

Table S1. Results of linear regressions of traits over time (in days), showing the coefficients of determination of the regression lines of the traits (column R^2_{time}) and of the differences in regression parameters among the genotypes (column $R^2_{\text{time+genotype}}$). Genotypic slopes in relation to the slope of genotype SBCC146, and significance of the differences to SBCC146 are shown.

Trait	R^2_{time}	$R^2_{\text{time+genotype}}$	Cierzo	Orria	Scarlett	SBCC042	SBCC073	SBCC146
----- Control -----								
Leaf area	65.7	15.2 **	-0.842	-1.356 **	-1.800 **	-0.845 **	-1.080 **	0
Leaf number	72.1	3.2 **	-0.056	-0.095 **	-0.059 *	-0.058 *	-0.024	0
Length of primary root	62.7	9.2 **	-0.108	-1.167	-3.667 **	-2.413 **	0.268	0
Length of lateral roots	43.6	8.3 **	0.886	-1.924 **	-0.986 *	-1.281 **	0.540	0
Root system depth	67.7	2.8 **	-0.187	-0.487 **	-0.289	-0.454 **	-0.344 **	0
Root system width	37.3	1.1	0.151	-0.059	0.064	-0.057	0.030	0
Total root length	66.0	8.6 **	0.780	-3.090 **	-4.658 **	-3.691 **	0.811	0
----- Drought -----								
Leaf area	60.7	12.1 **	-0.061	-0.909 **	-0.505 *	-0.590 **	-0.711 **	0
Leaf number	60.9	1.1	0.013	-0.058	0.014	0.016	-0.043	0
Length of primary root	70.1	4.3 **	0.019	-2.466 **	-1.116	-2.180 **	-0.364	0
Length of lateral roots	56.8	10.1 **	3.176 **	-2.285 **	-0.182	0.174	-0.879	0
Root system depth	46.1	15.0 **	0.022	-0.392 **	-0.043	-0.469 **	-0.325	0
Root system width	65.9	10.8 **	0.147 **	-0.162 **	0.031	-0.135 **	-0.146 **	0
Total root length	75.2	6.4 **	3.190	-4.748 **	-1.299	-2.011 **	-1.236	0

Table S2. Hundred seed weight of the six barley genotypes.

Genotype	Weight (g)
SBCC042	6.471
SBCC073	7.122
SBCC146	5.329
Cierzo	5.166
Orria	5.181
Scarlett	4.894

