

SOUTH AFRICAN

REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(12)				(13)				(14)			
	North-West Western Region				North-West Central Region (Sannieshof)				North-West Southern Region			
Silo/Intake stands (Type of storage)	Blaauwbank (Bins) Buhmannsdrif (Bins) Kameel (Bins) Mareetsane (Bins) Vryburg (Bins)				Biesiesvlei (Bins) Bossies (Bins) Gerdau (Bins) Oppaslaagte (Bins) Sannieshof (Bins)				Amalia (Bins) Barberspan (Bins) Delareyville (Bins) Excelsior (Bins) Geysdorp (Bins) Hallatshope (Bins) Migdol (Bins) Nooitgedacht (Bins) Taaibospan (Bins) Schweizer-Reneke (Bins)			
<u>Grading:</u>	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
1. Damaged sunflower seed, %	0.08	0.00	0.12	0.04	0.55	0.00	3.00	0.67	0.16	0.00	1.00	0.30
2. Screenings, %	2.22	1.28	3.08	0.70	2.41	0.66	11.62	2.42	2.66	0.84	5.36	1.21
3. Sclerotia, %	0.09	0.00	0.20	0.10	0.04	0.00	0.36	0.10	0.00	0.00	0.00	0.00
4. Foreign Matter, %	0.62	0.22	1.56	0.53	1.05	0.20	3.60	0.91	0.93	0.26	1.50	0.41
5. Deviations in 2,3 and 4 collectively, %: Provided that such deviations are individually within the limits of said items	2.93	1.70	3.56	0.71	3.50	0.86	13.10	2.76	3.59	1.68	6.84	1.46
Poisonous seeds (<i>Crotalaria sp.</i> , <i>Datura sp.</i> , <i>Ricinis communis</i>)	10	0	22	10.76	1	0	10	2.24	0	0	0	0.00
Poisonous seeds (<i>Argemone mexicana L.</i> , <i>Convolvulus sp.</i> , <i>Ipomoea purpurea Roth.</i> , <i>Lolium temulentum</i> , <i>Xanthium sp.</i>)	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
Number of samples	6				20				10			
<u>Nutritional analysis:</u>	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
Moisture, % (5 hr, 105 °C)	5.0	4.5	5.3	0.29	5.1	4.3	5.9	0.44	5.1	4.5	5.8	0.44
Crude Protein, % (as is)	19.04	18.60	19.50	0.35	18.29	17.01	19.20	0.50	18.28	17.24	19.29	0.65
Crude Fat, % (as is)	38.2	37.1	39.2	0.86	37.5	35.0	39.3	1.11	38.5	36.1	40.0	1.00
Crude Fibre, % (as is)	19.7	18.4	20.7	0.93	20.6	19.0	22.6	0.97	20.3	18.2	21.1	0.91
Ash, % (as is)	2.70	2.59	2.90	0.12	2.58	2.36	2.84	0.14	2.52	2.33	2.68	0.13
Number of samples	6				20				10			

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REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(17)				(18)				(19)			
	North-West Central Northern Region (Ottosdal)				North-West Central Region (Ventersdorp)				North-West Central Region (Lichtenburg)			
Silo/Intake stands (Type of storage)	Boschpoort (Bags/Bins/Bulk) Hartbeesfontein (Bins) Kleinharts (Bins) Melliodora (Bins) Ottosdal (Bins) Rostrataville (Bins) Vermaas (Bins) Werda (Bins)				Bodenstein (Bins) Buckingham (Bins) Coligny (Bins) Enselspruit (Bins) Makokskraal (Bins) Potchefstroom (Bins) Ventersdorp (Bins)				Grootpan (Bins) Halfpad (Bins) Hibernia (Bins) Lichtenburg (Bins/Bunkers) Lottie Halte (Bins) Lusthof (Bins)			
<u>Grading:</u>	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
1. Damaged sunflower seed, %	0.31	0.00	1.34	0.38	0.15	0.00	0.70	0.27	6.01	0.00	22.30	8.92
2. Screenings, %	2.12	0.62	3.74	0.70	1.98	0.24	3.28	1.00	3.98	1.28	6.82	1.70
3. Sclerotia, %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.12	0.04
4. Foreign Matter, %	1.01	0.25	3.00	0.59	1.78	0.66	5.32	1.76	2.51	0.28	15.52	4.60
5. Deviations in 2,3 and 4 collectively, %: Provided that such deviations are individually within the limits of said items	3.13	1.48	5.50	1.03	3.77	1.09	7.24	2.10	6.51	1.56	18.76	4.81
Poisonous seeds (<i>Crotalaria sp.</i> , <i>Datura sp.</i> , <i>Ricinis communis</i>)	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
Poisonous seeds (<i>Argemone mexicana L.</i> , <i>Convolvulus sp.</i> , <i>Ipomoea purpurea Roth.</i> , <i>Lolium temulentum</i> , <i>Xanthium sp.</i>)	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
Number of samples	18				6				10			
<u>Nutritional analysis:</u>	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
Moisture, % (5 hr, 105 °C)	5.4	4.0	6.8	0.57	5.5	4.4	6.0	0.59	5.3	4.5	5.9	0.50
Crude Protein, % (as is)	18.37	17.10	19.34	0.62	17.83	17.21	18.22	0.40	18.09	16.78	19.12	0.70
Crude Fat, % (as is)	39.0	35.7	44.5	1.96	37.8	36.6	40.1	1.27	37.9	36.8	39.2	0.87
Crude Fibre, % (as is)	19.4	16.4	20.8	0.98	20.2	19.4	20.8	0.60	20.8	19.6	22.3	0.83
Ash, % (as is)	2.60	2.42	2.93	0.14	2.41	2.31	2.55	0.09	2.46	2.30	2.61	0.11
Number of samples	18				6				10			

