

SOUTH AFRICAN REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(12)				(13)				(14)			
	North-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)				Baberspan (Bins) Delareyville (Bins) Excelsior (Bins) Geysdorp (Bins) Migdol (Bins) Nooitgedacht (Bins) Taaibos (Bins) Amalia (Bins) Hallatshope (Bins) Schweizer-Reneke (Bins)			
<u>Grading:</u>	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
1. Damage sunflower seed, %	0.25	0.00	0.62	0.33	1.73	0.00	4.76	2.02	0.25	0.00	1.03	0.38
2. Screenings, %	1.81	0.89	2.30	0.79	1.90	0.78	3.59	1.12	0.79	0.17	2.22	0.63
3. Sclerotinia, %	0.00	0.00	0.00	0.00	0.60	0.00	2.07	0.92	0.14	0.00	0.69	0.27
4. Foreign Matter, %	0.51	0.38	0.74	0.20	1.74	1.26	2.31	0.40	0.90	0.09	4.66	1.24
5. Deviations in 2,3 and 4 collectively: Provided that such deviations are individually within the limits of said items, %	2.32	1.31	3.04	0.90	4.24	2.71	6.17	1.62	1.83	0.33	6.72	1.68
Noxious seeds (<i>Crotalaria sp.</i> , <i>Datura sp.</i> , <i>Ricinis communis</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Noxious 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	0	0	0	0	0	0	0
Number of samples	3				5				13			
<u>Chemical analysis:</u>	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
Moisture, % (5hr, 105 °C)	3.2	2.6	3.8	0.60	3.2	1.9	4.3	0.91	3.2	2.1	4.4	0.67
Crude Protein, % (as is)	16.26	15.37	16.94	0.80	16.88	15.87	17.64	0.79	16.57	14.01	17.80	0.88
Crude Fat, % (as is)	39.8	38.4	42.4	2.25	38.9	35.9	41.9	2.40	38.4	32.5	40.3	2.10
Ash, % (as is)	2.47	2.42	2.52	0.05	2.69	2.54	2.81	0.12	2.67	2.55	2.78	0.08
Crude Fibre, % (as is)	19.9	19.1	20.7	0.80	20.2	18.8	21.9	1.53	20.6	18.7	26.2	1.87
Number of samples	3				5				13			

SOUTH AFRICAN REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(15)				(16)				(17)			
	North-West		South-Eastern Region		North-West		Central Eastern Region		North-West		Central Northern Region (Ottosdal)	
Silo/Intake stands (Type of storage)	Bloemhof (Bins) Christiana (Bins) Hertzogville (Bins) Hoopstad (Bins) Kingswood (Bins) Kruising (Bunkers) Poppieland (Bunkers)				Regina (Bins) Bamboesspruit (Bins) Leeudoringstad (Bins) Makwassie (Bins) Strydpoort (Bins) Wolmaranstad (Bins)				Boschpoort (Bags/Bins/Bulk) Kleinharts (Bins) Ottosdal (Bins) Rostrataville (Bins) Vermaas (Bins) Hartbeesfontein (Bins) Melliodora (Bins) Werda (Bins)			
<u>Grading:</u>	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
1. Damage sunflower seed, %	0.28	0.00	0.54	0.27	0.44	0.00	1.39	0.66	1.34	0.00	5.13	1.83
2. Screenings, %	1.43	1.39	1.47	0.04	1.03	0.12	2.39	1.07	1.54	0.34	4.53	1.26
3. Sclerotinia, %	0.00	0.00	0.00	0.00	0.08	0.00	0.31	0.16	0.46	0.00	1.34	0.40
4. Foreign Matter, %	1.40	0.87	1.79	0.47	1.79	0.16	3.58	1.52	1.73	0.42	11.25	3.17
5. Deviations in 2,3 and 4 collectively: Provided that such deviations are individually within the limits of said items, %	2.83	2.34	3.18	0.44	2.90	0.28	6.28	2.71	3.73	0.96	17.12	4.57
Noxious seeds (<i>Crotalaria sp.</i> , <i>Datura sp.</i> , <i>Ricinis communis</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Noxious 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	0	0	0	0	0	0	0
Number of samples	3				4				11			
<u>Chemical analysis:</u>	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
Moisture, % (5hr, 105 °C)	3.9	2.7	5.2	1.26	3.4	1.6	4.7	1.46	3.1	2.2	4.2	0.50
Crude Protein, % (as is)	17.96	17.73	18.32	0.32	18.05	16.80	20.55	1.70	16.33	15.42	17.25	0.56
Crude Fat, % (as is)	36.8	32.6	39.7	3.74	38.2	36.2	39.7	1.52	39.2	33.9	41.6	2.07
Ash, % (as is)	2.72	2.68	2.81	0.08	2.69	2.46	3.07	0.26	2.60	2.35	2.82	0.13
Crude Fibre, % (as is)	20.8	19.9	22.4	1.33	20.7	20.0	21.7	0.76	20.7	18.3	24.3	1.65
Number of samples	3				4				11			

