

South Africa



REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(12) North-West Western Region				(13) North-West Central Region (Sannieshof)				(14) North-West Southern Region			
	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
<u>Grading:</u>												
1. Damaged sunflower seed, %	0.10	0.00	0.80	0.28	1.81	0.00	14.00	3.89	0.00	0.00	0.00	0.00
2. Screenings, %	0.81	0.20	1.88	0.57	2.38	0.50	4.40	1.28	1.39	0.40	4.50	1.29
3. Sclerotia, %	0.01	0.00	0.10	0.04	0.06	0.00	0.20	0.08	0.03	0.00	0.30	0.09
4. Foreign Matter, %	0.81	0.18	2.42	0.88	0.97	0.30	1.90	0.52	0.79	0.10	1.80	0.56
5. Deviations in 2, 3 and 4 collectively, %: Provided that such deviations are individually within the limits of said items	1.63	0.38	4.30	1.27	3.42	0.80	6.14	1.75	2.21	0.54	5.66	1.56
Poisonous seeds (<i>Crotalaria sp.</i> , <i>Datura sp.</i> , <i>Ricinis communis</i>)	0	0	0	0.00	2	0	20	5.55	1	0	10	2.94
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	8				13				22			
<u>Nutritional analysis:</u>												
Moisture, % (5 hr, 105 °C)	4.8	4.2	5.4	0.41	4.5	3.7	6.3	0.80	4.6	3.4	5.2	0.48
Crude Protein, % (as is)	15.34	13.41	18.18	1.50	14.69	13.13	15.65	0.84	13.46	10.80	18.53	1.35
Crude Fat, % (as is)	38.4	30.6	41.9	3.54	39.1	35.2	41.9	1.88	40.5	36.9	46.9	2.00
Crude Fibre, % (as is)	23.3	19.5	26.1	2.35	22.8	19.2	25.1	1.58	23.1	17.6	27.8	2.28
Ash, % (as is)	2.73	2.36	3.19	0.30	2.71	2.57	2.88	0.08	2.62	2.39	2.96	0.16
Number of samples	8				13				22			

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REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(16) North-West Central-Eastern Region				(17) North-West Central-Northern Region (Ottosdal)				(18) North-West Central Region (Ventersdorp)			
	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
<u>Grading:</u>												
1. Damaged sunflower seed, %	0.00	-	-	-	0.08	0.00	0.90	0.27	0.11	0.00	1.00	0.33
2. Screenings, %	0.80	-	-	-	0.82	0.42	1.40	0.30	0.95	0.42	2.24	0.70
3. Sclerotia, %	0.00	-	-	-	0.02	0.00	0.10	0.04	0.52	0.00	4.02	1.31
4. Foreign Matter, %	0.20	-	-	-	0.78	0.10	1.60	0.52	1.16	0.28	2.90	0.93
5. Deviations in 2, 3 and 4 collectively, %: Provided that such deviations are individually within the limits of said items	1.00	-	-	-	1.62	0.66	2.74	0.65	2.63	0.80	6.70	2.07
Poisonous seeds (<i>Crotalaria sp.</i> , <i>Datura sp.</i> , <i>Ricinis communis</i>)	0	-	-	-	4	0	20	8.09	4	0	40	13.33
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				11				9			
<u>Nutritional analysis:</u>												
Moisture, % (5 hr, 105 °C)	3.9	-	-	-	5.2	4.5	6.4	0.49	5.1	4.0	8.3	1.30
Crude Protein, % (as is)	10.97	-	-	-	12.95	11.36	14.20	1.15	14.70	13.27	16.79	1.25
Crude Fat, % (as is)	42.6	-	-	-	40.9	37.2	42.8	1.90	39.5	36.8	42.2	2.03
Crude Fibre, % (as is)	24.4	-	-	-	22.9	21.4	25.2	1.06	23.6	21.9	26.6	1.67
Ash, % (as is)	2.37	-	-	-	2.61	2.46	2.77	0.09	2.67	2.48	2.87	0.14
Number of samples	1				11				9			