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REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(20)				(21)				(22)			
	North-West Eastern Region				Free State North-Western Region (Viljoenskroon)				Free State North-Western Region (Bothaville)			
Silo/Intake stands (Type of storage)	Battery (Bins) Brits (Bins) Boons (Bins) Derby (Bins) Koster (Bins) Swartruggens (Bins) Syferbult (Bins)				Attie (Bins) Groenebloem (Bins) Heuningspruit (Bins) Koppies (Bins) Rooiwal (Bins) Vierfontein (Bins) Viljoenskroon (Bins) Vredefort (Bins) Weiveld (Bins)				Allanridge (Bins) Bothaville (Bins) Mirage (Bins) Misgunst (Bunkers) Odendaalsrus (Bins) Schoonspruit (Bins) Schuttessedraai (Bins)			
<u>Grading:</u>	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
1. Damaged sunflower seed, %	6.15	0.08	28.00	10.04	0.39	0.00	1.00	0.36	0.15	0.00	0.95	0.35
2. Screenings, %	4.59	0.20	21.40	6.18	2.64	1.70	4.72	0.94	1.32	0.32	2.34	0.75
3. Sclerotia, %	0.18	0.00	0.60	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4. Foreign Matter, %	1.06	0.20	2.60	0.89	2.09	1.05	3.90	0.91	1.22	0.68	1.85	0.42
5. Deviations in 2,3 and 4 collectively, %: Provided that such deviations are individually within the limits of said items	5.83	0.40	24.00	6.77	4.73	3.25	5.80	0.86	2.54	1.00	3.64	0.89
Poisonous seeds (<i>Crotalaria sp.</i> , <i>Datura sp.</i> , <i>Ricinis communis</i>)	5	0	20	8.62	0	0	0	0.00	11	0	80	30.24
Poisonous seeds (<i>Argemone mexicana L.</i> , <i>Convolvulus sp.</i> , <i>Ipomoea purpurea Roth.</i> , <i>Lolium temulentum</i> , <i>Xanthium sp.</i>)	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
Number of samples	10				11				7			
<u>Nutritional analysis:</u>	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
Moisture, % (5 hr, 105 °C)	5.2	4.6	5.8	0.36	5.1	4.5	5.5	0.30	5.3	4.9	5.9	0.31
Crude Protein, % (as is)	17.75	15.96	21.32	1.61	18.22	17.24	19.39	0.67	19.63	18.84	20.42	0.53
Crude Fat, % (as is)	38.1	35.0	40.4	1.37	38.4	36.4	41.2	1.50	37.0	35.4	39.9	1.51
Crude Fibre, % (as is)	20.4	15.2	22.8	2.33	20.1	17.7	22.6	1.68	20.0	18.1	21.6	1.24
Ash, % (as is)	2.48	2.25	2.98	0.21	2.55	2.27	2.84	0.17	2.61	2.47	2.90	0.16
Number of samples	10				11				7			

