52347	10919	4422	53	54	37	32	0.6	0.5	0.2	0.3
RU1404196	3308	4707	0.4	0.4	29477	24809	60368	45763	6856	5190	41	47	37	30	0.5	0.5	0.3	0.6
RU1404198	5509	4925	0.3	0.5	34761	31803	29442	56006	9739	3614	52	47	63	35	0.9	0.7	0.3	0.4
RU1504083	5902	3396	0.4	0.4	30714	24462	68840	48212	6909	3759	49	37	43	28	0.8	0.5	0.2	0.3
RU1504100	6262	6211	0.5	0.5	34431	25518	76401	70149	6043	5547	49	54	59	29	0.9	0.8	0.2	0.5
RU1504114	6082	4553	0.5	0.4	34966	32121	74629	50749	6243	3879	46	48	56	21	0.7	0.5	0.2	0.3
RU1504122	6243	5896	0.4	0.4	34979	31523	98946	70813	11697	5134	45	50	60	31	0.8	0.6	0.2	0.3
RU1504154	6579	5875	0.5	0.5	33640	31169	88534	66421	8464	4632	47	49	52	30	1.0	0.7	0.3	0.4
RU1504156	4803	5533	0.4	0.5	30333	31892	50237	59414	4225	3982	43	47	62	35	0.6	0.7	0.2	0.3
RU1504157	6459	5285	0.5	0.4	28373	28039	77871	47382	7160	3411	49	44	47	30	0.8	0.5	0.2	0.3
RU1504186	5652	6971	0.4	0.4	28881	33596	68582	82925	6054	6081	51	57	58	49	0.6	0.8	0.2	0.4
RU1504191	5868	5866	0.5	0.4	34134	36980	73074	67301	8770	4844	45	47	39	34	0.7	0.7	0.2	0.4
RU1504193	5459	6335	0.5	0.5	24541	25225	54019	81137	4646	6057	52	50	50	32	0.7	0.8	0.2	0.5
RU1504194	4917	3718	0.4	0.4	28345	34680	58100	34251	6044	2685	46	42	57	25	0.6	0.3	0.2	0.2
RU1504196	6045	6297	0.5	0.4	29576	28129	70747	65800	6327	5418	49	48	49	28	0.7	0.7	0.2	0.4
RU1504197	6304	5575	0.5	0.5	28418	27006	76783	66529	7789	4434	52	52	48	29	0.7	0.8	0.2	0.4
RU1504198	5509	4871	0.5	0.4	29937	22923	57681	47584	5226	3844	52	51	40	28	0.7	0.6	0.2	0.4
Sabine	5556	5214	0.4	0.5	30795	27502	63439	59691	6158	4136	47	49	52	35	0.6	0.7	0.2	0.3
Taggart	5669	5644	0.5	0.5	30078	30770	56582	64907	4987	4294	50	49	60	34	0.7	0.7	0.2	0.4
Thad	6342	5243	0.4	0.5	29780	28841	51585	58503	7119	4302	48	50	53	33	0.7	0.6	0.2	0.4
N-22	5355	7455	0.5	0.5	25729	31417	53175	80254	8077	6923	46	51	46	50	0.7	1.0	0.2	0.4
Mean	<b>6009</b>	<b>5498</b>	<b>0.5</b>	<b>0.5</b>	<b>32059</b>	<b>31884</b>	<b>72781</b>	<b>63434</b>	<b>7076</b>	<b>4603</b>	<b>48</b>	<b>48</b>	<b>52</b>	<b>32</b>	<b>0.7</b>	<b>0.7</b>	<b>0.2</b>	<b>0.4</b>
Genotypes	*	***	*	NS	*	NS	***	***	***	**	**	NS	*	*	***	***	NS	**
Gen X Treatment	*		NS		NS		***		***		NS		NS		*		*	

Abbreviations: C=control, D=drought, Gen. = genotypes. Significant level \*\*\*, \*\*, \*, and N.S means P-value < 0.001, 0.01, 0.05, and not significant.



Table S5. Drought stress effects on physiological parameters measured viz minimal fluorescence intensity ( $F_o$ ), maximal fluorescence intensity ( $F_m$ ), and maximal variable fluorescence ( $F_v$ ). Measurements were taken at 28 days after sowing.

