

# 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) Schweizer-Reneke (Bins) Taaibospan (Bins)			
<b><u>Grading:</u></b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>
1. Damaged sunflower seed, %	0.00	0.00	0.00	0.00	0.23	0.00	0.95	0.29	0.25	0.00	2.40	0.61
2. Screenings, %	2.31	0.56	4.44	1.28	1.54	0.46	4.50	1.09	1.78	0.82	4.88	0.96
3. Sclerotia, %	0.00	0.00	0.00	0.00	0.04	0.00	0.22	0.08	0.00	0.00	0.00	0.00
4. Foreign Matter, %	0.78	0.26	1.56	0.46	0.83	0.36	1.28	0.29	1.37	0.28	4.00	1.15
5. Deviations in 2,3 and 4 collectively, %: Provided that such deviations are individually within the limits of said items	3.08	1.28	4.70	1.16	2.40	1.28	5.04	0.97	3.15	1.52	5.74	1.48
Poisonous 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
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	0	0	0	0	0	0	0
<b>Number of samples</b>	<b>10</b>				<b>12</b>				<b>16</b>			
<b><u>Nutritional analysis:</u></b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>
Moisture, % (5 hr, 105 °C)	5.1	4.6	6.2	0.46	5.2	4.4	5.9	0.44	5.1	4.7	5.7	0.29
Crude Protein, % (as is)	17.47	16.82	18.40	0.40	16.81	15.74	17.89	0.63	16.00	15.14	17.06	0.61
Crude Fat, % (as is)	36.9	33.3	39.7	2.25	38.0	31.2	41.3	2.46	38.0	34.5	40.9	1.96
Crude Fibre, % (as is)	21.4	17.9	24.6	1.75	21.9	20.0	24.0	1.13	21.9	20.5	24.5	1.20
Ash, % (as is)	2.28	2.11	2.47	0.12	2.43	2.24	3.03	0.21	2.29	2.08	2.60	0.16
<b>Number of samples</b>	<b>10</b>				<b>12</b>				<b>16</b>			

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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)			
<b><u>Grading:</u></b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>
1. Damaged sunflower seed, %	1.21	0.00	3.40	1.04	3.31	0.00	14.80	5.87	2.32	0.00	12.58	3.42
2. Screenings, %	3.51	1.34	5.94	1.77	2.98	2.16	4.00	0.70	1.83	0.50	3.90	1.10
3. Sclerotia, %	0.20	0.00	0.66	0.25	1.05	0.00	5.52	1.98	0.01	0.00	0.10	0.03
4. Foreign Matter, %	0.82	0.40	1.64	0.37	1.37	0.80	3.12	0.70	1.20	0.54	2.24	0.50
5. Deviations in 2,3 and 4 collectively, %: Provided that such deviations are individually within the limits of said items	4.52	2.44	6.74	1.52	5.41	3.45	10.52	2.36	3.04	1.36	6.04	1.45
Poisonous 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
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	0	0	0	0	0	0	0
<b>Number of samples</b>	<b>9</b>				<b>9</b>				<b>16</b>			
<b><u>Nutritional analysis:</u></b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>
Moisture, % (5 hr, 105 °C)	4.6	3.3	5.8	0.70	4.9	4.0	5.7	0.56	5.0	3.7	5.6	0.46
Crude Protein, % (as is)	16.71	14.74	17.74	0.85	15.36	14.66	15.90	0.37	16.76	14.72	18.14	0.93
Crude Fat, % (as is)	39.4	38.1	41.5	1.35	39.6	37.8	42.0	1.54	38.5	33.4	41.6	2.07
Crude Fibre, % (as is)	21.3	19.0	24.1	1.38	22.2	20.8	24.1	1.02	21.4	19.3	24.7	1.56
Ash, % (as is)	2.52	2.36	2.87	0.16	2.37	2.15	2.61	0.14	2.45	2.13	2.74	0.16
<b>Number of samples</b>	<b>9</b>				<b>9</b>				<b>16</b>			

# SOUTH AFRICAN

## 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) Schuttendraai (Bins)			
<b><u>Grading:</u></b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>
1. Damaged sunflower seed, %	0.41	0.00	0.85	0.37	0.33	0.00	2.60	0.68	0.14	0.00	0.24	0.12
2. Screenings, %	1.63	1.34	2.00	0.29	2.63	1.00	4.50	1.07	2.48	1.02	3.32	1.27
3. Sclerotia, %	0.41	0.00	1.00	0.50	0.02	0.00	0.28	0.07	0.00	0.00	0.00	0.00
4. Foreign Matter, %	1.07	0.88	1.47	0.27	0.93	0.44	2.56	0.59	1.59	0.42	3.42	1.60
5. Deviations in 2,3 and 4 collectively, %: Provided that such deviations are individually within the limits of said items	3.11	2.36	4.47	0.94	3.58	1.70	5.54	1.31	4.07	1.44	6.74	2.65
Poisonous 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
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	0	0	0	0	0	0	0
<b>Number of samples</b>	<b>4</b>				<b>18</b>				<b>3</b>			
<b><u>Nutritional analysis:</u></b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>
Moisture, % (5 hr, 105 °C)	4.5	4.3	4.8	0.22	4.5	3.6	5.2	0.52	4.3	3.5	5.1	0.80
Crude Protein, % (as is)	16.82	15.72	17.30	0.75	17.42	15.88	18.24	0.63	17.17	16.07	17.85	0.96
Crude Fat, % (as is)	39.9	39.2	40.5	0.68	38.2	35.0	42.7	1.92	37.2	34.7	39.9	2.61
Crude Fibre, % (as is)	21.0	19.9	22.4	1.09	20.4	18.0	23.0	1.61	21.0	20.2	21.9	0.85
Ash, % (as is)	2.50	2.27	2.67	0.19	2.68	2.35	2.87	0.15	2.59	2.30	2.90	0.30
<b>Number of samples</b>	<b>4</b>				<b>18</b>				<b>3</b>			

