

RSA WHEAT CROP QUALITY SUMMARY

RSA Crop Quality 2016/2017 and 2018/2019 Seasons

Country of origin	RSA Crop Average 2016/2017							RSA Crop Average 2018/2019						
Class and Grade bread wheat	B1	B2	B3	B4	UT	COW	Average	B1	B2	B3	B4	UT	COW	Average
No. of samples	130	91	33	28	48	7	337	153	88	29	14	48	5	337
WHEAT GRADING														
Protein (12% mb), %	13.0	11.5	11.0	11.0	11.4	13.6	12.0	12.8	11.6	10.5	10.7	12.0	11.5	12.1
Moisture, %	9.9	9.8	9.8	9.9	9.7	10.2	9.9	9.3	9.3	9.2	9.6	9.0	9.7	9.3
Falling number, sec	358	361	343	359	349	358	356	402	401	378	354	400	359	397
1000 Kernel mass (13% mb), g	37.7	39.6	40.5	37.8	38.6	35.6	38.6	38.9	39.7	39.9	37.0	39.0	42.9	39.2
Hlm (dirty), kg/hl	81.7	82.0	81.8	81.5	80.7	77.7	81.5	81.7	81.7	82.0	79.9	79.5	82.3	81.3
Screenings (<1.8 mm sieve), %	1.35	1.64	1.53	2.70	3.03	4.37	1.86	1.30	1.23	1.18	2.44	2.58	0.69	1.49
Gravel, stones, turf and glass, %	0.01	0.01	0.01	0.00	0.01	0.39	0.02	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Foreign matter, %	0.16	0.16	0.15	0.15	0.31	0.82	0.19	0.14	0.13	0.11	0.14	0.27	0.12	0.15
Other grain & unthreshed ears, %	0.34	0.36	0.29	0.29	0.74	0.44	0.40	0.31	0.36	0.31	0.42	1.03	0.09	0.43
Heat damaged kernels, %	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00
Immature kernels, %	0.04	0.03	0.04	0.01	0.04	0.03	0.03	0.09	0.07	0.06	0.09	0.04	0.18	0.08
Insect damaged kernels, %	0.36	0.48	0.41	0.49	0.94	0.32	0.49	0.49	0.47	0.53	0.49	0.81	1.50	0.55
Heavily frost damaged kernels, %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.00	0.00	0.50	8.88	0.22
Sprouted kernels, %	0.16	0.14	0.11	0.06	0.16	1.09	0.16	0.02	0.02	0.01	0.00	0.10	0.16	0.03
Total damaged kernels, %	0.56	0.64	0.56	0.55	1.14	1.45	0.68	0.60	0.56	0.60	0.58	0.95	1.94	0.66
Combined deviations, %	2.40	2.82	2.55	3.70	5.21	7.21	3.14	2.35	2.29	2.20	3.58	4.83	2.85	2.73
Field fungi, %	0.32	0.35	0.32	0.43	0.41	0.57	0.36	0.12	0.14	0.10	0.12	0.12	0.08	0.12
Storage fungi, %	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
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
Poisonous seeds (<i>Crotalaria spp.</i> , etc.)	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Poisonous seeds (<i>Argemone mexicana</i> , etc.)	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Live insects	No	No	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	No	No
	B1	B2	B3	B4	UT	COW	Average	B1	B2	B3	B4	UT	COW	Average
No. of samples	23	14	11	10	11	1	70	28	21	11	7	3	-	70
Bühler Extraction, %	72.8	72.7	72.2	72.8	71.6	73.1	72.5	71.5	71.7	71.5	69.2	70.7	-	71.3
FLOUR														
Colour, KJ (wet)	-3.7	-3.8	-3.6	-4.0	-3.8	-3.4	-3.8	-4.5	-4.6	-4.7	-4.4	-4.5	-	-4.5
Colour, Konica Minolta CM5 (dry)														
L*	93.65	93.68	93.68	93.90	93.77	93.38	93.71	93.74	93.80	93.89	93.61	93.99	-	93.78
a*	0.46	0.49	0.44	0.45	0.43	0.44	0.46	0.45	0.45	0.44	0.48	0.41	-	0.45
b*	9.91	10.21	10.17	10.48	10.05	10.15	10.12	10.04	10.05	10.23	10.65	9.82	-	10.12
Ash (db), %	0.58	0.60	0.58	0.60	0.60	0.62	0.59	0.60	0.60	0.61	0.61	0.57	-	0.60
Protein (12% mb), %	12.1	11.1	10.7	9.9	11.2	12.6	11.2	11.8	10.6	9.6	10.4	11.3	-	10.9
Wet Gluten (14% mb), %	33.0	30.7	29.5	25.9	31.0	34.3	30.7	32.7	28.9	25.6	30.1	31.3	-	30.1
Dry Gluten (14% mb), %	11.5	10.5	10.0	8.8	10.6	12.0	10.5	11.0	9.7	8.5	10.1	10.6	-	10.1
Gluten Index	95	93	94	96	93	96	94	92	95	96	96	93	-	94
100g BAKING TEST														
Baking water absorption, %	62.4	61.3	60.8	59.7	61.3	63.0	61.3	61.9	60.5	59.4	60.5	61.3	-	60.9
Loaf volume, cm ³	1104	1029	987	957	1036	1167	1040	1088	1014	936	994	1085	-	1033
Evaluation (see page 79)	0	0	0	0	0	0	0	0	0	0	0	0	-	0
FARINOGRAM														
Water absorption (14% mb), %	60.8	60.1	60.2	57.8	60.3	59.7	60.1	61.6	60.4	58.9	58.6	61.1	-	60.5
Development time, min	6.2	5.3	5.0	3.7	4.7	6.5	5.2	5.4	4.9	4.5	4.5	4.5	-	5.0
Stability, mm	9.0	8.0	7.8	7.3	8.3	9.3	8.3	7.4	6.8	6.4	7.1	6.8	-	7.0
Mixing tolerance index, BU	35	38	39	40	36	34	37	40	41	43	38	40	-	41
	112							113						