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REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(19) North-West Central Region (Lichtenburg)				(20) North-West Eastern Region				(21) Free State North-Western Region (Viljoenskroon)			
<u>Grading:</u>	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
1. Damaged sunflower seed, %	0.75	0.00	9.00	2.60	0.00	0.00	0.00	0.00	0.05	0.00	0.54	0.16
2. Screenings, %	1.65	0.44	3.80	1.01	1.93	0.70	4.16	1.19	2.76	0.46	6.94	2.18
3. Sclerotia, %	0.41	0.00	4.08	1.16	0.11	0.00	0.26	0.12	0.00	0.00	0.00	0.00
4. Foreign Matter, %	0.92	0.26	2.00	0.63	0.82	0.28	1.50	0.47	2.04	0.50	4.26	1.41
5. Deviations in 2, 3 and 4 collectively, %: Provided that such deviations are individually within the limits of said items	2.98	0.86	8.48	2.16	2.86	1.80	5.66	1.40	4.80	1.70	9.08	3.12
Poisonous seeds (<i>Crotalaria sp.</i> , <i>Datura sp.</i> , <i>Ricinis communis</i>)	0	0	0	0.00	5	0	30	12.25	1	0	14	4.22
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				6				11			
<u>Nutritional analysis:</u>	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
Moisture, % (5 hr, 105 °C)	4.4	3.5	5.8	0.63	4.2	2.8	4.9	0.76	4.8	4.2	5.3	0.36
Crude Protein, % (as is)	14.22	12.91	15.17	0.84	14.81	12.08	16.87	1.63	14.44	12.74	17.19	1.25
Crude Fat, % (as is)	41.6	38.4	44.3	1.94	40.2	37.0	44.9	2.98	39.1	35.3	41.6	2.23
Crude Fibre, % (as is)	22.4	21.2	23.5	0.68	22.7	22.0	23.7	0.63	23.3	21.3	27.2	1.75
Ash, % (as is)	2.60	2.50	2.76	0.08	2.54	2.14	2.91	0.25	2.68	2.62	2.78	0.05
Number of samples	12				6				11			

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REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(22) Free State North-Western Region (Bothaville)				(23) Free State North-Western Region				(24) Free State Central Region			
	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
<u>Grading:</u>												
1. Damaged sunflower seed, %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2. Screenings, %	1.57	0.70	2.00	0.75	1.01	0.40	2.20	0.69	2.10	0.64	4.26	1.23
3. Sclerotia, %	0.00	0.00	0.00	0.00	0.02	0.00	0.10	0.04	0.00	0.00	0.00	0.00
4. Foreign Matter, %	0.67	0.32	1.00	0.34	0.65	0.18	1.40	0.49	1.46	0.10	4.30	1.10
5. Deviations in 2, 3 and 4 collectively, %: Provided that such deviations are individually within the limits of said items	2.24	1.02	3.00	1.07	1.68	0.58	2.88	0.98	3.57	0.74	8.18	2.11
Poisonous seeds (<i>Crotalaria sp.</i> , <i>Datura sp.</i> , <i>Ricinis communis</i>)	0	0	0	0.00	0	0	0	0.00	3	0	20	5.94
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	3				6				15			
<u>Nutritional analysis:</u>												
Moisture, % (5 hr, 105 °C)	4.6	3.7	5.1	0.78	4.8	4.3	5.2	0.30	4.9	3.6	6.0	0.74
Crude Protein, % (as is)	13.79	12.80	14.83	1.02	14.25	13.13	16.59	1.22	13.88	12.62	17.36	1.32
Crude Fat, % (as is)	40.5	38.3	43.9	3.01	39.4	37.0	40.4	1.27	39.5	34.1	47.2	2.91
Crude Fibre, % (as is)	23.3	21.5	25.8	2.22	24.5	21.3	32.0	3.81	23.0	13.6	25.6	2.89
Ash, % (as is)	2.61	2.58	2.64	0.03	2.70	2.50	3.11	0.22	2.58	2.23	2.94	0.16
Number of samples	3				6				15			

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REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(25) Free State South-Western Region				(26) Free State South-Eastern Region				(27) Free State Northern Region			
	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
<u>Grading:</u>												
1. Damaged sunflower seed, %	0.16	0.00	0.80	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2. Screenings, %	1.22	0.46	2.50	0.89	1.00	0.28	2.08	0.57	1.90	0.20	3.40	1.10
3. Sclerotia, %	0.88	0.00	4.30	1.91	0.12	0.00	0.42	0.17	0.06	0.00	0.50	0.17
4. Foreign Matter, %	0.63	0.22	1.00	0.28	0.98	0.12	2.66	0.82	1.77	0.26	4.28	1.40
5. Deviations in 2, 3 and 4 collectively, %: Provided that such deviations are individually within the limits of said items	2.72	1.32	7.40	2.63	2.10	0.66	4.20	1.27	3.73	0.88	6.30	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	5				9				9			
<u>Nutritional analysis:</u>												
Moisture, % (5 hr, 105 °C)	5.4	5.1	5.9	0.31	4.8	3.9	5.9	0.55	4.7	4.4	5.6	0.41
Crude Protein, % (as is)	11.73	10.94	13.35	0.94	12.81	11.88	14.21	0.87	14.32	11.71	15.56	1.16
Crude Fat, % (as is)	41.2	38.8	43.2	1.91	40.1	36.2	43.4	2.63	39.3	37.1	41.4	1.47
Crude Fibre, % (as is)	23.7	21.8	26.3	1.66	23.2	22.2	24.5	0.69	22.9	21.5	24.1	1.11
Ash, % (as is)	2.68	2.50	2.88	0.14	2.50	2.25	2.70	0.13	2.53	2.28	2.73	0.16
Number of samples	5				9				9			