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REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(23)				(24)				(26)			
	Free State North-Western Region (Bultfontein)				Free State Central Region				Free State South-Eastern Region			
Silo/Intake stands (Type of storage)	Bultfontein (Bins)				Bloemfontein (Bins)				Arlington (Bins)			
	Losdoorns (Bins)				Brandfort (Bins)				Kaallaagte (Bins)			
	Protespan (Bins)				De Brug (Bins)				Libertas (Bins)			
	Tierfontein (Bins)				Geneva (Bins)				Marquard (Bins)			
	Wesselsbron (Bins)				Hennenman (Bins)				Meets (Bins)			
	Willemsrust (Bins)				Kroonstad (Bins)				Monte Video (Bins)			
					Petrusburg (Bins)				Senekal (Bins)			
					Theunissen (Bins)				Steynsrus (Bins)			
					Van Tonder (Bins)							
					Welgeleë (Bins)							
					Winburg (Bins)							
<u>Grading:</u>	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
1. Damaged sunflower seed, %	0.29	0.00	0.92	0.24	0.13	0.00	0.30	0.12	0.26	0.00	1.35	0.38
2. Screenings, %	2.26	1.46	3.80	0.64	1.47	0.60	3.14	0.73	2.26	0.34	6.40	1.81
3. Sclerotia, %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	1.48	0.30
4. Foreign Matter, %	1.63	0.68	4.30	1.05	1.13	0.34	2.06	0.70	1.32	0.12	6.30	1.25
5. Deviations in 2,3 and 4 collectively, %: Provided that such deviations are individually within the limits of said items	3.89	2.50	6.52	1.23	2.60	1.74	5.06	1.09	3.66	0.52	12.20	2.71
Poisonous seeds (<i>Crotalaria sp.</i> , <i>Datura sp.</i> , <i>Ricinis communis</i>)	10	0	120	34.64	0	0	0	0.00	0	0	0	0.00
Poisonous seeds (<i>Argemone mexicana L.</i> , <i>Convolvulus sp.</i> , <i>Ipomoea purpurea Roth.</i> , <i>Lolium temulentum</i> , <i>Xanthium sp.</i>)	0	0	0	0.00	0	0	0	0.00	0	0	0	0.00
Number of samples	12				9				30			
<u>Nutritional analysis:</u>	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
Moisture, % (5 hr, 105 °C)	5.7	5.2	6.1	0.34	5.5	4.7	6.1	0.40	5.0	4.4	5.8	0.38
Crude Protein, % (as is)	19.55	18.27	20.58	0.75	16.89	15.29	17.79	0.83	16.66	13.88	18.81	1.10
Crude Fat, % (as is)	36.8	35.3	38.8	1.16	37.1	33.8	39.6	1.82	39.2	34.4	42.1	1.52
Crude Fibre, % (as is)	20.0	18.9	21.6	0.92	22.1	20.9	23.8	1.01	20.4	17.3	23.3	1.19
Ash, % (as is)	2.82	2.60	3.02	0.15	2.53	2.42	2.81	0.12	2.60	2.24	3.05	0.15
Number of samples	12				9				30			

SOUTH AFRICAN

REGIONAL SUNFLOWER QUALITY

	(27)	(28)	(29)
PRODUCTION REGION	Free State Northern Region	Free State Eastern Region	Mpumalanga Southern Region
Silo/Intake stands (Type of storage)	Gottenburg (Bins) Heilbron (Bins) Hoogte (Bins) Mooigeleë (Bins) Petrus Steyn (Bins) Wolwehoek (Bins)	Afrikaskop (Bins/Bunkers) Ascent (Bins) Cornelia (Bins) Daniëlsrus (Bins) Eeram (Bins) Frankfort (Bins) Harrismith (Bins) Jim Fouché (Bins) Kransfontein (Bins/Bunkers) Memel (Bins) Reitz (Bins) Tweeling (Bins) Villiers (Bins/Bulk) Vrede (Bins) Warden (Bins) Windfield (Bins)	Balfour (Bins) Greylingstad (Bins) Grootvlei (Bins) Harvard (Bins) Holmdene (Bins) Leeuspruit (Bins) Platrand (Bins) Standerton (Bins) Val (Bins)
<u>Grading:</u>	ave min max stdev	ave min max stdev	ave min max stdev
1. Damaged sunflower seed, %	0.04 0.00 0.08 0.06	0.08 0.00 0.40 0.17	0.08 0.00 0.50 0.20
2. Screenings, %	0.97 0.10 1.84 1.23	1.34 0.08 2.66 0.82	1.83 1.24 3.90 1.02
3. Sclerotia, %	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.30 0.00 1.80 0.73
4. Foreign Matter, %	0.92 0.76 1.08 0.23	2.87 0.00 15.84 5.00	1.68 0.55 4.65 1.52
5. Deviations in 2,3 and 4 collectively, %: Provided that such deviations are individually within the limits of said items	1.89 1.18 2.60 1.00	4.21 0.08 16.52 4.92	3.81 1.97 6.21 1.86
Poisonous seeds (<i>Crotalaria sp.</i> , <i>Datura sp.</i> , <i>Ricinis communis</i>)	0 0 0 0.00	0 0 0 0.00	0 0 0 0.00
Poisonous seeds (<i>Argemone mexicana L.</i> , <i>Convolvulus sp.</i> , <i>Ipomoea purpurea Roth.</i> , <i>Lolium temulentum</i> , <i>Xanthium sp.</i>)	0 0 0 0.00	0 0 0 0.00	0 0 0 0.00
Number of samples	2	9	6
<u>Nutritional analysis:</u>	ave min max stdev	ave min max stdev	ave min max stdev
Moisture, % (5 hr, 105 °C)	5.0 5.0 5.0 0.00	5.3 4.7 6.2 0.52	5.2 4.7 5.6 0.33
Crude Protein, % (as is)	17.50 16.63 18.36 1.22	18.03 16.86 19.42 0.93	17.50 15.36 21.58 2.31
Crude Fat, % (as is)	37.4 36.5 38.3 1.27	37.0 33.2 41.2 2.77	38.4 36.6 39.8 1.30
Crude Fibre, % (as is)	21.0 20.8 21.1 0.21	20.3 17.7 24.3 2.13	20.9 17.8 22.8 1.89
Ash, % (as is)	2.68 2.51 2.85 0.24	2.74 2.50 2.96 0.15	2.51 2.22 3.06 0.30
Number of samples	2	9	6

