

# RSA Wheat Crop Quality Summary

RSA Crop Quality 2021/22 and 2023/24 Seasons

Country of origin	RSA Crop Average 2021/22						RSA Crop Average 2023/24						
Class and Grade bread wheat	Super	Gr1	Gr2	Gr3	COW	Average	Super	Gr1	Gr2	Gr3	COW	Average	
No. of samples	73	64	46	47	105	335	64	83	70	33	85	335	
<b>WHEAT</b>													
<b>GRADING</b>													
Protein (12% mb), %	13.3	12.0	11.0	10.1	12.0	11.9	13.3	12.0	11.0	10.4	11.6	11.8	
Moisture, %	11.3	11.2	11.1	11.2	11.1	11.2	10.8	11.1	11.0	11.1	11.2	11.1	
Falling number, sec	344	349	366	367	311	341	378	375	380	373	371	375	
1000 Kernel mass (13% mb), g	40.1	41.8	42.1	41.8	38.1	40.3	38.1	40	40.5	38.7	38.1	39.1	
Hlm (dirty), kg/hl	81.2	81.3	79.9	79.8	78.1	79.9	81.7	80.5	81.6	80.8	79.3	80.7	
Screenings (<1.8 mm sieve), %	0.69	0.82	0.92	0.91	2.04	1.20	1.01	1.24	1.04	1.27	2.37	1.45	
Gravel, stones, turf and glass, %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Foreign matter, %	0.01	0.02	0.04	0.02	0.15	0.06	0.06	0.13	0.10	0.06	0.22	0.13	
Other grain & unthreshed ears, %	0.29	0.23	0.42	0.39	1.12	0.57	0.22	0.32	0.28	0.32	0.93	0.45	
Heat damaged kernels, %	0.01	0.01	0.00	0.00	0.04	0.01	0.01	0.01	0.01	0.03	0.04	0.02	
Immature kernels, %	0.09	0.04	0.02	0.02	0.03	0.04	0.10	0.10	0.06	0.04	0.14	0.09	
Insect damaged kernels, %	0.18	0.17	0.28	0.32	0.58	0.34	0.32	0.35	0.37	0.32	0.56	0.40	
Sprouted kernels, %	0.09	0.09	0.06	0.04	0.44	0.19	0.02	0.02	0.02	0.01	0.03	0.02	
Total damaged kernels, %	0.37	0.31	0.35	0.39	1.08	0.58	0.45	0.48	0.45	0.39	0.76	0.53	
Combined deviations, %	1.35	1.39	1.73	1.71	4.39	2.41	1.75	2.17	1.88	2.04	4.28	2.55	
Heavily frost damaged kernels, %	0.00	0.02	0.00	0.00	0.03	0.01	0.05	0.00	0.04	0.00	0.02	0.02	
Field fungi, %	0.44	0.38	0.23	0.17	0.77	0.47	0.28	0.32	0.22	0.27	0.60	0.36	
Storage fungi, %	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Ergot, %	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Poisonous seeds ( <i>Crotalaria spp.</i> , etc.)	0	0	0	0	1	0	0	0	0	0	0	0	
Poisonous seeds ( <i>Argemone mexicana</i> , etc.)	0	0	0	0	0	0	0	0	0	0	0	0	
Live insects	No	No	No	No	No	No	No	No	No	No	No	No	
Undesirable odour	No	No	No	No	No	No	No	No	No	No	No	No	
		Super	Gr1	Gr2	Gr3	COW	Average	Super	Gr1	Gr2	Gr3	COW	Average
<b>No. of samples</b>		19	16	14	8	8	65	16	20	15	10	4	65
Bühler Extraction, %		74.0	74.1	73.7	73.8	73.3	73.9	73.2	73.2	72.6	72.1	71.7	72.8
<b>FLOUR</b>													
Colour, KJ (wet)	-4.9	-5.0	-5.0	-4.9	-4.8	-4.9	-4.8	-4.7	-4.9	-4.8	-4.5	-4.8	
Colour, Konica Minolta CM5 (dry)													
L*	93.6	93.73	93.75	93.96	93.55	93.70	93.62	93.67	93.89	93.82	93.72	93.73	
a*	0.51	0.48	0.46	0.47	0.49	0.49	0.54	0.54	0.50	0.47	0.57	0.52	
b*	9.83	9.89	9.84	9.77	9.91	9.85	10.23	10.01	10.12	10.11	9.66	10.08	
Ash (db), %	0.59	0.60	0.61	0.62	0.60	0.60	0.59	0.61	0.58	0.60	0.61	0.59	
Protein (12% mb), %	12.3	10.9	10.0	9.1	11.1	10.9	12.1	11.1	9.9	9.7	10.4	10.8	
Wet Gluten (14% mb), %	32.5	28.9	26.6	23.4	29.7	28.9	32.4	30.2	26.6	25.6	28.6	29.1	
Dry Gluten (14% mb), %	11.0	9.5	8.8	7.8	9.9	9.6	11.0	9.9	8.5	8.3	9.4	9.6	
Gluten Index	96	96	96	96	96	96	96	96	95	96	96	96	
<b>100 g BAKING TEST</b>													
Baking water absorption, %	62.4	60.8	60.1	59.0	61.1	61.0	62.3	61.0	59.7	59.7	60.3	60.8	
Loaf volume, cm <sup>3</sup>	1150	1064	1018	938	1078	1065	1140	1068	968	950	970	1038	
Evaluation (see page 78)	0	0	0	0	0	0	0	0	0	0	0	0	
<b>FARINOGRAM</b>													
Water absorption (14% mb), %	61.5	59.9	59.3	58.0	59.6	60.0	61.3	60.3	59.2	58.9	59.5	60.0	
Development time, min	7.9	5.3	4.5	4.0	4.9	5.7	6.7	5.2	5.2	4.5	4.1	5.4	
Stability, mm	12.2	9.1	8.1	7.3	10.1	9.7	14.3	10.5	10.2	9.5	9.5	11.2	
Mixing tolerance index, BU	33	44	48	52	41	42	30	36	36	38	34	35	

