

Table S3. Individual environments and combined overall BLUPs values for nine traits recorded in eight durum wheat tested across 15 environments.

Environment	Genotype	BLUP_TW	BLUP_GY	BLUP_HI	BLUP_TKW	BLUP_KA	BLUP_KW	BLUP_KL	BLUP_KC	BLUP_KLKW
IR-JU22	Boabdil	2022.027	747.528	37.231	51.118	19.936	3.496	7.801	NA	2.235
	Bolenga	2062.195	767.301	37.124	49.883	19.138	3.558	7.302	NA	2.070
	Norsi	2022.027	596.571	29.916	64.877	24.357	3.527	9.298	NA	2.631
	NUR-072	2148.555	800.002	36.452	62.255	23.127	3.435	9.231	NA	2.697
	NUR-106	2117.426	741.444	34.502	60.837	24.523	3.435	9.896	NA	2.895
	NUR-238	1996.922	586.684	29.904	49.239	19.238	3.404	7.768	NA	2.301
	UC1113	1984.370	733.839	37.592	44.606	18.207	3.282	7.635	NA	2.367
	Um Qais	2089.810	730.797	34.709	47.908	17.509	3.496	6.803	NA	2.004
LSD(0.05)		145.595	73.388	3.384	1.499	0.453	0.078	0.158		0.098
IR-KD20	Boabdil	1856.294	632.752	34.170	40.457	17.452	3.149	7.470	1.527	2.387
	Bolenga	1579.674	589.266	37.818	34.859	15.221	2.978	6.841	1.494	2.314
	Norsi	1500.113	434.209	30.537	53.696	22.023	3.205	9.164	1.719	2.881
	NUR-072	1982.387	707.687	35.248	57.826	22.809	3.264	9.260	1.699	2.855
	NUR-106	1610.606	638.309	39.878	58.904	24.283	3.408	9.665	1.729	2.848
	NUR-238	1809.137	722.203	39.146	56.493	21.322	3.546	8.041	1.471	2.278
	UC1113	1830.403	733.527	39.154	48.685	19.752	3.379	7.921	1.524	2.364
	Um Qais	1639.605	554.678	34.642	44.710	17.141	3.389	6.791	1.375	2.012
LSD(0.05)		296.341	113.150	5.542	2.735	0.887	0.066	0.253	0.034	0.071
IR-KD21	Boabdil	985.566	436.163	44.888	50.010	19.774	3.334	8.006	1.570	2.440
	Bolenga	1438.743	786.008	53.323	39.029	16.307	3.117	7.158	1.541	2.350
	Norsi	1023.903	303.042	30.621	54.023	22.943	3.334	9.245	1.716	2.769
	NUR-072	1311.309	560.241	42.691	61.198	23.241	3.427	9.082	1.629	2.650
	NUR-106	1199.021	609.799	50.300	59.712	25.552	3.520	9.799	1.774	2.889
	NUR-238	1056.205	424.942	40.633	54.939	21.425	3.489	8.266	1.541	2.380
	UC1113	1145.776	521.714	45.789	47.677	19.708	3.427	7.810	1.512	2.291
	Um Qais	1075.610	544.385	50.515	35.761	15.218	3.117	6.701	1.483	2.231
LSD(0.05)		167.824	94.209	7.464	3.018	1.045	0.130	0.479	0.119	0.246

Environment	Genotype	BLUP_TW	BLUP_GY	BLUP_HI	BLUP_TKW	BLUP_KA	BLUP_KW	BLUP_KL	BLUP_KC	BLUP_KLKW
RF-JU20	Boabdil	1299.949	395.821	26.900	37.615	16.898	3.043	7.477	1.571	2.479
	Bolenga	1517.917	570.691	31.314	28.341	14.043	2.827	6.675	1.529	2.395
	Norsi	2142.535	431.963	17.037	54.318	22.471	3.298	9.141	1.695	2.789
	NUR-072	1322.421	420.315	26.470	42.685	18.791	2.991	8.472	1.730	2.847
	NUR-106	1437.611	482.492	28.009	47.835	21.795	3.144	9.450	1.818	3.027
	NUR-238	1122.739	281.143	20.926	34.438	15.254	2.948	6.958	1.523	2.385
	UC1113	1291.595	395.156	25.378	29.282	15.111	2.857	7.198	1.610	2.551
	Um Qais	1678.530	578.039	28.693	34.522	14.765	3.030	6.592	1.497	2.251
LSD(0.05)		116.114	49.799	2.690	1.234	0.426	0.066	0.144	0.059	0.124