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REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(28) Free State Eastern Region				(29) Mpumalanga Southern Region				(30) Mpumalanga Eastern Region			
	<i>ave</i>	<i>min</i>	<i>max</i>	<i>stdev</i>	<i>ave</i>	<i>min</i>	<i>max</i>	<i>stdev</i>	<i>ave</i>	<i>min</i>	<i>max</i>	<i>stdev</i>
<u>Grading:</u>												
1. Damaged sunflower seed, %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-
2. Screenings, %	1.45	1.08	2.14	0.39	0.67	0.22	2.02	0.68	1.44	-	-	-
3. Sclerotia, %	0.07	0.00	0.20	0.10	0.21	0.00	0.80	0.32	0.00	-	-	-
4. Foreign Matter, %	1.50	0.80	2.22	0.55	0.38	0.10	0.80	0.34	1.20	-	-	-
5. Deviations in 2, 3 and 4 collectively, %: Provided that such deviations are individually within the limits of said items	3.02	2.30	4.36	0.85	1.26	0.50	2.92	0.94	2.64	-	-	-
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	-	-	-
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	-	-	-
Number of samples	6				6				1			
<u>Nutritional analysis:</u>												
Moisture, % (5 hr, 105 °C)	4.8	4.2	5.3	0.37	5.1	4.4	5.5	0.37	5.0	-	-	-
Crude Protein, % (as is)	13.79	12.47	15.33	1.06	15.33	13.58	18.35	1.68	16.43	-	-	-
Crude Fat, % (as is)	40.4	40.0	40.8	0.36	39.5	35.7	43.3	2.83	40.6	-	-	-
Crude Fibre, % (as is)	22.6	20.5	24.4	1.26	22.7	21.2	25.5	1.74	20.7	-	-	-
Ash, % (as is)	2.65	2.43	2.93	0.16	2.54	2.31	2.64	0.12	2.75	-	-	-
Number of samples	6				6				1			

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REGIONAL SUNFLOWER QUALITY

PRODUCTION REGION	(31) Mpumalanga Central Region				(33) Mpumalanga Northern Region				(35) Limpopo Region			
	ave	min	max	stdev	ave	min	max	stdev	ave	min	max	stdev
<u>Grading:</u>												
1. Damaged sunflower seed, %	0.00	-	-	-	0.00	0.00	0.00	0.00	0.06	0.00	1.08	0.26
2. Screenings, %	1.20	-	-	-	1.55	1.10	2.12	0.52	1.61	0.04	4.00	1.25
3. Sclerotia, %	0.00	-	-	-	0.10	0.00	0.30	0.17	0.00	0.00	0.00	0.00
4. Foreign Matter, %	9.20	-	-	-	1.34	0.32	2.50	1.10	1.23	0.00	6.00	1.33
5. Deviations in 2, 3 and 4 collectively, %: Provided that such deviations are individually within the limits of said items	10.40	-	-	-	2.99	1.42	4.24	1.44	2.84	0.04	7.10	1.88
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				3				17			
<u>Nutritional analysis:</u>												
Moisture, % (5 hr, 105 °C)	4.1	-	-	-	4.5	4.4	4.6	0.12	5.2	4.4	6.0	0.46
Crude Protein, % (as is)	15.29	-	-	-	14.06	13.26	14.77	0.76	15.62	13.94	18.22	1.38
Crude Fat, % (as is)	44.8	-	-	-	41.0	39.2	42.4	1.65	39.1	35.2	44.2	2.55
Crude Fibre, % (as is)	18.2	-	-	-	22.2	21.8	22.7	0.46	21.9	16.4	26.8	2.77
Ash, % (as is)	3.02	-	-	-	2.27	2.18	2.35	0.09	2.50	2.26	2.75	0.12
Number of samples	1				3				17			