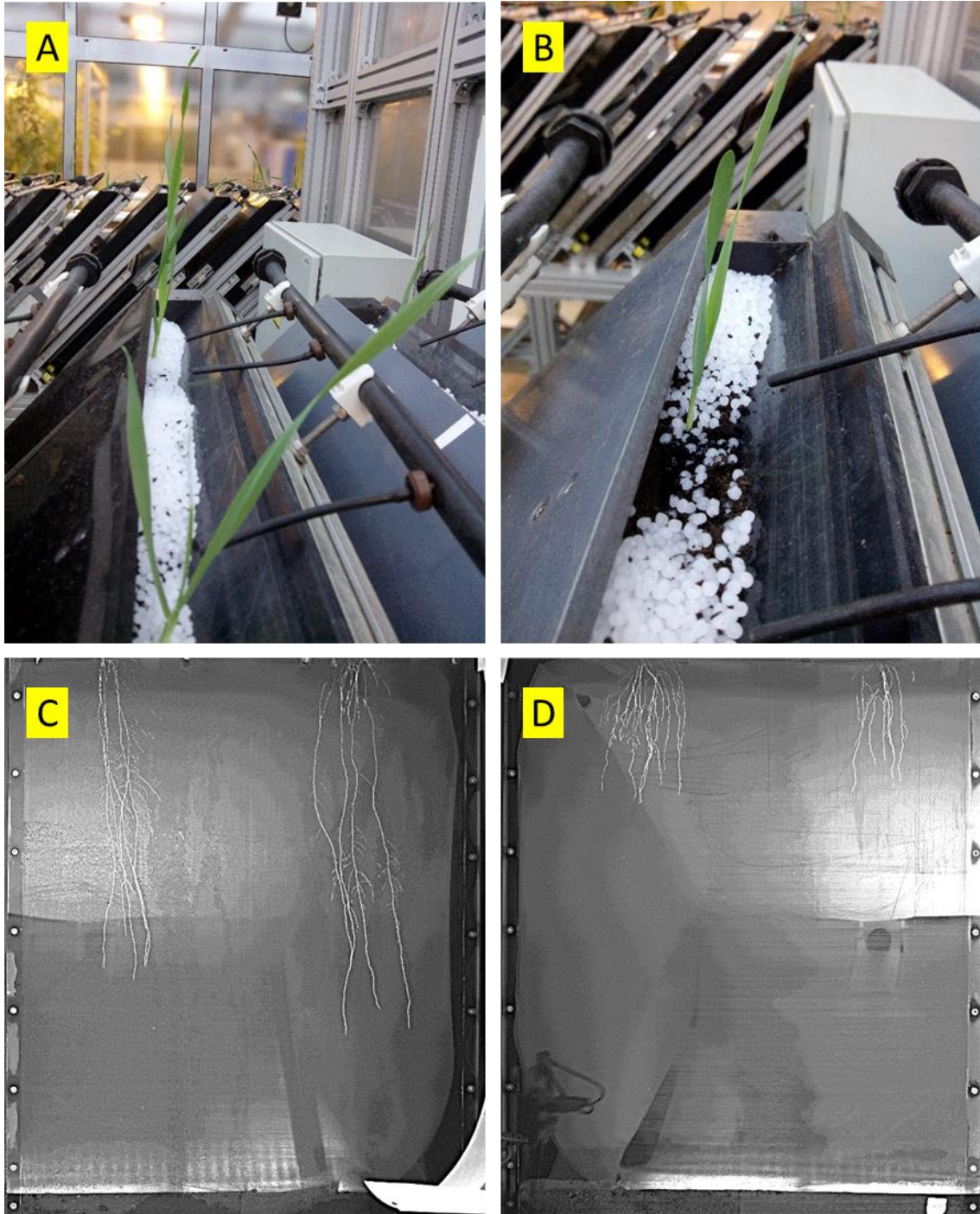


Figure S1. Photographs of plants grown in the experiment. A, B) aerial part of plants grown in the control and drought treatments, respectively. C, D) photographs of rhizoboxes taken in the image analysis cabinet, in the control and drought treatments, respectively.