RF-JU21	Boabdil	908.374	320.349	35.990	31.829	15.842	2.863	7.503	1.670	2.702
	Bolenga	986.600	421.168	41.871	34.597	16.490	2.917	7.600	1.670	2.676
	Norsi	915.264	251.394	27.946	45.060	19.537	2.999	8.635	1.710	2.864
	NUR-072	947.848	289.609	30.679	34.240	16.976	2.808	8.117	1.730	2.891
	NUR-106	912.456	327.685	36.495	36.318	17.916	2.917	8.182	1.710	2.810
	NUR-238	985.443	367.158	36.753	30.557	14.902	2.754	7.244	1.650	2.676
	UC1113	875.549	246.996	29.277	27.710	14.513	2.808	6.953	1.630	2.541
	Um Qais	1035.184	463.678	43.525	26.699	13.022	2.699	6.565	1.630	2.541
LSD(0.05)		100.858	45.999	4.711	2.411	1.051	0.140	0.365	0.094	0.199

RF-MR20	Boabdil	873.779	256.191	29.156	34.193	15.746	2.996	7.131	1.561	2.421
	Bolenga	815.494	265.746	33.040	30.984	15.156	2.907	7.003	1.567	2.453
	Norsi	774.777	166.492	22.286	47.340	20.927	3.142	8.839	1.716	2.780
	NUR-072	939.904	312.402	32.380	36.729	17.998	2.861	8.695	1.862	3.050
	NUR-106	937.757	246.452	25.763	36.263	19.194	2.961	8.982	1.880	3.032
	NUR-238	813.676	191.570	23.924	29.677	15.606	2.820	7.574	1.707	2.726
	UC1113	845.129	250.432	29.726	28.040	14.984	2.836	7.274	1.659	2.613
	Um Qais	885.650	270.923	30.208	26.717	13.133	2.842	6.292	1.495	2.275
LSD(0.05)		130.645	59.351	5.064	3.498	1.175	0.160	0.646	0.144	0.301

Environment	Genotype	BLUP_TW	BLUP_GY	BLUP_HI	BLUP_TKW	BLUP_KA	BLUP_KW	BLUP_KL	BLUP_KC	BLUP_KLKW
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<b>RF-MR21</b>	<b>Boabdil</b>	690.403	186.984	26.966	31.959	16.169	2.900	7.435	1.602	2.572
	<b>Bolenga</b>	777.279	222.393	28.485	26.441	13.526	2.755	6.646	1.569	2.479
	<b>Norsi</b>	784.385	187.264	24.010	43.935	19.769	3.045	8.685	1.698	2.852
	<b>NUR-072</b>	804.792	209.404	26.232	37.690	18.051	2.929	8.258	1.762	2.821
	<b>NUR-106</b>	796.642	195.567	24.584	36.696	20.099	3.016	9.014	1.795	3.007
	<b>NUR-238</b>	780.962	227.062	28.943	32.252	15.772	2.929	7.238	1.602	2.541
	<b>UC1113</b>	708.463	190.856	27.099	26.209	14.022	2.813	6.777	1.602	2.479
	<b>Um Qais</b>	772.324	201.011	26.046	27.141	13.559	2.813	6.580	1.537	2.417
<b>LSD(0.05)</b>		<b>92.433</b>	<b>33.809</b>	<b>3.964</b>	<b>2.922</b>	<b>0.780</b>	<b>0.120</b>	<b>0.333</b>	<b>0.055</b>	<b>0.177</b>