SOUTH AFRICAN REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(18)				(19)				(20)			
	North-West Central Region (Ventersdorp)				North-West Central Region (Lichtenburg)				North-West Eastern Region			
Silo/Intake stands (Type of storage)	Bodenstein (Bins) Coligny (Bins) Buckingham (Bins) Enselspruit (Bins) Makokskraal (Bins) Potchefstroom (Bins) Ventersdorp (Bins)				Lichtenburg (Bunkers) Grootpan (Bins) Halfpad (Bins) Hibernia (Bins) Lottie Halte (Bins) Lusthof (Bins) Lichtenburg Silo 3 (Bins) Lichtenburg Silo 5 (Bins)				Battery (Bins) Brits (Bins) Boons (Bins) Derby (Bins) Koster (Bins) Swartruggens (Bins) Syferbult (Bins)			
<u>Grading:</u>	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
1. Damage sunflower seed, %	14.13	1.16	64.80	24.98	2.46	0.51	6.14	2.29	2.04	0.00	4.15	1.84
2. Screenings, %	2.15	0.26	3.84	1.47	3.85	2.28	6.50	1.86	2.57	0.17	5.85	2.17
3. Sclerotinia, %	4.61	0.80	8.07	3.15	2.82	0.00	6.64	2.92	3.14	0.00	11.84	4.23
4. Foreign Matter, %	1.51	0.82	2.25	0.50	2.13	1.32	2.96	0.63	0.75	0.12	1.56	0.59
5. Deviations in 2,3 and 4 collectively: Provided that such deviations are individually within the limits of said items, %	8.27	4.07	12.83	3.55	8.80	4.84	14.67	3.65	6.47	0.31	17.01	6.31
Noxious seeds (<i>Crotalaria sp.</i> , <i>Datura sp.</i> , <i>Ricinis communis</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Noxious 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	0	0	0	0	0	0	0
Number of samples	6				5				8			
<u>Chemical analysis:</u>	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
Moisture, % (5hr, 105 °C)	2.5	1.3	3.2	0.71	3.1	2.3	3.7	0.50	3.0	1.9	4.2	0.91
Crude Protein, % (as is)	15.42	14.08	17.48	1.25	16.02	13.53	17.44	1.47	16.16	14.12	18.08	1.56
Crude Fat, % (as is)	40.3	36.5	43.8	2.41	37.7	35.7	39.1	1.52	38.8	36.4	42.0	1.82
Ash, % (as is)	2.74	2.61	2.82	0.08	2.60	2.38	2.75	0.15	2.64	2.51	2.78	0.09
Crude Fibre, % (as is)	20.6	18.7	22.4	1.47	21.9	21.0	23.3	0.91	20.1	18.5	21.2	0.82
Number of samples	6				5				8			