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No. of samples	23	14	11	10	11	1	70	28	21	11	7	3	-	70
ALVEOGRAM														
Strength (S), cm ²	42.4	34.9	34.1	31.3	36.2	37.8	37.0	38.5	33.2	29.0	31.2	36.5	-	34.6
Stability (P), mm	74	72	77	69	76	71	73	84	82	76	81	80	-	82
Distensibility (L), mm	155	133	116	126	127	120	135	114	100	95	87	118	-	104
P/L	0.49	0.57	0.68	0.56	0.61	0.59	0.57	0.75	0.85	0.83	0.96	0.68	-	0.81
114							115							
EXTENSOGRAM														
Strength, cm ²	113	93	85	89	97	126	99	101	90	76	85	96	-	92
Max. height, BU	388	359	326	368	348	420	364	364	351	323	344	348	-	350
Extensibility, mm	210	186	184	168	195	217	193	204	187	172	177	201	-	191
116							117							
MIXOGRAM														
Peak time, min	2.6	2.5	2.6	2.8	2.5	2.9	2.6	2.5	2.6	2.7	3.0	2.3	-	2.6
Water absorption (14% mb), %	62.4	61.1	60.9	59.9	61.4	63.0	61.4	61.9	60.5	59.4	60.5	61.3	-	60.9
118							119							
MYCOTOXINS														
Aflatoxin B ₁ (µg/kg)	ND							ND						
Aflatoxin B ₂ (µg/kg)	ND							ND						
Aflatoxin G ₁ (µg/kg)	ND							ND						
Aflatoxin G ₂ (µg/kg)	ND							ND						
Fumonisin B ₁ (µg/kg)	ND							ND						
Fumonisin B ₂ (µg/kg)	ND							ND						
Fumonisin B ₃ (µg/kg)	ND							ND						
Deoxynivalenol (µg/kg) [max. value]	<100 [501]							<100 [361]						
Ochratoxin A (µg/kg)	ND							ND						
Zearalenone (µg/kg)	ND							ND						
T-2 Toxin (µg/kg)	ND							ND						
No. of samples	40							40						