Name	$F_o$		$F_m$		$F_v$	
	C	D	C	D	C	D
14CLPYT033	9444.67	8506.67	30891.67	26296.67	22113.67	17790.00
14CLPYT108	11037.67	7252.33	29563.33	22730.33	19192.33	15478.00
14CVPYT094	11183.33	10371.33	34999.00	28783.00	20482.33	18411.67
14CVPYT144	11411.33	9124.33	34602.67	26246.67	23191.33	17122.33
COLORADO	10695.67	8940.33	31297.00	24459.00	20601.33	15518.67
Bowman	8897.33	8604.33	28263.00	26799.67	19365.67	18195.33
CAFFEY	9710.00	7537.33	30447.67	19032.67	17404.33	14828.67
CHENIERE	9753.33	6853.00	30733.67	16651.67	20980.33	13132.00
CL Jazzman	11931.33	6204.33	33193.67	15533.67	24595.67	9329.33
CL111	10772.00	7122.00	33030.67	24070.33	22258.67	16948.33
CL142-AR	8788.67	8311.67	29845.00	26279.33	21056.33	17967.67
CL151	11368.00	9384.67	36282.00	25933.00	24914.00	16548.33
CL152	10435.67	7987.00	33969.33	24686.67	20200.33	16699.67
CL163	11107.67	10100.00	36119.67	30278.33	25012.00	20178.33
CL172	9374.00	8431.00	34257.67	26702.67	24883.67	16938.33
CL271	11866.33	7477.33	37387.33	21593.33	25521.00	20782.67
Cocodrie	11525.00	8496.00	34125.67	21587.00	23267.33	13091.00
NIPONBARE	10197.67	9276.33	33768.00	24871.00	23570.33	15594.67
ANTONIO	9926.67	8851.67	30389.00	24403.00	17129.00	17218.00
El Paso 144	11292.33	8550.67	33183.33	27992.33	21891.00	19441.67
GSOR100390	9341.67	9135.33	31275.67	25601.67	21934.00	21133.00
GSOR100417	9753.33	8409.67	28410.33	25413.33	21990.33	17003.67
GSOR101758	9156.67	5232.67	22605.00	20544.33	15781.67	16311.67
RU1104122	11757.67	7738.00	35155.33	20666.67	23397.67	16262.00
CLJZMN	9493.67	8875.33	30408.67	30545.00	20915.00	18336.33
INIA Tacuari	10425.00	8358.00	34949.33	22031.67	24524.33	16673.67
IRGA409	11845.00	7429.33	36293.00	22813.33	24448.00	16717.33
JES	10999.33	10522.67	32727.33	29910.00	25061.33	19387.33
JUPITER	10241.00	7005.00	31893.33	19813.67	21652.33	16142.00
LA 2008	10013.33	9406.67	31329.67	25109.33	21316.33	15702.67
LA 2134	11297.00	9352.00	37463.00	28458.33	25499.33	19106.33
LAKAST	9265.33	8257.67	20345.33	23939.00	8746.67	15681.33
MERMENTAU	10966.33	7801.00	31784.67	25626.67	20818.33	12533.00
Presidio	12224.67	7363.67	34088.67	20955.67	26530.67	16270.12
Rex	10208.33	9991.67	35350.33	27005.67	28475.33	17014.00
RoyJ	9839.67	9623.33	31286.33	27667.00	18113.33	18043.67
RU0603075	10284.00	8322.67	39138.33	26698.00	28854.33	15042.00
RU1201024	10252.00	9200.33	29076.00	26626.33	20824.00	17426.00
RU1201047	9720.33	8127.67	33215.00	23895.33	23494.67	15767.67
RU1201136	10685.00	8358.00	34440.00	26224.00	23755.00	19199.33
RU1204156	11769.00	9211.33	40671.33	25694.33	28902.33	16483.00
RU1204197	9915.67	8452.67	32424.33	25326.00	22508.67	16873.33
RU1301084	10273.00	9547.00	33069.67	28431.33	21796.67	18884.33
RU1301093	9937.33	8853.33	34370.33	28652.67	22433.00	19799.33
RU1301102	9775.00	8258.00	31849.67	23798.00	22074.67	15540.00
RU1302192	11097.00	9563.00	30516.33	28989.67	22419.33	17093.33
RU1303138	9518.67	9075.33	28328.67	26247.67	20797.00	16172.33
RU1303181	9262.67	7380.00	30278.33	19202.67	20015.67	9822.67
RU1304114	10089.33	9482.33	33998.00	26648.33	23908.67	17166.00
RU1304122	11075.33	9015.67	33937.00	31404.33	22861.67	20722.00
RU1304154	9634.00	7362.33	28653.00	21923.33	22352.33	17894.33
RU1304156	9233.00	8670.00	31611.67	25272.33	22378.67	19935.67
RU1305001	9493.00	10013.00	32033.67	29075.33	22540.67	19062.33
RU1401067	9850.67	7741.00	33237.00	24697.67	23386.33	16956.67
RU1401070	10067.33	7900.00	35794.00	19712.33	25726.67	15145.67
RU1401090	11801.67	8175.00	37127.33	15093.67	25325.67	14884.00

