

**Table 2. Statistical estimations of the quantitative agromorphological and grain quality traits for the subsp. *durum*, *turgidum* and *dicoccum* at each environment (N north, C centre and S south).**

Traits	Environment	Mean			S.D.			Minimum			Maximum		
		<i>durum</i>	<i>turgidum</i>	<i>dicoccum</i>									
<b>Quantitative agromorphological traits</b>													
Days to heading	C	172.48	177.73	181.02	3.24	2.49	2.90	166.67	173.00	174.33	182.00	184.00	183.33
Days to heading	N	158.61	162.51	164.98	3.04	2.60	3.41	151.82	158.83	160.66	169.03	167.36	169.61
Days to heading	S	130.54	133.27	137.31	4.65	6.50	3.41	106.14	112.09	131.65	146.36	141.91	143.89
Days to heading	S08	133.74	139.82	145.69	3.77	5.12	3.38	127.01	132.02	139.00	143.02	153.00	153.01
Plant height (cm)	C	122.51	133.27	117.17	9.27	8.38	5.62	94.58	115.92	107.25	146.58	149.92	127.25
Plant height (cm)	N	117.22	131.06	120.00	11.82	10.17	8.08	85.40	113.18	106.72	141.98	155.86	131.74
Plant height (cm)	S	103.83	112.60	105.78	9.67	7.44	8.91	76.83	95.91	88.27	128.96	124.30	121.19
Spikelets per spike (number)	C	22.42	24.98	26.13	1.71	6.46	3.65	18.65	18.90	20.90	29.06	61.40	31.90
Spikelets per spike (number)	N	20.69	23.30	24.75	1.29	1.94	3.29	17.47	19.81	18.96	24.91	26.81	29.06
Spikelets per spike (number)	S	21.55	23.86	24.64	2.24	2.93	2.35	16.32	17.91	21.33	29.13	32.47	28.21
Days to maturity	C	213.23	215.20	216.33	3.76	1.53	3.34	200.92	213.92	214.33	219.67	218.33	223.33
Days to maturity	N	193.17	196.66	195.52	2.18	1.96	2.95	188.97	192.55	190.33	201.89	200.42	200.35
$\Delta^{13}\text{C}$	C	17.07	16.74	16.68	0.51	0.66	0.41	15.89	15.54	16.18	18.18	19.48	17.50
$\Delta^{13}\text{C}$	N	17.25	17.03	17.14	0.20	0.18	0.16	16.60	16.65	16.92	17.70	17.35	17.48
Spike length (cm)	C	95.37	107.88	125.56	11.43	10.82	20.57	71.96	77.79	96.79	146.63	129.63	162.79
<b>Grain quality traits</b>													
Protein content (%)	C	16.56	17.45	19.08	2.65	2.74	1.53	10.24	11.61	17.00	20.38	21.67	22.33
Protein content (%)	N	16.81	16.90	17.75	0.90	1.28	1.09	14.84	14.38	16.18	19.27	19.01	19.38
Gluten strength (mm)	C	6.40	6.31	5.50	2.08	1.48	1.47	2.56	3.35	3.77	11.35	9.27	8.77
Gluten strength (mm)	N	6.85	6.73	5.77	1.67	1.27	0.87	3.83	3.94	4.32	11.00	9.23	7.81
Vitreousness (%)	C	97.49	85.29	86.75	3.91	14.34	10.94	74.71	35.13	65.13	101.71	99.13	99.13
Vitreousness (%)	N	89.22	92.52	90.17	11.35	3.16	5.47	24.66	84.92	72.60	98.75	99.47	93.66
Yellow Index	C	14.24	13.21	11.79	0.94	0.87	0.51	11.89	11.46	10.72	17.28	16.45	12.59
Yellow Index	N	15.08	14.39	12.81	0.91	0.88	0.46	12.88	13.02	11.83	17.48	17.44	13.57
Thousand kernel weight (g)	C	53.63	50.76	62.02	8.25	5.85	8.81	34.63	38.63	38.00	74.29	63.63	72.00
Thousand kernel weight (g)	N	53.38	48.07	50.46	5.32	5.23	9.76	41.02	39.55	31.99	67.51	62.41	61.74
Test weight (kg/hl)	C	77.62	77.91	76.73	1.86	1.49	2.03	71.73	74.73	73.29	81.66	81.62	80.62
Test weight (kg/hl)	N	80.91	79.61	79.02	1.97	1.90	1.82	73.79	74.09	76.61	84.93	83.07	80.66

All experiments were conducted in 2007 except in the south in 2008 as indicated (S08).

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