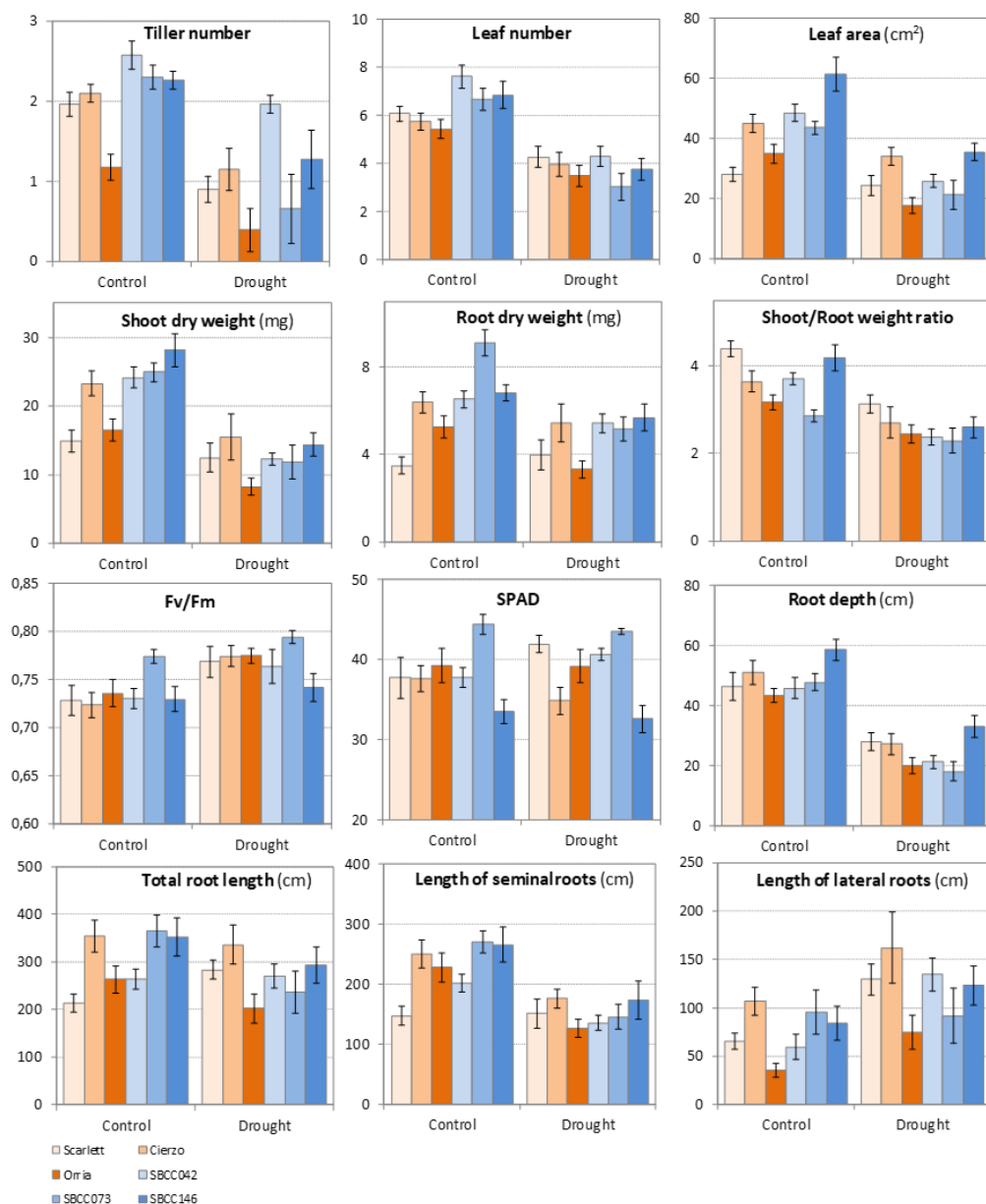


Figure S2. Genotypic averages for all variables measured at the end of the experiment (27 days after sowing) or at specific dates, for SPAD (21 days after sowing) and Fv/Fm (20 days after sowing), at the two treatments, control and drought. Bars represent \pm standard error of the mean.

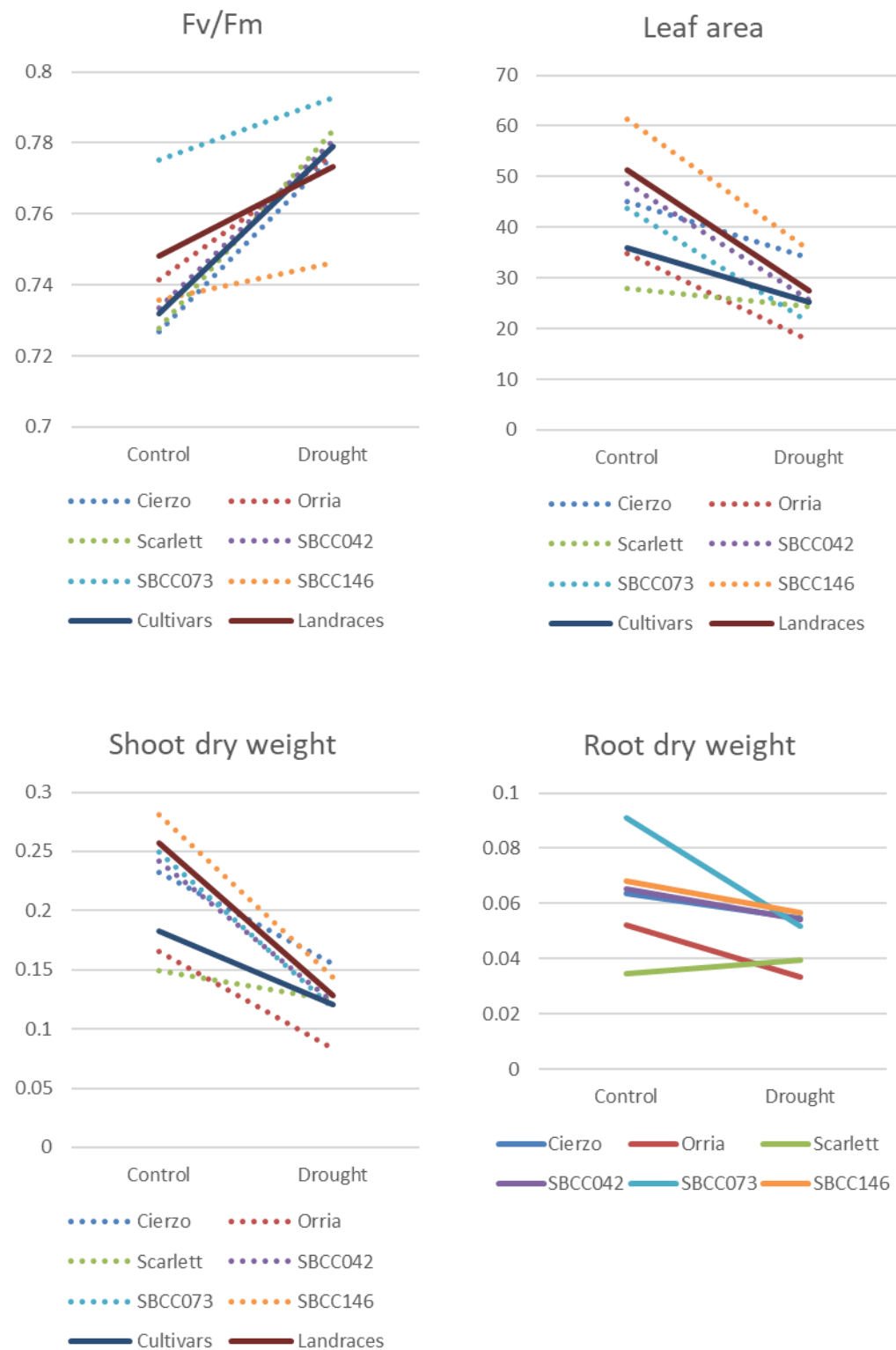


Figure S3. Interaction graphs for selected traits with significant genotype x treatment (all four traits) and type x treatment interaction (Fv/Fm, leaf area and shoot dry weight).