<b>RF-MR22</b>	<b>Boabdil</b>	908.706	227.216	24.397	33.879	16.017	2.906	7.470	NA	2.634
	<b>Bolenga</b>	880.870	226.888	25.566	31.723	14.503	2.906	6.743	NA	2.404
	<b>Norsi</b>	900.753	237.707	25.914	50.769	21.218	3.220	8.824	NA	2.765
	<b>NUR-072</b>	882.858	255.414	28.838	34.264	16.873	2.748	8.361	NA	3.093
	<b>NUR-106</b>	864.963	270.825	31.844	40.811	19.770	2.937	9.121	NA	3.125
	<b>NUR-238</b>	918.648	351.621	37.966	41.822	17.828	3.126	7.635	NA	2.470
	<b>UC1113</b>	821.220	225.250	28.450	37.335	17.136	3.094	7.569	NA	2.503
	<b>Um Qais</b>	918.648	262.629	27.928	37.766	15.754	3.063	6.677	NA	2.273
<b>LSD(0.05)</b>		<b>81.826</b>	<b>45.853</b>	<b>3.379</b>	<b>2.052</b>	<b>0.747</b>	<b>0.112</b>	<b>0.264</b>		<b>0.125</b>

<b>RF-MS20</b>	<b>Boabdil</b>	953.047	336.011	34.944	36.504	16.575	3.099	7.337	1.568	2.403
	<b>Bolenga</b>	946.096	366.671	38.349	32.713	15.156	3.005	6.844	1.505	2.338
	<b>Norsi</b>	945.464	183.624	19.813	52.090	21.162	3.255	8.652	1.631	2.630
	<b>NUR-072</b>	965.211	348.647	35.785	38.612	17.829	2.943	8.258	1.725	2.824
	<b>NUR-106</b>	1070.340	362.887	32.867	45.781	21.657	3.255	9.080	1.757	2.856
	<b>NUR-238</b>	785.045	226.441	30.528	39.031	16.740	3.099	7.272	1.505	2.338
	<b>UC1113</b>	785.045	266.395	35.184	31.014	15.651	2.943	7.206	1.600	2.468
	<b>Um Qais</b>	874.852	307.953	35.486	31.990	14.463	3.036	6.384	1.442	2.144
<b>LSD(0.05)</b>		<b>151.203</b>	<b>41.880</b>	<b>4.616</b>	<b>2.251</b>	<b>0.820</b>	<b>0.099</b>	<b>0.334</b>	<b>0.082</b>	<b>0.130</b>

<b>Environment</b>	<b>Genotype</b>	<b>BLUP_TW</b>	<b>BLUP_GY</b>	<b>BLUP_HI</b>	<b>BLUP_TKW</b>	<b>BLUP_KA</b>	<b>BLUP_KW</b>	<b>BLUP_KL</b>	<b>BLUP_KC</b>	<b>BLUP_KLKW</b>
<b>RF-MS21</b>	<b>Boabdil</b>	647.390	187.254	28.921	34.059	16.008	3.001	7.201	NA	2.434

	<b>Bolenga</b>	835.853	263.685	31.159	30.364	13.774	2.890	6.274	NA	2.203
	<b>Norsi</b>	528.772	65.155	12.301	36.422	18.736	3.028	8.327	NA	2.796
	<b>NUR-072</b>	672.619	216.405	32.040	42.273	18.440	3.084	7.962	NA	2.598
	<b>NUR-106</b>	555.804	144.729	26.007	42.433	19.525	3.028	8.591	NA	2.829
	<b>NUR-238</b>	585.222	180.059	30.873	37.473	16.501	3.028	7.168	NA	2.368
	<b>UC1113</b>	620.786	159.129	25.592	32.053	15.746	3.001	7.002	NA	2.368
	<b>Um Qais</b>	696.287	236.147	34.017	31.849	14.037	2.973	6.274	NA	2.137
<b>LSD(0.05)</b>		<b>87.986</b>	<b>42.504</b>	<b>5.090</b>	<b>2.949</b>	<b>0.779</b>	<b>0.077</b>	<b>0.222</b>		<b>0.084</b>

