

TABLE 11: IMPORTED SORGHUM QUALITY

Quality of sorghum imported from March 2019 to February 2020 compared to RSA crop quality of the 2018/19 season

Country of origin		Argentina		RSA Crop Average	
Class sorghum		GM	Class Other	GM	Class Other
Grade sorghum		GM3	-	GM3	-
Grading					
Foreign matter, %		2.56	7.20	0.62	-
Unthreshed sorghum, %		1.00	0.72	1.08	-
Defective sorghum, %		0.56	0.80	0.38	-
Small kernel sorghum, %		1.28	3.60	1.12	-
Total defective sorghum and small kernel sorghum, %		1.84	4.40	1.50	-
Sorghum of another group, %		0.00	0.00	7.80	-
White sorghum, %		1.52	2.36	0.00	-
Total of sorghum of another group and white sorghum, %		1.52	2.36	7.80	-
Weather-stained sorghum, %		1.48	1.76	0.40	-
Physical parameters					
Test weight, kg/hl		78.5	80.4	77.8	-
1000 Kernel Mass, g (14% moisture base)		23.7	23.1	30.0	-
# Image analysis	Length, mm	4.46	4.50	4.29	-
	Standard Deviation	0.37	0.30	0.32	-
	Width, mm	3.86	3.90	3.82	-
	Standard Deviation	0.31	0.26	0.22	-
	Roundness, %	86	88	87	-
	Standard Deviation	5.0	5.1	4.9	-
	Surface Area, %	72	72	71	-
	Standard Deviation	4.2	3.8	2.4	-
Chemical composition					
Moisture, %		12.0	12.0	11.8	-
Protein, % (db)		10.0	10.1	11.9	-
Starch content, % (db)		75.7	74.6	72.6	-
Hunterlab colour (fraction of dehulled sample above the 1.8 mm slotted sieve milled on Retch mill through 0.5 mm sieve)	L	74.87	75.43	73.56	-
	a	4.11	3.96	4.44	-
	b	11.26	11.13	10.19	-
Mycotoxins (µg/kg)					
Aflatoxin B ₁		ND	ND	ND	-
Aflatoxin B ₂		ND	ND	ND	-
Aflatoxin G ₁		ND	ND	ND	-
Aflatoxin G ₂		ND	ND	ND	-
Total		ND	ND	ND	-
Fumonisin B ₁		ND	ND	ND	-
Fumonisin B ₂		ND	ND	ND	-
Fumonisin B ₃		ND	ND	ND	-
Total		ND	ND	ND	-
Deoxynivalenol		ND	ND	ND	-
15-ADON		ND	ND	ND	-
Ochratoxin A		ND	ND	ND	-
Zearalenone		ND	ND	ND	-
HT2		ND	ND	ND	-
T2		ND	ND	ND	-
Number of samples		1	1	1	1

TABLE 11: IMPORTED SORGHUM QUALITY (continue)

Quality of sorghum imported from March 2019 to February 2020 compared to RSA crop quality of the 2018/19 season

Country of origin		USA		RSA Crop Average	
Class sorghum		GM		GM	
Grade sorghum		GM2	GM3	GM2	GM3
Grading					
Foreign matter, %		1.65	0.99	1.80	0.62
Unthreshed sorghum, %		1.47	0.94	0.72	1.08
Defective sorghum, %		1.25	1.26	0.54	0.38
Small kernel sorghum, %		2.09	2.16	0.50	1.12
Total defective sorghum and small kernel sorghum, %		3.35	3.43	1.04	1.50
Sorghum of another group, %		0.24	0.08	0.22	7.80
White sorghum, %		4.79	6.85	0.80	0.00
Total of sorghum of another group and white sorghum, %		5.03	6.93	1.02	7.80
Weather-stained sorghum, %		2.97	2.71	1.10	0.40
Physical parameters					
Test weight, kg/hl		75.0	76.2	78.7	77.8
1000 Kernel Mass, g (14% moisture base)		24.1	23.9	26.7	30.0
# Image analysis	Length, mm	4.32	4.29	4.36	4.29
	Standard Deviation	0.34	0.34	0.26	0.32
	Width, mm	3.71	3.74	3.80	3.82
	Standard Deviation	0.33	0.30	0.22	0.22
	Roundness, %	86	87	87	87
	Standard Deviation	6.0	5.0	4.7	4.9
	Surface Area, %	68	69	71	71
	Standard Deviation	5.2	3.7	2.6	2.4
Chemical composition					
Moisture, %		12.8	13.8	11.5	11.8
Protein, % (db)		9.7	9.4	9.7	11.9
Starch content, % (db)		74.0	72.9	73.5	72.6
Hunterlab colour (fraction of dehulled sample above the 1.8 mm slotted sieve milled on Retch mill through 0.5 mm sieve)	L	73.58	74.63	73.21	73.56
	a	4.04	3.93	4.19	4.44
	b	10.28	10.23	9.98	10.19
Mycotoxins (µg/kg)					
Aflatoxin B ₁		ND	ND	ND	ND
Aflatoxin B ₂		ND	ND	ND	ND
Aflatoxin G ₁		ND	ND	ND	ND
Aflatoxin G ₂		ND	ND	ND	ND
Total		ND	ND	ND	ND
Fumonisin B ₁		<20 [38]	60 [136]	157	ND
Fumonisin B ₂		ND	ND [35]	26	ND
Fumonisin B ₃		ND	ND [35]	30	ND
Total [max value]		<20 [38]	73 [206]	213	ND
Deoxynivalenol		<100 [178]	<100 [267]	127	ND
15-ADON		ND	ND	ND	ND
Ochratoxin A		ND	ND	ND	ND
Zearalenone		<20 [43]	22 [99]	78	ND
HT2		ND	ND	ND	ND
T2		ND	ND	ND	ND
Number of samples		3	10	1	1