SOUTH AFRICAN

REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(33) Mpumalanga Northern Region	(34) Gauteng	(35) Limpopo
Silo/Intake stands (Type of storage)	Arnot (Bins) Driefontein (Bins) Lydenburg (Bins) Marble Hall (Bins) Middelburg (Bins) Pan (Bins) Stoffberg (Bins) Wonderfontein (Bins)	Bloekomspruit (Bins) Bronkhorstspruit (Bins) Glenroy (Bins) Goeie Hoek (Bins) Kaalfontein (Bins) Kliprivier (Bunkers) Meyerton (Bunkers) Middelvei (Bins) Nigel (Bins) Oberholzer (Bins) Pretoria Wes (Bins) Raathsvlei (Bins) Vogelvallei (Bunkers)	Alma (Bins) Lehau (Bins) Naboomspruit (Mookgophong) (Bins) Northam (Bins) Nutfield (Bins) Nylstroom (Modimolle) (Bins) Potgietersrus (Mokopane) (Bins) Roedtan (Bins) Settlers (Bins) Warmbad (Bela-Bela) (Bins)
<u>Grading:</u>	ave min max stdev	ave min max stdev	ave min max stdev
1. Damaged sunflower seed, %	0.00 - - -	1.40 0.20 2.60 1.70	0.39 0.00 1.40 0.58
2. Screenings, %	1.84 - - -	3.60 3.20 4.00 0.57	1.09 0.60 2.36 0.62
3. Sclerotia, %	0.00 - - -	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
4. Foreign Matter, %	2.30 - - -	1.03 0.50 1.55 0.74	1.01 0.50 1.50 0.40
5. Deviations in 2,3 and 4 collectively, %: Provided that such deviations are individually within the limits of said items	4.14 - - -	4.63 4.50 4.75 0.18	2.10 1.12 3.86 0.95
Poisonous seeds (<i>Crotalaria sp.</i> , <i>Datura sp.</i> , <i>Ricinis communis</i>)	0 - - -	0 0 0 0.00	0 0 0 0.00
Poisonous seeds (<i>Argemone mexicana L.</i> , <i>Convolvulus sp.</i> , <i>Ipomoea purpurea Roth.</i> , <i>Lolium temulentum</i> , <i>Xanthium sp.</i>)	0 - - -	0 0 0 0.00	0 0 0 0.00
Number of samples	1	2	7
<u>Nutritional analysis:</u>	ave min max stdev	ave min max stdev	ave min max stdev
Moisture, % (5 hr, 105 °C)	4.5 - - -	5.0 4.4 5.6 0.85	5.0 4.3 5.5 0.45
Crude Protein, % (as is)	14.97 - - -	17.69 16.41 18.97 1.81	17.16 14.82 18.58 1.59
Crude Fat, % (as is)	41.2 - - -	40.3 38.9 41.7 1.98	40.0 36.2 43.1 2.29
Crude Fibre, % (as is)	20.7 - - -	19.2 18.1 20.3 1.56	20.4 14.9 23.6 2.84
Ash, % (as is)	2.37 - - -	2.67 2.48 2.85 0.26	2.69 2.41 2.97 0.21
Number of samples	1	2	7