# SOUTH AFRICAN

## REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(23)				(24)				(25)			
	Free State North-Western Region (Bultfontein)				Free State Central Region				Free State South-Western Region			
Silo/Intake stands (Type of storage)	Bultfontein (Bins) Losdoorns (Bins) Protespan (Bins) Tierfontein (Bins) Wesselsbron (Bins) Willemsrust (Bins)				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) Clocolan (Bins) Ficksburg (Bins) Fouriesburg (Bins) Marseilles (Bins) Modderpoort (Bins) Slabberts (Bins) Tweespruit (Bins) Westminster (Bins)			
<b><u>Grading:</u></b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>
1. Damaged sunflower seed, %	2.60	0.00	11.28	4.04	0.00	0.00	0.00	0.00	0.51	0.00	2.02	0.71
2. Screenings, %	3.52	0.22	28.24	7.53	1.86	1.00	2.46	0.61	1.60	0.46	3.50	1.03
3. Sclerotia, %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.86	0.27
4. Foreign Matter, %	0.93	0.24	1.54	0.39	0.84	0.50	1.06	0.23	1.18	0.22	2.60	0.76
5. Deviations in 2,3 and 4 collectively, %: Provided that such deviations are individually within the limits of said items	4.45	0.70	29.74	7.73	2.70	1.50	3.40	0.73	3.03	0.92	6.06	1.87
Poisonous 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
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	0	0	0	0	0	0	0
<b>Number of samples</b>	<b>13</b>				<b>5</b>				<b>10</b>			
<b><u>Nutritional analysis:</u></b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>
Moisture, % (5 hr, 105 °C)	4.6	3.7	5.2	0.40	4.4	3.9	4.8	0.41	4.9	4.4	5.8	0.43
Crude Protein, % (as is)	17.72	15.66	19.97	1.13	16.90	15.77	17.81	0.98	16.03	12.74	18.35	1.82
Crude Fat, % (as is)	37.5	34.6	38.8	1.22	37.6	36.3	39.5	1.55	39.5	34.3	46.4	3.17
Crude Fibre, % (as is)	20.9	18.3	22.1	1.15	21.4	20.8	21.9	0.42	20.7	14.1	24.4	2.87
Ash, % (as is)	2.69	2.43	3.09	0.22	2.41	2.35	2.53	0.07	2.76	2.47	3.22	0.22
<b>Number of samples</b>	<b>13</b>				<b>5</b>				<b>10</b>			

# SOUTH AFRICAN

## REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(26)				(28)				(29)			
	Free State South-Eastern Region				Free State Eastern Region				Mpumalanga Southern Region			
Silo/Intake stands (Type of storage)	Arlington (Bins) Kaallaagte (Bins) Libertas (Bins) Marquard (Bins) Meets (Bins) Monte Video (Bins) Senekal (Bins) Steynsrus (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)			
<b><u>Grading:</u></b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>
1. Damaged sunflower seed, %	0.18	0.00	2.35	0.52	0.11	0.00	0.34	0.20	0.06	0.00	0.18	0.08
2. Screenings, %	1.88	0.54	5.54	1.33	1.41	0.28	3.56	1.87	1.40	0.20	2.54	0.84
3. Sclerotia, %	0.07	0.00	0.76	0.18	0.00	0.00	0.00	0.00	0.14	0.00	0.70	0.31
4. Foreign Matter, %	0.98	0.06	4.40	0.89	0.41	0.34	0.46	0.06	1.04	0.36	2.00	0.63
5. Deviations in 2,3 and 4 collectively, %: Provided that such deviations are individually within the limits of said items	2.93	0.60	7.50	1.86	1.81	0.70	4.02	1.91	2.58	1.70	3.26	0.58
Poisonous 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
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	0	0	0	0	0	0	0
<b>Number of samples</b>	<b>24</b>				<b>3</b>				<b>5</b>			
<b><u>Nutritional analysis:</u></b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>
Moisture, % (5 hr, 105 °C)	4.8	4.3	5.4	0.28	4.7	4.5	5.0	0.25	4.4	4.0	4.8	0.34
Crude Protein, % (as is)	16.17	14.15	18.93	1.38	15.76	14.72	16.32	0.90	15.19	14.73	16.24	0.61
Crude Fat, % (as is)	38.8	32.2	41.7	2.10	42.0	41.6	42.3	0.36	41.7	39.7	42.7	1.30
Crude Fibre, % (as is)	20.2	17.0	25.3	1.82	20.1	18.3	22.4	2.11	19.8	19.1	20.8	0.63
Ash, % (as is)	2.68	1.99	3.05	0.23	2.68	2.67	2.71	0.02	2.21	2.00	2.57	0.26
<b>Number of samples</b>	<b>24</b>				<b>3</b>				<b>5</b>			

