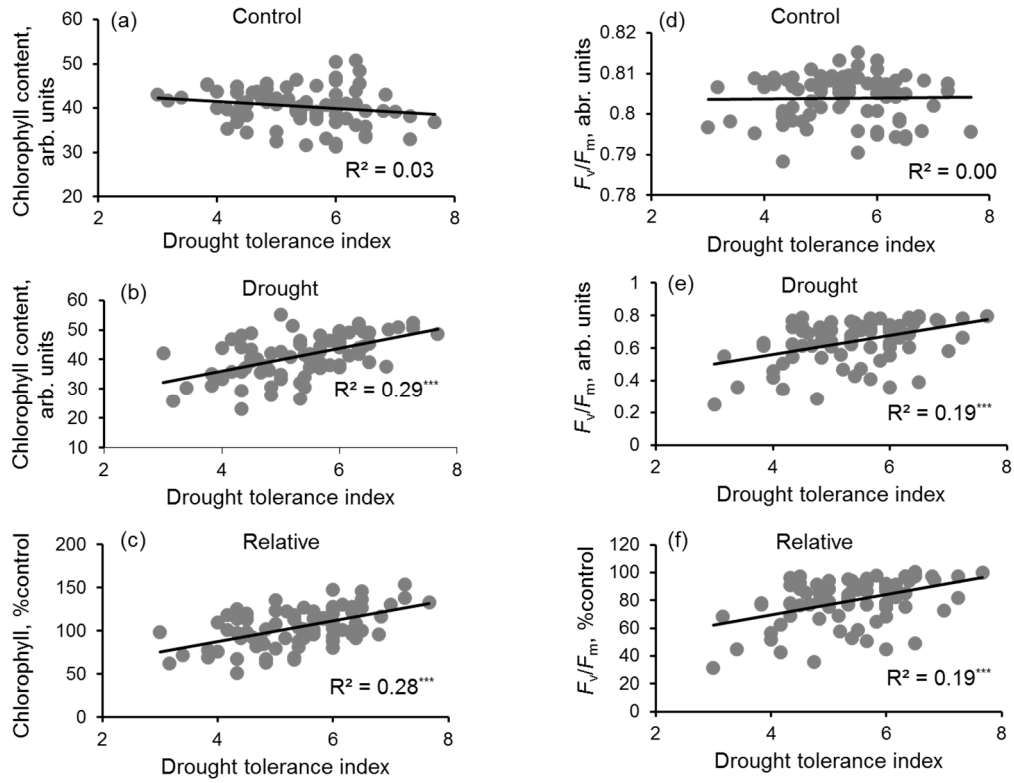
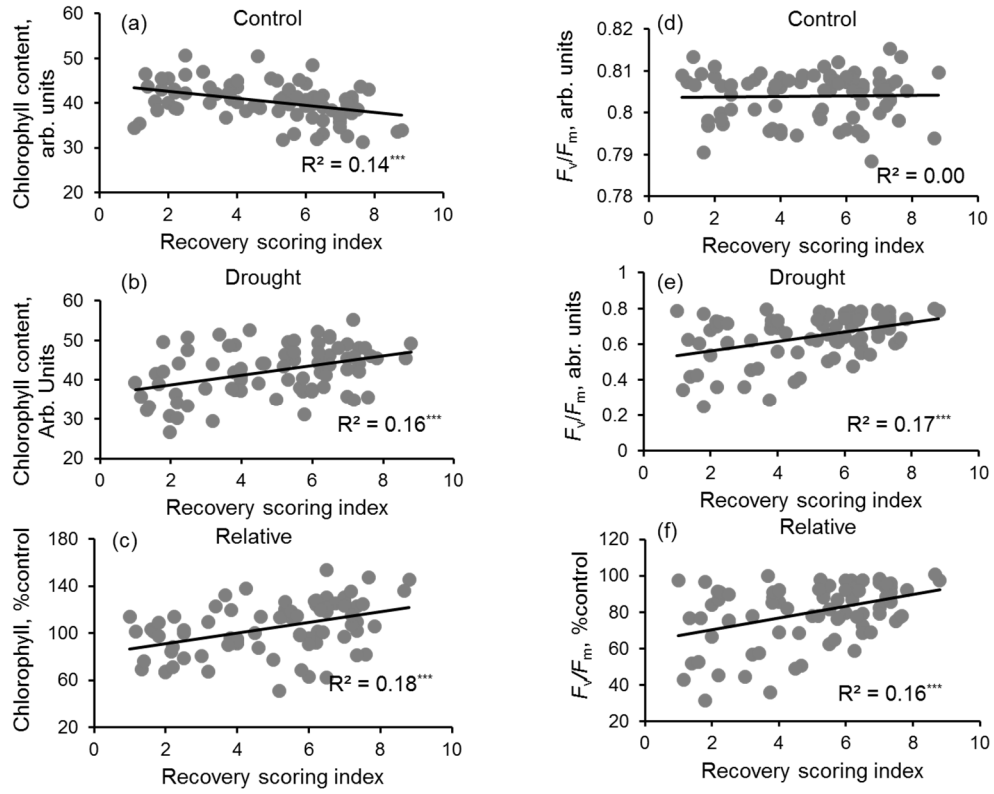


