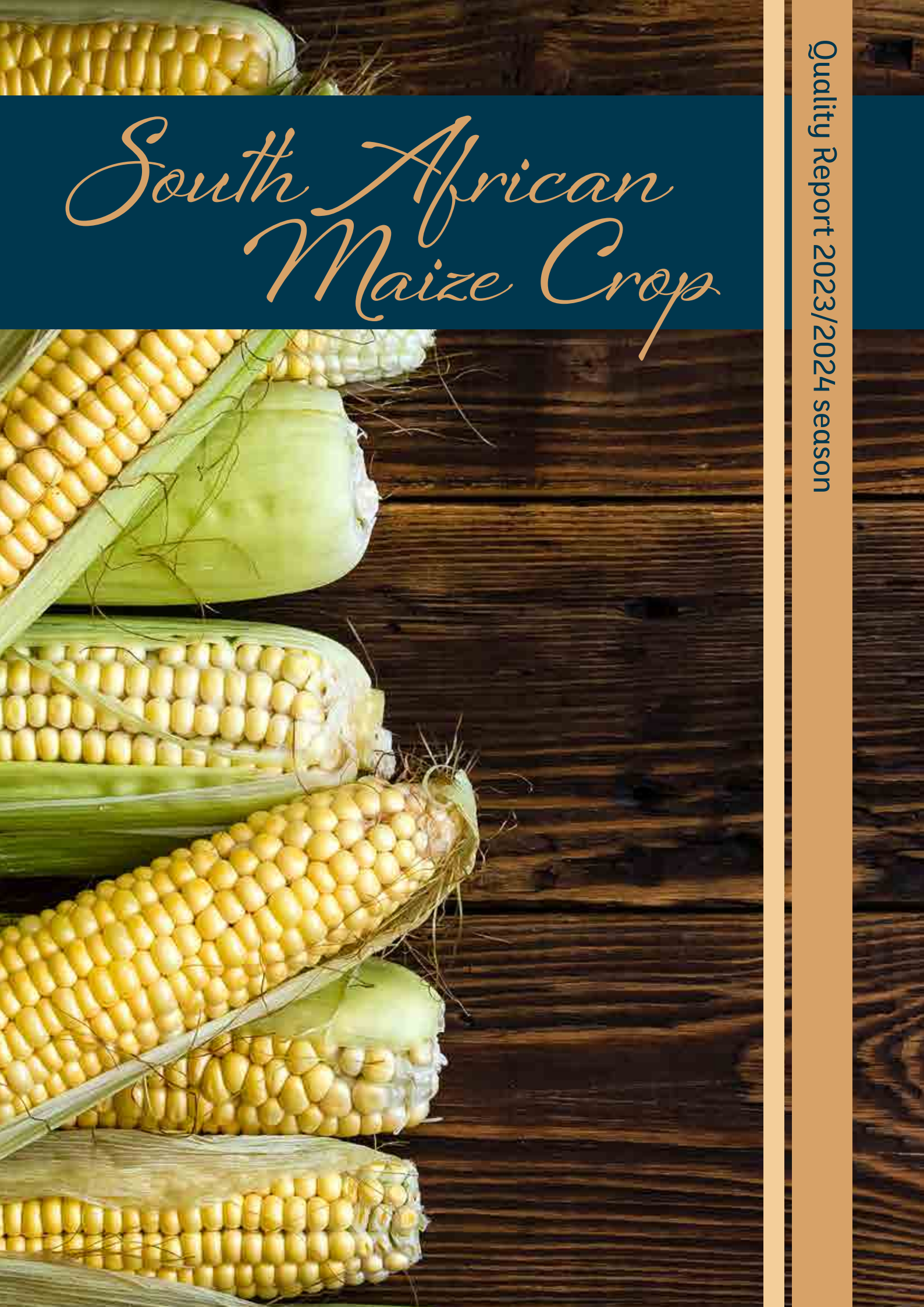
South African Maize Crop

Quality Report 2023/2024 season



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South African

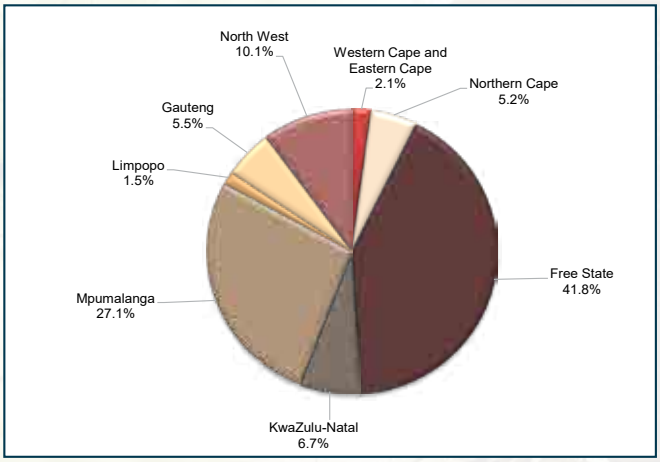
Commercial Maize Quality for the 2023/2024 season

Acknowledgments
With gratitude to:

- The Maize Trust for financial support in conducting this survey.
- Agbiz Grain and its members for providing the samples to make this survey possible.
- The Crop Estimates Committee (CEC) of the Department of Agriculture (NDA) for providing production related figures.
- South African Grain Information Service (SAGIS) for providing supply and demand figures relating to maize and maize products.

Introduction

During the 2024 harvesting season, a representative sample of each delivery of maize at the various grain intake points was taken according to the prescribed grading regulation. The sampling procedure for the samples used in this survey is described on page 115. A total of 1 000 composite samples, representing white and yellow maize of each production region, were received and analysed to determine the quality. The samples consisted of 518 white and 482 yellow maize samples.



Graph 1: Provincial contribution to the production of the 2023/24 maize crop

Figures provided by the CEC.

The quality attributes tested, include:
RSA grading: Samples were graded according to the following factors, as defined in the South African grading regulation: defective kernels above and below the 6.35 mm sieve, total defective kernels, foreign matter, other colour kernels and combined deviations.

USA grading: Samples were graded according to the American grading regulations to determine the following factors: Test weight per bushel (pounds), heat damaged kernels, total damaged kernels, broken corn and foreign matter (BCFM) and other colour.

Nutritional values: Moisture, crude protein, crude fat, crude fibre and starch.
Physical quality factors: Test weight (kg/hl), 100 kernel mass, kernel size, breakage susceptibility, stress cracks, milling index and grit yield.
All white maize samples were milled on the Bühler MCKA maize mill, while 50% of the samples were also milled on the Roff laboratory maize mill for comparison purposes. The whiteness index of all the milled maize meal samples were determined.