<b>RF-NS22</b>	<b>Boabdil</b>	1972.276	502.118	25.370	45.888	19.330	3.267	7.935	1.557	2.447
	<b>Bolenga</b>	1438.425	394.501	27.447	47.664	19.839	3.340	7.968	1.534	2.401
	<b>Norsi</b>	1398.881	238.037	17.219	51.831	22.938	3.328	9.359	1.726	2.839
	<b>NUR-072</b>	1998.132	500.591	25.041	48.778	21.119	3.142	9.114	1.769	2.929
	<b>NUR-106</b>	2156.310	504.865	23.503	54.993	24.761	3.340	9.984	1.792	3.005
	<b>NUR-238</b>	2084.826	586.837	27.933	46.951	19.323	3.300	7.868	1.527	2.391
	<b>UC1113</b>	1201.158	320.467	26.449	37.006	17.212	3.124	7.486	1.560	2.427
	<b>Um Qais</b>	1491.658	428.084	28.724	34.231	15.182	3.039	6.736	1.488	2.251
<b>LSD(0.05)</b>		<b>349.167</b>	<b>104.424</b>	<b>3.912</b>	<b>4.457</b>	<b>1.133</b>	<b>0.111</b>	<b>0.202</b>	<b>0.033</b>	<b>0.053</b>

<b>RF-RB20</b>	<b>Boabdil</b>	1024.728	467.852	44.598	34.435	16.560	2.965	7.488	1.597	2.491
	<b>Bolenga</b>	896.907	387.002	43.454	35.700	17.220	2.977	7.706	1.615	2.712
	<b>Norsi</b>	757.196	293.174	41.511	38.144	18.228	3.103	7.981	1.623	2.408
	<b>NUR-072</b>	871.951	261.495	30.160	37.258	18.041	2.919	8.467	1.806	2.995
	<b>NUR-106</b>	971.221	371.365	37.776	38.830	19.752	3.070	8.907	1.817	2.986
	<b>NUR-238</b>	899.879	338.422	37.751	35.254	16.743	2.984	7.540	1.594	2.539
	<b>UC1113</b>	950.412	413.621	43.180	34.746	16.692	2.972	7.528	1.603	2.542
	<b>Um Qais</b>	992.030	429.591	42.531	33.907	15.824	2.956	7.127	1.535	2.467
<b>LSD(0.05)</b>		<b>155.192</b>	<b>71.094</b>	<b>4.672</b>	<b>5.598</b>	<b>2.702</b>	<b>0.122</b>	<b>1.020</b>	<b>0.116</b>	<b>0.242</b>

<b>Environment</b>	<b>Genotype</b>	<b>BLUP_TW</b>	<b>BLUP_GY</b>	<b>BLUP_HI</b>	<b>BLUP_TKW</b>	<b>BLUP_KA</b>	<b>BLUP_KW</b>	<b>BLUP_KL</b>	<b>BLUP_KC</b>	<b>BLUP_KLKW</b>
<b>RF-RB21</b>	<b>Boabdil</b>	327.841	40.883	17.160	19.647	12.829	2.601	6.784	1.701	2.674
	<b>Bolenga</b>	346.842	104.686	18.140	18.570	11.263	2.415	6.281	1.642	2.644

	<b>Norsi</b>	321.051	40.251	9.001	21.165	14.171	2.570	7.666	1.820	2.972
	<b>NUR-072</b>	304.492	35.296	18.761	22.996	14.363	2.632	7.603	1.820	2.942
	<b>NUR-106</b>	307.410	52.287	12.325	24.689	15.962	2.694	8.169	1.880	3.061
	<b>NUR-238</b>	309.495	49.354	14.592	21.712	13.212	2.663	6.784	1.612	2.585
	<b>UC1113</b>	281.202	15.891	19.074	18.429	12.254	2.570	6.564	1.642	2.555
	<b>Um Qais</b>	310.567	49.632	29.054	27.518	13.980	2.787	6.816	1.582	2.466
<b>LSD(0.05)</b>		<b>47.795</b>	<b>16.109</b>	<b>3.148</b>	<b>2.475</b>	<b>0.905</b>	<b>0.091</b>	<b>0.478</b>	<b>0.118</b>	<b>0.233</b>

