

# RSA WHEAT CROP QUALITY SUMMARY

## RSA Crop Quality 2009/2010 and 2011/2012 Seasons

Country of origin	RSA Crop Average 2009/2010							RSA Crop Average 2011/2012						
Class and Grade bread wheat	B1	B2	B3	B4	UT	COW	Average	B1	B2	B3	B4	UT	COW	Average
<b>No. of samples</b>	<b>159</b>	<b>138</b>	<b>79</b>	<b>30</b>	<b>58</b>	<b>16</b>	<b>480</b>	<b>176</b>	<b>120</b>	<b>61</b>	<b>39</b>	<b>25</b>	<b>12</b>	<b>433</b>
<b>WHEAT GRADING</b>														
Protein (12% mb), %	12.84	11.50	10.62	9.64	11.51	11.29	11.68	12.78	11.52	10.48	10.33	11.72	10.78	11.77
Moisture, %	11.5	11.3	11.3	10.8	11.0	11.0	11.3	11.1	11.0	10.9	10.9	11.0	11.4	11.0
Falling number, sec	382	375	359	339	365	240	367	397	393	384	372	376	274	387
1000 Kernel mass (13% mb), g	38.7	39.5	40.4	40.2	38.1	36.6	39.2	37.7	38.8	38.9	38.2	34.1	36.7	38.0
Hlm (dirty), kg/hl	80.8	80.0	79.5	79.7	79.0	75.2	79.9	81.1	81.0	80.7	79.9	78.8	79.9	80.7
Screenings (<1,8mm), %	1.36	1.30	1.47	1.44	3.03	3.36	1.63	1.32	1.36	1.36	2.21	3.20	2.62	1.56
Gravel, stones, turf and glass, %	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Foreign matter, %	0.05	0.05	0.09	0.09	0.11	0.12	0.07	0.08	0.09	0.10	0.10	0.14	0.13	0.09
Other grain & unthreshed ears, %	0.25	0.26	0.30	0.35	0.65	0.64	0.33	0.24	0.29	0.27	0.30	0.64	0.20	0.28
Heat damaged kernels, %	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Immature kernels, %	0.07	0.05	0.04	0.03	0.06	0.01	0.05	0.05	0.04	0.02	0.03	0.03	0.03	0.04
Insect damaged kernels, %	0.19	0.26	0.29	0.27	0.52	1.10	0.30	0.37	0.43	0.43	0.36	0.84	0.24	0.42
Heavily frost damaged kernels, %	0.00	0.00	0.00	0.00	0.00	0.13	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sprouted kernels, %	0.09	0.11	0.16	0.14	0.36	2.73	0.23	0.03	0.02	0.04	0.02	0.10	0.42	0.04
Total damaged kernels, %	0.36	0.43	0.50	0.44	0.96	3.96	0.60	0.46	0.48	0.49	0.41	0.96	0.70	0.50
Combined deviations, %	2.02	2.04	2.34	2.32	4.76	8.07	2.63	2.10	2.23	2.23	3.06	4.94	3.65	2.45
Field fungi, %	0.19	0.19	0.21	0.15	0.16	0.54	0.20	0.10	0.11	0.14	0.19	0.06	0.06	0.12
Storage fungi, %	0.01	0.01	0.01	0.00	0.01	0.03	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01
Ergot, %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Noxious seeds ( <i>Crotalaria spp., etc.</i> )	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Noxious seeds ( <i>Agronome mexicana, etc.</i> )	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Live insects	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Undesirable odour	No	No	No	No	No	No	No	No	No	No	No	No	No	No
	B1	B2	B3	B4	UT	COW	Average	B1	B2	B3	B4	UT	COW	Average
<b>No. of samples</b>	<b>26</b>	<b>28</b>	<b>20</b>	<b>10</b>	<b>11</b>	<b>5</b>	<b>100</b>	<b>28</b>	<b>23</b>	<b>15</b>	<b>15</b>	<b>8</b>	<b>2</b>	<b>90</b>
<b>BÜHLER EXTRACTION, %</b>	<b>74.8</b>	<b>75.1</b>	<b>74.8</b>	<b>73.8</b>	<b>74.9</b>	<b>74.1</b>	<b>74.7</b>	<b>74.4</b>	<b>74.2</b>	<b>74.8</b>	<b>73.8</b>	<b>72.8</b>	<b>73.3</b>	<b>74.1</b>
<b>FLOUR</b>														
Colour, KJ	-2.2	-2.3	-2.3	-2.3	-2.2	-1.7	-2.2	-2.7	-2.7	-3.0	-2.8	-2.7	-3.0	-2.8
Protein (12% mb), %	11.7	10.6	9.6	8.6	10.6	10.4	10.5	11.7	10.5	9.6	9.6	10.6	9.7	10.6
Wet Gluten (14% mb), %	32.1	29.0	25.9	22.2	29.1	28.3	28.6	32.0	28.4	26.0	26.0	28.5	25.6	28.7
Dry Gluten (14% mb), %	11.3	10.1	9.0	7.9	10.2	9.6	10.0	11.1	9.8	8.8	8.8	9.7	9.0	9.9
<b>100g BAKING TEST</b>														
Baking water absorption, %	61.5	60.3	59.3	58.2	60.4	59.5	60.2	61.7	60.3	59.3	59.2	60.6	59.1	60.4
Loaf volume, cm <sup>3</sup>	902	853	803	727	847	868	843	916	847	811	802	821	778	852
Evaluation	1	0	0	0	0	0	0	0	0	0	0	1	1	0
<b>FARINOGRAM</b>														
Water absorption, %	62.3	61.3	60.5	59.3	60.6	58.3	61.0	62.3	61.3	60.9	60.3	60.7	60.1	61.3
Development time, min	4.8	3.4	2.9	2.0	3.7	2.7	3.5	5.6	3.8	3.2	2.8	4.4	3.1	4.1
Stability, mm	8.4	6.8	5.7	3.8	6.9	4.9	6.6	10.7	8.1	6.7	6.8	8.9	6.4	8.5
Mixing tolerance index, BU	39	44	52	71	48	71	49	34	39	47	43	37	50	39



