

S7 Table. List of major QTL (PVE> 20%) for seven drought-responsive traits identified in earlier studies along with their linked markers, PVE, mapping population type, and parental genotypes.

S.No.	Trait/QTL	Linked marker	PVE (R ²) ^a	Mapping population; parental genotypes	Favourable allele	Reference
1. Grain yield						
a)	<i>qGYWD.3B.2</i>	<i>Xgpw7774</i>	19.6	RIL; WL711(DS)/C306 (DT)	C306	[1]
b)	4A	<i>Xwmc420</i>	20.0	RIL; Sitta(DS)/Dharwar Dry (DT)	Dharwar Dry	[2]
c)	4A-a	<i>Xgwm397</i>	23.9	RIL; SeriM82/Babax	Babax	[3]
d)	<i>Qyld.csdh.7AL</i>	<i>Xgwm322</i>	20.0*	DH; Chinese Spring (DS)/SQ1(DT)	SQ1	[4]
2. 1000 grain weight						
a)	3B	<i>Xbarc101</i>	45.2	F _{2:3} families; Massara-1 (DS)/ Oste-Gata (DT)	Oste-Gata	[5]
b)	<i>QTgw-7D-b</i>	<i>XC29-P13</i>	21.9	RIL; SeriM82/Babax	Babax	[6]
3. Days to Heading						
a)	<i>QDh-7D.b</i>	<i>XC29-P13</i>	22.7	RIL; SeriM82/Babax	Babax	[6]
b)	<i>QHd.idw-2A.2</i>	<i>Xwmc177</i>	32.2	RIL; Kofa/Svevo	Kofa	[7]
4. Days to Maturity						
a)	<i>QDm-7D.b</i>	<i>X7D-acc/cat-10</i>	22.7	RIL; SeriM82/Babax	Babax	[6]
5. Stem Reserve Mobilization						
a)	<i>QSrm.ipk-2D</i>	<i>Xgwm249a</i>	42.2	RIL; W7984/Opata 85	W7984	[8]
b)	<i>QSrm.ipk-5D</i>	<i>Xfbb238b</i>	37.5	RIL; W7984/Opata 85	W7984	[8]
c)	<i>QSrm.ipk-7D</i>	<i>Xfbb189b</i>	21.0	RIL; W7984/Opata 85	W7984	[8]
6. Water soluble carbohydrate						
a)	<i>QWsc-c.aww-3A</i>	<i>Xwmc0388A</i>	19.0	DH; Kukri (DS)/RAC875 (DT)	RAC875	[9]
7. SPAD/chlorophyll content						
a)	<i>Qchl.ksu-3B</i>	<i>Xbarc68</i>	59.1	RIL; HUW206 (DS)/C306 (DT)	C306	[10]

^a Highest PVE (R²) values under drought/water stress; * with >20% higher yield per ear, DS, drought sensitive; DT, drought tolerant.

- Shukla S, Singh K, Patil R V, Kadam S, Bharti S, Prasad P, et al. Genomic regions associated with grain yield under drought stress in wheat (*Triticum aestivum* L.). *Euphytica*. 2015;203: 449–467. doi:10.1007/s10681-014-1314-y
- Kirigwi FM, Van Ginkel M, Brown-Guedira G, Gill BS, Paulsen GM, Fritz AK. Markers associated with a QTL for grain yield in wheat under drought. *Mol Breed*. 2007;20: 401–413. doi:10.1007/s11032-007-9100-3
- Pinto RS, Reynolds MP, Mathews KL, McIntyre CL, Olivares-Villegas J-J, Chapman SC. Heat and drought adaptive QTL in a wheat population designed to minimize confounding agronomic effects. *Theor Appl Genet*. 2010;121: 1001–1021. doi:10.1007/s00122-010-1351-4
- Quarrie SA, Pekic Quarrie S, Radosevic R, Rancic D, Kaminska A, Barnes JD, et al. Dissecting a wheat QTL for yield present in a range of environments: From the QTL to candidate genes. *J Exp Bot*. 2006;57: 2627–2637. doi:10.1093/jxb/erl026
- Golabadi M, Arzani A, Mirmohammadi Maibody SAM, Sayed Tabatabaei BE, Mohammadi SA. Identification of microsatellite markers linked with yield components under drought stress at terminal growth stages in durum wheat. *Euphytica*. 2011;177: 207–221. doi:10.1007/s10681-010-0242-8
- Lopes MS, Reynolds MP, McIntyre CL, Mathews KL, Jalal Kamali MR, Mossad M, et al. QTL for yield and associated traits

in the Seri/Babax population grown across several environments in Mexico, in the West Asia, North Africa, and South Asia regions. Theor Appl Genet. 2013;126: 971–984. doi:10.1007/s00122-012-2030-4

7. Maccaferri M, Sanguineti MC, Corneti S, Ortega JLA, Salem M Ben, Bort J, et al. Quantitative trait loci for grain yield and adaptation of durum wheat (*Triticum durum* Desf.) across a wide range of water availability. Genetics. 2008;178: 489–511. doi:10.1534/genetics.107.077297
8. Salem KFM, Roder MS, Borner A. Identification and Mapping Quantitative Trait Loci for Stem Reserve Mobilisation in Wheat (*Triticum aestivum* L.). Cereal Res Commun. 2007;35: 1367–1374.
9. Bennett D, Izanloo A, Reynolds M, Kuchel H, Langridge P, Schnurbusch T. Genetic dissection of grain yield and physical grain quality in bread wheat (*Triticum aestivum* L.) under water-limited environments. Theor Appl Genet. 2012;125: 255–271. doi:10.1007/s00122-012-1831-9
10. Kumar S, Sehgal SK, Kumar U, Prasad PVV, Joshi AK, Gill BS. Genomic characterization of drought tolerance-related traits in spring wheat. Euphytica. 2012;186: 265–276. doi:10.1007/s10681-012-0675-3