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<b>No. of samples</b>	19	16	14	8	8	65	16	20	15	10	4	65
<b>ALVEOGRAM</b>												
Strength (S), cm <sup>2</sup>	51.3	41.1	37.2	33.2	43.2	42.5	44.8	40.7	36.0	33.6	37.3	39.3
Stability (P), mm	89	80	88	85	85	86	77	79	84	80	79	80
Distensibility (L), mm	136	127	108	93	126	121	145	129	103	102	116	122
P/L	0.69	0.66	0.98	0.92	0.69	0.77	0.55	0.62	0.88	0.87	0.68	0.71
<b>EXTENSOGRAM</b>												
Strength, cm <sup>2</sup>	123	108	87	72	106	103	131	115	97	87	104	110
Max. height, BU	426	401	360	346	405	393	422	416	401	351	396	403
Extensibility, mm	215	198	177	152	188	191	227	203	176	177	189	198
<b>MIXOGRAM</b>												
Peak time, min	3.0	2.9	2.9	2.9	3.0	2.9	2.9	3.0	3.2	3.0	3.2	3.0
Water absorption (14% mb), %	62.6	60.8	59.8	59.0	61.2	60.9	62.3	61.0	59.7	59.7	60.3	60.8
<b>MYCOTOXINS</b>												
Aflatoxin B <sub>1</sub> (µg/kg)	ND						ND					
Aflatoxin B <sub>2</sub> (µg/kg)	ND						ND					
Aflatoxin G <sub>1</sub> (µg/kg)	ND						ND					
Aflatoxin G <sub>2</sub> (µg/kg)	ND						ND					
Fumonisin B <sub>1</sub> (µg/kg)	ND						ND					
Fumonisin B <sub>2</sub> (µg/kg)	ND						ND					
Fumonisin B <sub>3</sub> (µg/kg)	ND						ND					
Deoxynivalenol (µg/kg) [max. value]	169 [1 085]						66 [478]					
15-ADON (µg/kg) [max. value]	16 [183]						ND					
Ochratoxin A (µg/kg)	ND						ND					
Zearalenone (µg/kg) [max. value]	4 [144]						ND					
HT-2 (µg/kg)	ND						ND					
T-2 Toxin (µg/kg)	ND						ND					
<b>No. of samples</b>	40						40					