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Effective screening methods for salinity tolerance: pot experiments but not hydroponics are plausible models of salt tolerance in barley.

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SUPPLEMENTARY DATA

Supplementary Table S1. The whole shoot concentrations of Na^+, K^+ and Cl^- in 60 genotypes of barley in experiment 1. Values are means (n = 4).

	Na^+	Cl^-	K^+
CPI77146-32	2174	1226	971
Tadmor	1613	1830	1600
Buloke	2215	1518	1183
Yarra	1855	1225	952
Briggs	1229	1028	781
Fleet	1747	1010	1299
H.Spont 41.1	2185	1221	1027
O2D/20	1736	1112	1534
Parent16	1478	886	1082
Keel	1477	897	1259
Gairdner	2243	1375	1285
Chevron	902	760	775
WI3788	2151	1261	1105
Flagship	1950	1057	1481
WI4262	1632	1083	968
Dobla	1879	1460	1020
Dhow	1418	912	997
Arivat	1361	1054	845
Hindmarsh	1816	1152	1129
Albecta	1813	1016	1296
Vlamingh	1788	1172	1376
Frankline	2425	1451	1517
Parent15	1330	891	880
Proto	1771	1069	1046
Harmel	1780	1006	1324
Baudin	1673	1388	1516
YU6472	1466	1061	1168
Maritime	1292	1011	1105
WI3416	1862	1001	1395
Barque73	1656	1006	1424
Ratna	1316	972	1137
Club Mariout	1148	1012	874
ICARDA-391	1283	957	868

Sahara	1479	998	1206
Arta	2181	1200	1144
Mundah	1717	1014	1446
Er/Apm	1453	993	1049
Clipper	1728	1153	1168
Arupo	1966	1161	1126
CM72	1838	1004	1020
CM67	1263	1099	878
ICARDA-382	1119	903	887
CPI71284-48	2819	2163	2023
Barque	983	858	852
WI2198	944	830	712
Schooner	873	1050	816
Skiff	863	840	672
Capstan	1613	963	1240
Egmont	1149	999	903
Parent12	1327	1037	806
Beecher	1841	1061	1427
California Mar	1470	1140	854
Parent-08	984	803	835
Sloop	1676	991	1081
Kaputar	2138	1440	680
Gerbel	1403	946	2209
Parent19	1864	1838	2550
Halycon	1647	1029	1176
Cl-3576	1093	841	1295

Supplementary Table S2. The dry matter production of 15 genotypes of barley (experiment 2) in control conditions and in two levels of soil salinity (ECe = 7.2 and 15.3 dS m^{-1}) at three harvests. Values are means (n = 3).

	Control	EC1	EC1	EC2	EC2
	DW	DW	ST	DW	ST
First harvest					
Fleet	3.73	2.96	79	2.55	68
Flagship	2.23	2.12	95	1.63	73
Buloke	2.44	2.34	96	2.32	95
Hindmarsh	2.32	1.90	82	1.58	68
WI4263	3.06	2.55	83	2.15	70
Schooner	3.01	2.85	95	2.78	92
P19	3.01	2.60	86	2.32	77
Gairdner	2.46	2.08	85	1.62	66
ODZ20	3.53	3.03	86	2.52	71
Yara	3.25	2.85	88	1.91	59
SloopSA	3.40	3.01	89	2.88	85
Maritime	3.21	3.05	95	2.55	79
Capstan	3.55	3.25	92	3.05	86
Keel	3.65	3.01	82	2.65	73
Baudin	3.15	2.75	87	2.71	86
Second harvest					
Fleet	8.44	7.06	84	6.85	81
Flagship	10.16	7.12	70	6.94	68
Buloke	8.79	6.66	76	6.64	76
Hindmarsh	5.67	5.03	89	4.91	87
WI4263	6.38	5.91	93	4.93	77
Schooner	8.21	6.72	82	3.95	48
P19	7.91	5.85	74	4.85	61
Gairdner	6.51	5.15	79	4.05	62
ODZ20	6.24	4.98	80	4.81	77
Yara	8.44	6.85	81	5.37	64
SloopSA	7.55	5.15	68	4.85	64
Maritime	8.15	5.05	62	4.85	60
Capstan	7.32	6.25	85	5.85	80
Keel	7.88	5.15	65	5.05	64
Baudin	6.33	4.05	64	3.15	50
Third harvest					
Fleet	14.9	10.5	71	9.1	61
Flagship	12.6	6.8	54	6.5	52
Buloke	11.6	7.5	65	6.8	59
Hindmarsh	12.5	10.1	81	8.9	71
WI4263	9.6	8.5	89	8.1	84

Schooner	11.6	6.8	59	5.8	50
P19	10.1	8.9	88	6.5	64
Gairdner	9.5	6.4	67	5.6	59
ODZ20	13.9	10.9	78	10.5	75
Yara	16.2	9.9	61	7.8	48
SloopSA	9.9	6.5	66	5.0	51
Maritime	12.2	6.8	56	5.2	43
Capstan	15.1	13.1	87	10.5	70
Keel	14.6	10.9	75	8.8	60
Baudin	10.6	6.1	58	5.1	48

Supplementary Table S3. The grain yield (kg ha^{-1}), leaf osmotic potential (OP) and leaf Na, Cl and K concentration (mmol kg^{-1} DW) of barley varieties grown at Hart site in 2009. The results for leaf OP and ion concentrations are from youngest emerged leaves at ZGS 65. Values are averages (*n*=4).

	grain yield	OP	Na	Cl	K
Maritime	2988	1.65	556	689	665
Schooner	3132	1.61	455	615	685
Flagship	3355	1.63	415	675	695
Baudin	3792	1.68	450	580	655
Gairdner	3813	1.53	465	577	678
SloopSA	3820	1.58	395	550	665
Yarra	3990	1.45	420	568	670
Buloke	4001	1.38	425	560	615
Keel	4105	1.62	455	585	645
Hindmarsh	4355	1.18	365	480	633
WI4262	4545	1.15	370	485	690
Fleet	4755	1.39	361	465	625
Capstan	4985	1.21	345	470	677