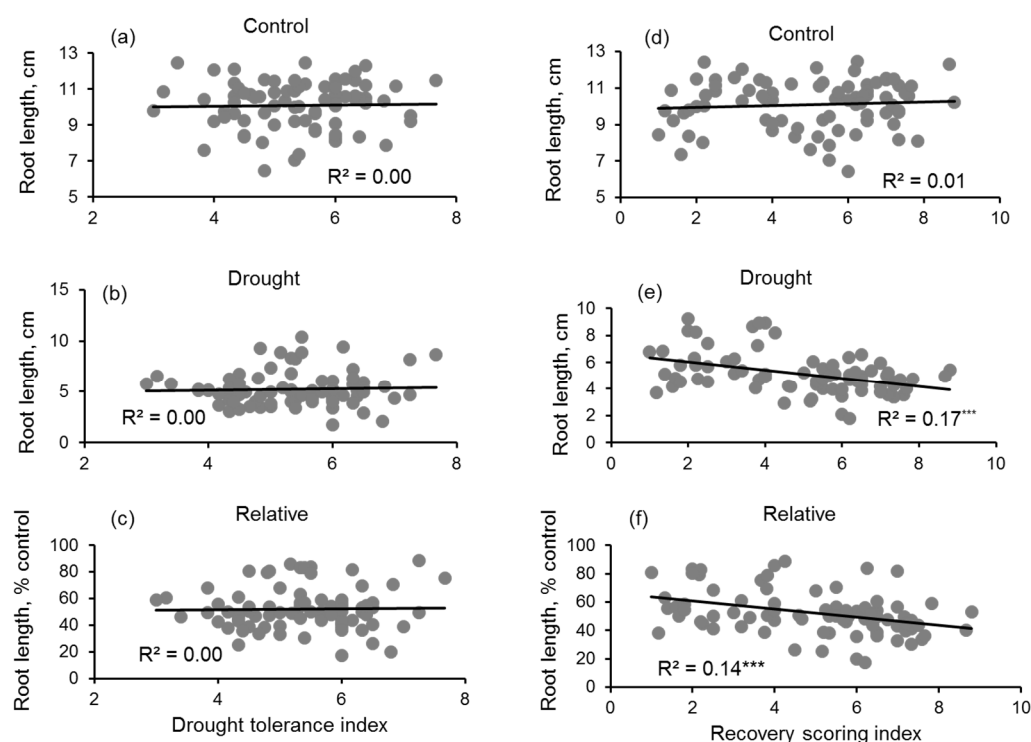
## Supplementary Materials



**Figure S1.** Correlations (Pearson's  $R^2$  value) of chlorophyll content and  $F_v/F_m$  with drought tolerance index (a) correlation between chlorophyll content under irrigated conditions and the drought tolerance index; (b) correlation between chlorophyll content under drought stress conditions and the drought tolerance index; (c) correlation between chlorophyll content (% control) under drought stress conditions and the drought tolerance index; (d) correlation between  $F_v/F_m$  ratio under irrigated conditions and the drought tolerance index; (e) correlation between  $F_v/F_m$  ratio under drought stress conditions and the drought tolerance index; (f) correlation between  $F_v/F_m$  ratio (% control) under drought stress conditions and the drought tolerance index.  $^{***}P < 0.001$  indicates significant difference by two-tailed test.



**Figure S2.** Correlations (Pearson's  $R^2$  value) of chlorophyll content and  $F_v/F_m$  with drought recovery index (a) correlation between chlorophyll content under irrigated conditions and the drought recovery index; (b) correlation between chlorophyll content under drought stress conditions and the drought recovery index; (c) correlation between chlorophyll content (% control) under drought stress conditions and the drought recovery index; (d) correlation between  $F_v/F_m$  ratio under irrigated conditions and the drought recovery index; (e) correlation between  $F_v/F_m$  ratio under drought stress conditions and the drought recovery index; (f) correlation between  $F_v/F_m$  ratio (% control) under drought stress conditions and the drought recovery index. \*\*\* $P < 0.001$  indicates significant difference by two-tailed test.



**Figure S3.