SOUTH AFRICAN REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(21)				(22)				(23)			
	Free State North-Western Region (Viljoenskroon)				Free State North-Western Region (Bothaville)				Free State North-Western Region (Bultfontein)			
Silo/Intake stands (Type of storage)	Attie (Bins) Groenebloem (Bins) Heuningspruit (Bins) Koppies (Bins) Rooiwal (Bins) Vierfontein (Bins) Viljoenskroon (Bins) Vredefort (Bins) Weiveld (Bins)				Allanridge (Bins) Bothaville (Bins) Mirage (Bins) Odendaalsrus (Bins) Schoonspruit (Bins) Schuttesdraai (Bins) Misgunst (Bunkers)				Bultfontein (Bins) Losdoorns (Bins) Protespan (Bins) Tierfontein (Bins) Wesselsbron (Bins) Willemsrus (Bins)			
<u>Grading:</u>	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
1. Damage sunflower seed, %	0.28	0.00	1.05	0.33	0.19	0.00	0.53	0.26	0.04	0.00	0.19	0.07
2. Screenings, %	2.50	0.89	4.79	1.13	0.66	0.09	1.50	0.63	1.30	0.25	2.00	0.64
3. Sclerotinia, %	0.09	0.00	1.04	0.25	0.20	0.00	0.98	0.44	0.00	0.00	0.00	0.00
4. Foreign Matter, %	2.04	0.51	5.92	1.50	0.48	0.11	1.75	0.71	0.61	0.00	1.12	0.39
5. Deviations in 2,3 and 4 collectively: Provided that such deviations are individually within the limits of said items, %	4.63	1.92	9.40	2.34	1.34	0.20	2.90	1.35	1.91	0.49	2.66	0.85
Noxious seeds (<i>Crotalaria sp.</i> , <i>Datura sp.</i> , <i>Ricinis communis</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Noxious 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	0	0	0	0	0	0	0
Number of samples	21				5				8			
<u>Chemical analysis:</u>	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
Moisture, % (5hr, 105 °C)	3.5	1.8	4.9	0.92	2.3	1.5	3.1	0.69	3.5	1.5	4.8	1.13
Crude Protein, % (as is)	16.68	15.33	18.42	0.80	17.47	16.24	18.04	0.70	17.93	16.72	18.84	0.85
Crude Fat, % (as is)	38.1	26.0	41.0	3.29	40.6	39.1	42.4	1.21	38.1	33.3	41.2	2.56
Ash, % (as is)	2.67	2.29	2.97	0.16	2.67	2.49	2.74	0.10	2.73	2.64	2.89	0.08
Crude Fibre, % (as is)	20.7	18.3	23.3	1.47	19.2	17.5	20.1	1.08	20.6	19.3	22.7	1.31
Number of samples	21				5				8			

SOUTH AFRICAN REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(24) Free State Central Region	(25) Free State South-Western Region	(26) Free State South-Eastern Region
Silo/Intake stands (Type of storage)	Bloemfontein (Bins) Brandfort (Bins) De Brug (Bins) Geneva (Bins) Hennenman (Bins) Kroonstad (Bins) Petrusburg (Bins) Theunissen (Bins) Van Tonder (Bins) Welgeleë (Bins) Winburg (Bins)	Bethlehem (Bins) Slabberts (Bins) Clocolan (Bins) Ficksburg (Bins) Fouriesburg (Bins) Marseilles (Bins) Modderpoort (Bins) Tweespruit (Bins) Westminster (Bins)	Kaallaagte (Bins) Libertas (Bins) Marquard (Bins) Meets (Bins) Monte Video (Bins) Senekal (Bins) Arlington (Bins) Steynsrus (Bins)
<u>Grading:</u>	ave min max stdev	ave min max stdev	ave min max stdev
1. Damage sunflower seed, %	0.13 0.00 0.55 0.17	0.17 0.00 0.75 0.22	0.62 0.00 8.61 2.14
2. Screenings, %	2.60 0.25 9.22 2.12	1.28 0.16 1.78 0.50	1.19 0.12 2.79 0.92
3. Sclerotinia, %	0.01 0.00 0.13 0.04	0.11 0.00 0.62 0.20	0.05 0.00 0.44 0.15
4. Foreign Matter, %	3.12 0.11 16.39 4.94	0.88 0.17 1.72 0.47	0.50 0.09 1.47 0.38
5. Deviations in 2,3 and 4 collectively: Provided that such deviations are individually within the limits of said items, %	5.73 0.39 18.56 5.47	2.27 1.00 3.36 0.77	1.74 0.23 4.22 1.21
Noxious seeds (<i>Crotalaria sp.</i> , <i>Datura sp.</i> , <i>Ricinis communis</i>)	0 0 2 0.49	0 0 0 0	0 0 0 0
Noxious 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 0 0 0	0 0 0 0
Number of samples	17	13	16
<u>Chemical analysis:</u>	ave min max stdev	ave min max stdev	ave min max stdev
Moisture, % (5hr, 105 °C)	3.4 2.0 6.3 1.13	2.9 1.4 4.5 0.89	4.0 1.4 4.7 0.95
Crude Protein, % (as is)	16.87 12.58 19.27 1.47	13.84 11.56 16.00 1.64	14.85 13.08 16.40 0.72
Crude Fat, % (as is)	37.5 26.2 42.8 4.87	42.7 40.1 46.3 1.73	40.4 39.5 41.9 0.68
Ash, % (as is)	2.79 2.57 2.94 0.11	2.68 2.52 2.87 0.11	2.54 2.08 2.90 0.30
Crude Fibre, % (as is)	20.7 17.5 26.8 2.49	18.9 15.7 20.3 1.37	20.9 19.2 22.5 1.06
Number of samples	17	13	16