# SOUTH AFRICAN

## REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(31)				(33)				(34)			
	Mpumalanga Central Region				Mpumalanga Northern Region				Gauteng			
Silo/Intake stands (Type of storage)	Bakenlaagte (Bunkers) Bethal (Bins) Brakfontein (Bunkers) Devon (Bins) Kinross (Bins/Bunkers) Klipfontein (Bunkers) Leslie (Bins) Palmietfontein (Bunkers) Trichardt (Bins) Vaalkrantz (Bunkers)				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) Middelvlei (Bins) Nigel (Bins) Oberholzer (Bins) Pretoria Wes (Bins) Raathsvlei (Bins) Vogelvallei (Bunkers)			
<b><u>Grading:</u></b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>
1. Damaged sunflower seed, %	0.06	0.00	0.12	0.07	0.12	-	-	-	0.09	0.00	0.16	0.08
2. Screenings, %	2.87	2.48	3.36	0.38	0.48	-	-	-	1.65	1.40	2.00	0.31
3. Sclerotia, %	0.00	0.00	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00
4. Foreign Matter, %	0.72	0.68	0.76	0.03	0.26	-	-	-	3.71	1.70	5.54	1.93
5. Deviations in 2,3 and 4 collectively, %: Provided that such deviations are individually within the limits of said items	3.58	3.24	4.04	0.34	0.74	-	-	-	5.36	3.10	7.54	2.22
Poisonous seeds ( <i>Crotalaria sp.</i> , <i>Datura sp.</i> , <i>Ricinis communis</i> )	0	0	0	0	0	-	-	-	0	0	0	0
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	-	-	-	0	0	0	0
<b>Number of samples</b>	<b>4</b>				<b>1</b>				<b>3</b>			
<b><u>Nutritional analysis:</u></b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>
Moisture, % (5 hr, 105 °C)	4.6	4.6	4.6	0.00	4.4	-	-	-	5.1	4.9	5.3	0.21
Crude Protein, % (as is)	16.42	16.08	16.65	0.24	12.69	-	-	-	17.37	16.87	18.23	0.75
Crude Fat, % (as is)	38.1	37.7	38.4	0.29	40.9	-	-	-	38.7	38.2	39.4	0.61
Crude Fibre, % (as is)	22.5	22.1	22.9	0.33	22.9	-	-	-	19.4	18.2	20.0	1.01
Ash, % (as is)	2.36	2.30	2.42	0.06	2.37	-	-	-	2.37	2.34	2.40	0.03
<b>Number of samples</b>	<b>4</b>				<b>1</b>				<b>3</b>			

## SOUTH AFRICAN REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(35)			
	Limpopo			
Silo/Intake stands (Type of storage)	Alma (Bins) Lehau (Bins) Naboomspruit (Mookgophong) (Bins) Northam (Bins) Nylstroom (Modimolle) (Bins) Nutfield (Bins) Potgietersrus (Mokopane) (Bins) Roedtan (Bins) Settlers (Bins) Warmbad (Bela-Bela) (Bins)			
<b><u>Grading:</u></b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>
1. Damaged sunflower seed, %	3.31	0.00	18.00	7.07
2. Screenings, %	1.94	0.72	6.86	1.70
3. Sclerotia, %	0.00	0.00	0.00	0.00
4. Foreign Matter, %	0.90	0.44	1.44	0.36
5. Deviations in 2,3 and 4 collectively, %: Provided that such deviations are individually within the limits of said items	2.84	1.72	8.06	1.81
Poisonous seeds ( <i>Crotalaria sp.</i> , <i>Datura sp.</i> , <i>Ricinis communis</i> )	0	0	0	0
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
<b>Number of samples</b>	<b>11</b>			
<b><u>Nutritional analysis:</u></b>	<b>ave</b>	<b>min</b>	<b>max</b>	<b>stdev</b>
Moisture, % (5 hr, 105 °C)	4.6	4.1	5.1	0.38
Crude Protein, % (as is)	17.15	14.80	18.89	1.36
Crude Fat, % (as is)	39.7	36.3	41.8	1.71
Crude Fibre, % (as is)	19.7	18.2	21.4	1.00
Ash, % (as is)	2.67	2.40	2.86	0.17
<b>Number of samples</b>	<b>11</b>			