** Correlations (Pearson's  $R^2$  value) between the root length and both drought tolerance index and drought recovery index (a) correlation between root length under control conditions and the drought tolerance index; (b) correlation between root lengths under PEG induced drought stress conditions and the drought tolerance index; (c) correlation between root lengths (% control) under PEG induced drought stress conditions and the drought tolerance index; (d) correlation between root length under irrigated conditions and the drought recovery index; (e) correlation between root length under PEG-induced drought stress conditions and the drought recovery index; (f) correlation between the root lengths (% control) under PEG induced drought stress conditions and the drought recovery index. \*\*\* $P < 0.001$  indicates significant difference by two-tailed test.

**Table S1.** Origin of the different barley genotypes.

Genotypes	Origin
93-3143 C60	China
AC Burman	Canada
Aizao3	China
Barque73	Australia
Boa Fe	Portugal
Brindabella	Australia
Carmen	Australia
Cevada de 2 ordens	Portugal
cevada Preta	Portugal
CI-4196	China
CI-8826	China
Clipper	Australia
CM72	America
CPI71284-48	Unknown
CXHKSL	China
DASH	New Zealand
Dayton	America
DYSYH	China
Flagship	Australia

Franklin	Australia
Gairdner	Australia
Gebeina	Germany
Haruna nijo	Japan
Honen	Japan
HOR12522	Spain
HOR12779	Spain
HOR13437	Moroco
HOR13447	Moroco
HOR1448	Portugal
HOR2410	Portugal
HOR3870	Portugal
HOR4055	Spain
HOR8847	Spain
HOR8851	Spain
HU93-045	China
Karin	Unknown
Keel	Australia
Kinu nijo6	Japan
Lixi143	China
Macquarie	Australia
Mundah	Australia
Naso nijo	Japan
Numar	America
RGZLL	China
Sahara	Japan
Schooner	Australia
Skiff	Australia
Svanhals	CYMMIT
SYR01	Syria
TAM407227	Unknown
TF026	Australia
TX9425	China
Unicorn	Japan
WA12908	China
WA12915	China
WA12916	China
WA12918	China
WA12924	China
WA12927	China
WA12930	China
WA12931	China
WA12937	China
WA12949	China
Westminister	British
Xiaojiang	China
Yan89110	China
Yan90260	China
Yerong	China
YF374	China
Yiwu Erleng	China
YPSLDM	China
YSM1	China
YSM3	China
YU6472	China
YUQS	China
YWHKSL	China
YYXT	China
Zhepi 2	China

ZUG293  
ZUG403

China  
China

---