SOUTH AFRICAN REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(27)				(28)				(29)			
	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) Wolwehoek (Bins) Petrus Steyn (Bins)				Afrikaskop (Bins/Bunkers) Eeram (Bins) Harrismith (Bins) Kransfontein (Bins/Bunkers) Ascent (Bins) Cornelia (Bins) Daniëlsrus (Bins) Frankfort (Bins) Jim Fouché (Bins) 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. Damage sunflower seed, %	0.13	0.00	0.45	0.18	0.03	0.00	0.18	0.07	3.04	1.59	5.30	1.80
2. Screenings, %	2.01	0.38	5.94	1.61	0.42	0.14	1.07	0.33	0.74	0.33	1.15	0.36
3. Sclerotinia, %	0.10	0.00	0.62	0.20	0.16	0.00	1.41	0.47	1.42	0.00	4.51	2.08
4. Foreign Matter, %	1.60	0.14	3.33	1.17	0.69	0.00	1.57	0.58	0.72	0.30	1.14	0.39
5. Deviations in 2,3 and 4 collectively: Provided that such deviations are individually within the limits of said items, %	3.71	0.87	8.43	2.31	1.27	0.14	2.80	0.93	2.88	1.47	6.16	2.21
Noxious seeds (<i>Crotalaria sp.</i> , <i>Datura sp.</i> , <i>Ricinis communis</i>)	0	0	0	0	0	0	0	0	0	0	0	0
Noxious 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	0	0	0	0	0	0	0
Number of samples	9				9				4			
<u>Chemical analysis:</u>	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
Moisture, % (5hr, 105 °C)	3.1	2.1	3.8	0.55	2.5	1.8	3.8	0.68	1.6	1.1	2.2	0.50
Crude Protein, % (as is)	15.79	14.05	17.62	1.05	15.05	12.22	17.64	1.65	15.49	15.27	15.67	0.19
Crude Fat, % (as is)	39.5	38.1	43.1	1.51	42.7	35.4	49.1	4.25	42.9	42.4	43.6	0.52
Ash, % (as is)	2.67	2.44	2.87	0.14	2.81	2.44	3.47	0.27	2.53	2.46	2.59	0.06
Crude Fibre, % (as is)	20.2	17.8	21.5	1.12	18.7	14.7	21.7	1.94	18.2	17.2	19.2	0.81
Number of samples	9				9				4			

SOUTH AFRICAN REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(33)				(34)				(35)			
	Mpumalanga Northern Region				Gauteng				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) Bronkhorstspuit (Bins) Glenroy (Bins) Goeie Hoek (Bins) Kaalfontein (Bins) Kliprivier (Bunkers) Meyerton (Bunkers) Nigel (Bins) Pretoria West (Bins) Vogelvallei (Bunkers) Middelvlei (Bins) Oberholzer (Bins) Raathsvlei (Bins)				Northam (Bins) Alma (Bins) Lehau (Bins) Naboomspruit (Mookgophong) (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. Damage sunflower seed, %	1.88	-	-	-	1.05	0.00	1.74	0.76	0.17	0.00	1.00	0.37
2. Screenings, %	1.15	-	-	-	2.01	0.74	4.20	1.53	1.29	0.37	3.44	0.90
3. Sclerotinia, %	1.05	-	-	-	0.54	0.00	1.64	0.77	0.00	0.00	0.00	0.00
4. Foreign Matter, %	1.79	-	-	-	1.63	0.24	4.48	1.94	0.89	0.59	1.25	0.26
5. Deviations in 2,3 and 4 collectively: Provided that such deviations are individually within the limits of said items, %	3.99	-	-	-	4.17	0.98	7.34	2.93	2.18	1.24	4.37	0.88
Noxious seeds (<i>Crotalaria sp.</i> , <i>Datura sp.</i> , <i>Ricinis communis</i>)	0	-	-	-	0	0	0	0	0	0	0	0
Noxious 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	0	0	0	0
Number of samples	1				4				11			
<u>Chemical analysis:</u>	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
Moisture, % (5hr, 105 °C)	1.6	-	-	-	2.3	1.0	3.8	1.23	3.3	1.2	5.0	1.28
Crude Protein, % (as is)	13.39	-	-	-	15.44	13.25	17.55	1.97	16.95	14.26	19.32	1.64
Crude Fat, % (as is)	40.4	-	-	-	42.5	39.4	46.1	3.14	40.7	34.1	44.3	3.02
Ash, % (as is)	2.78	-	-	-	2.53	2.18	2.80	0.26	2.59	2.09	2.90	0.26
Crude Fibre, % (as is)	20.8	-	-	-	19.2	17.6	20.1	1.10	18.6	14.4	22.2	2.47
Number of samples	1				4				11			