RU1401099	10490.33	9233.00	38309.00	28793.67	27818.67	19560.67
RU1401102	11650.00	8647.67	36303.67	18618.00	24653.67	9970.33
RU1401145	10100.00	9417.33	33264.67	22530.00	23164.67	16446.00
RU1401161	9645.00	8212.67	28035.33	19834.67	21723.67	15036.00
RU1401164	11043.00	8528.67	33508.33	23625.00	22465.33	18429.67
RU1402005	9365.33	6803.33	29043.33	25465.00	18011.33	15585.67
RU1402031	11758.00	9504.00	36975.67	27775.33	25217.67	18271.33
RU1402065	11501.00	8051.67	33919.67	24870.67	23418.67	16819.00
RU1402115	9514.67	8821.00	31654.67	24469.67	22140.00	15648.67
RU1402131	10804.33	8409.33	36488.00	21728.00	25683.67	13318.67
RU1402134	11671.67	8398.33	33898.33	20275.67	22226.67	15210.67
RU1402149	11086.00	8236.00	33561.67	26030.33	22475.67	17794.33
RU1402174	8575.33	9178.67	21279.00	23603.00	20370.33	17540.33
RU1402189	11107.67	7102.67	34927.33	18520.33	23819.67	11417.67
RU1402195	9774.67	8214.33	32803.33	23169.33	23028.67	14955.00
RU1403107	11844.67	9005.33	36542.00	25304.33	24697.33	16299.00
RU1403126	10912.67	7806.33	36997.33	15802.00	26084.67	9995.67
RU1404122	11227.00	9255.00	37669.33	26529.33	26442.33	17274.33
RU1404154	11390.33	7705.00	36978.33	20222.00	24254.67	15850.33
RU1404156	11498.00	9081.33	37691.00	27591.00	26193.00	18509.67
RU1404157	12570.67	5837.00	35978.67	25118.00	23408.00	12947.67
RU1404191	10663.33	7197.33	31975.33	27999.00	24645.33	17468.33
RU1404193	8471.00	8485.33	28287.00	22400.00	20149.33	13914.67
RU1404194	9498.67	9395.33	24946.67	26778.00	16114.67	17382.67
RU1404196	9937.00	8626.00	27655.67	25770.33	21052.00	17144.33
RU1404198	10056.67	9038.00	31260.00	22758.00	21203.33	17053.33
RU1504083	9905.00	8127.67	33893.67	23483.33	23988.67	15355.67
RU1504100	9449.67	7575.00	31975.67	19528.33	15859.33	7953.33
RU1504114	12581.33	8843.33	37268.00	27580.33	24686.67	18737.00
RU1504122	11482.00	8864.67	29606.67	26041.33	18791.33	17176.67
RU1504154	10295.00	9244.00	31076.33	26561.33	20781.33	17317.33
RU1504156	10284.00	7197.67	35047.00	21252.67	24763.00	17388.33
RU1504157	10633.00	6818.33	37961.67	18322.67	26594.00	9837.67
RU1504186	10230.00	7477.33	32955.00	21121.00	22725.00	13643.67
RU1504191	10977.67	7726.67	34039.00	21023.67	26394.67	16630.33
RU1504193	9883.33	6851.33	28967.33	17723.67	22417.33	10872.33
RU1504194	9102.67	6949.67	27385.00	22213.33	18282.33	18597.00
RU1504196	10858.67	7868.00	37908.00	23705.00	27049.33	19170.33
RU1504197	11703.67	7781.00	39511.33	19441.67	27807.67	11660.67
RU1504198	10501.33	7367.00	32034.33	18059.00	21533.00	10692.00
Sabine	10869.33	8897.00	30690.33	28609.67	19821.00	19712.67
Taggart	10121.67	8138.67	31687.33	24827.67	21565.67	16689.00
Thad	11454.67	9644.67	38156.67	31308.00	26702.00	21663.33
N-22	10057.00	7748.33	29190.33	23125.67	17133.33	15377.33
<b>Mean</b>	<b>10478.28</b>	<b>8359.04</b>	<b>32847.92</b>	<b>24141.54</b>	<b>22605.50</b>	<b>16317.21</b>
<b>Genotypes</b>	<b>***</b>	<b>NS</b>	<b>***</b>	<b>*</b>	<b>***</b>	<b>***</b>
<b>Gen. X Treatment</b>		<b>*</b>	<b>***</b>		<b>***</b>	

Abbreviations: C=control, D=drought, Gen. = genotypes. Significant level \*\*\*, \*, and N.S means P-value < 0.001, 0.05, and not significant.