<b>RF-SK20</b>	<b>Boabdil</b>	893.714	207.313	11.929	36.913	17.446	3.090	7.535	1.573	2.452
	<b>Bolenga</b>	913.855	201.980	28.473	31.901	15.325	2.966	7.028	1.551	2.428
	<b>Norsi</b>	729.490	117.522	12.146	39.359	18.839	3.073	8.161	1.641	2.623
	<b>NUR-072</b>	872.106	246.878	11.744	38.211	18.332	3.055	8.102	1.641	2.648
	<b>NUR-106</b>	864.259	157.973	17.324	37.682	18.934	3.073	8.191	1.641	2.672
	<b>NUR-238</b>	750.077	194.422	16.027	33.086	16.465	3.020	7.326	1.573	2.452
	<b>UC1113</b>	674.057	213.095	5.869	30.368	15.578	3.002	7.147	1.573	2.452
	<b>Um Qais</b>	1083.689	231.761	16.221	35.757	15.515	3.055	6.909	1.506	2.306
<b>LSD(0.05)</b>		<b>69.399</b>	<b>33.426</b>	<b>3.336</b>	<b>3.862</b>	<b>1.069</b>	<b>0.120</b>	<b>0.554</b>	<b>0.104</b>	<b>0.236</b>

<b>RF-SK22</b>	<b>Boabdil</b>	944.303	155.561	23.425	30.601	15.765	2.888	7.267	1.568	2.503
	<b>Bolenga</b>	957.656	175.478	22.214	23.706	12.254	2.697	6.137	1.504	2.374
	<b>Norsi</b>	964.778	92.139	16.073	37.075	18.713	2.942	8.530	1.760	2.923
	<b>NUR-072</b>	969.229	189.630	28.224	33.977	16.825	2.806	7.965	1.696	2.858
	<b>NUR-106</b>	941.633	112.584	18.469	37.363	18.613	2.915	8.463	1.760	2.890
	<b>NUR-238</b>	963.888	145.602	25.886	30.271	14.771	2.861	6.901	1.536	2.438
	<b>UC1113</b>	944.838	173.905	31.333	27.526	14.407	2.833	6.735	1.504	2.374
	<b>Um Qais</b>	955.342	274.545	21.609	23.706	12.353	2.724	6.303	1.504	2.374
<b>LSD(0.05)</b>		<b>61.437</b>	<b>40.975</b>	<b>4.560</b>	<b>2.775</b>	<b>0.604</b>	<b>0.125</b>	<b>0.155</b>	<b>0.070</b>	<b>0.138</b>

<b>Environment</b>	<b>Genotype</b>	<b>BLUP_TW</b>	<b>BLUP_GY</b>	<b>BLUP_HI</b>	<b>BLUP_TKW</b>	<b>BLUP_KA</b>	<b>BLUP_KW</b>	<b>BLUP_KL</b>	<b>BLUP_KC</b>	<b>BLUP_KLKW</b>
<b>Overall(combined)</b>	<b>Boabdil</b>	1082.122	339.834	29.736	36.557	16.799	3.043	7.445	1.586	2.479
	<b>Bolenga</b>	1084.138	377.857	33.153	33.171	15.281	2.953	6.935	1.555	2.410

	<b>Norsi</b>	1062.932	249.996	22.452	45.989	20.424	3.138	8.715	1.711	2.777
	<b>NUR-072</b>	1105.204	355.802	29.371	41.960	18.874	3.005	8.486	1.749	2.862
	<b>NUR-106</b>	1093.983	346.670	29.292	44.029	20.893	3.113	9.070	1.791	2.947
	<b>NUR-238</b>	1071.479	327.448	29.527	38.147	16.986	3.060	7.429	1.566	2.453
	<b>UC1113</b>	1043.635	325.616	30.044	33.348	16.042	2.996	7.240	1.580	2.451
	<b>Um Qais</b>	1087.934	366.971	32.117	33.325	14.720	3.000	6.609	1.495	2.260
<b>LSD(0.05)</b>		<b>72.886</b>	<b>47.343</b>	<b>3.007</b>	<b>2.943</b>	<b>0.824</b>	<b>0.072</b>	<b>0.211</b>	<b>0.036</b>	<b>0.074</b>