## RSA Crop Quality of 2009/2010 and 2011/2012 Seasons

Country of origin	RSA Crop Average 2009/2010							RSA Crop Average 2011/2012						
Class and Grade bread wheat	B1	B2	B3	B4	UT	COW	Average	B1	B2	B3	B4	UT	COW	Average
<b>No. of samples</b>	26	28	20	10	11	5	100	28	23	14	15	8	2	90
<b>ALVEOGRAM</b>														
Strength (S) , cm <sup>2</sup>	42.4	36.5	32.7	25.0	35.4	26.8	35.5	41.7	34.6	29.4	29.8	33.7	30.4	35.0
Stability (P), mm	93	90	90	87	83	61	89	85	83	80	79	82	78	82
Distensibility (L), mm	97	86	75	58	90	101	85	112	94	86	89	96	86	98
P/L	1.03	1.13	1.31	1.80	0.97	0.61	1.17	0.79	0.92	0.97	0.97	0.90	0.90	0.89
<b>EXTENSOGRAM</b>														
Strength, cm <sup>2</sup>	96	85	74	61	87	71	83	110	87	72	74	86	82	90
Max. height, BU	355	344	327	304	345	295	337	379	337	294	311	349	315	340
Extensibility, mm	187	174	158	139	173	171	170	211	184	174	170	175	183	188
<b>MIXOGRAM</b>														
Peak time, min	2.6	2.6	2.7	2.8	2.5	2.8	2.6	2.9	3.0	2.8	3.1	3.3	3.2	3.0
Absorption, %	61.8	60.4	59.4	58.5	60.6	60.3	60.4	61.9	60.4	59.4	59.4	60.6	59.5	60.5
<b>MYCOTOXINS</b>														
	<b>ROSA</b>							<b>UPLC-MS/MS</b>						
Afla G <sub>1</sub> (µg/kg) [max. value]	1 000 [4 000]							0 [0]						
Afla B <sub>1</sub> (µg/kg) [max. value]								0 [0]						
Afla G <sub>2</sub> (µg/kg) [max. value]								0 [0]						
Afla B <sub>2</sub> (µg/kg) [max. value]								0 [0]						
Fum B <sub>1</sub> (µg/kg) [max. value]	-							0 [0]						
Fum B <sub>2</sub> (µg/kg) [max. value]	-							0 [0]						
Deoxynivalenol (µg/kg) [max. value]	50 [48 000]							6 [119]						
Ochratoxin A (µg/kg) [max. value]	0 [1]							0 [0]						
Zearalenone (µg/kg) [max. value]	-							0 [0]						
T-2 Toxin (µg/kg) [max. value]	-							0 [0]						
<b>No. of samples</b>	<b>30</b>							<b>40</b>						