Mycotoxin analyses were performed on 350 samples representative of white and yellow maize produced per region.

Please refer to pages 115 - 119 for the methodologies followed.

The maize crop quality survey is performed annually by the Southern African Grain Laboratory NPC (SAGL). SAGL was established in 1997 on request of the Grain Industry. SAGL is an ISO 17025 accredited testing laboratory and participates in a number of proficiency testing schemes, both nationally and internationally, as part of our ongoing quality assurance procedures to demonstrate technical competency and international comparability.

The results of this, the 27th survey, as well as previous years' surveys are available on the SAGL website (www.sagl.co.za). The report, in an easy to page format, is also available on the website. Hard copy reports are distributed to industry stakeholders and interested parties.

In addition to the quality information, production figures (obtained from the Crop Estimates Committee (CEC)) relating to hectares planted, tons produced and yields obtained on a national as well as provincial basis, over an eleven season period, are provided in this report. SAGIS (South African Grain Information Service) supply and demand figures over several years are provided in table and graph format, also import and export data. Information on maize processed per province as well as the manufacture, import and export of maize products is also included in this report. The national grading regulations as published in Government Gazettes of 16 February 2024 as well as 1 March 2024, are provided on pages 124 to 134.

The long-term goal of this crop quality survey is the annual determination of the quality of the commercial maize crop on a national level. This valuable data set reveals general tendencies, highlights quality differences in the commercial maize produced in different local production regions for local market requirements and provides important information on the quality of commercial maize intended for export. During seasons when maize is imported for domestic use, the quality of the imported maize can be compared to that of locally produced maize.

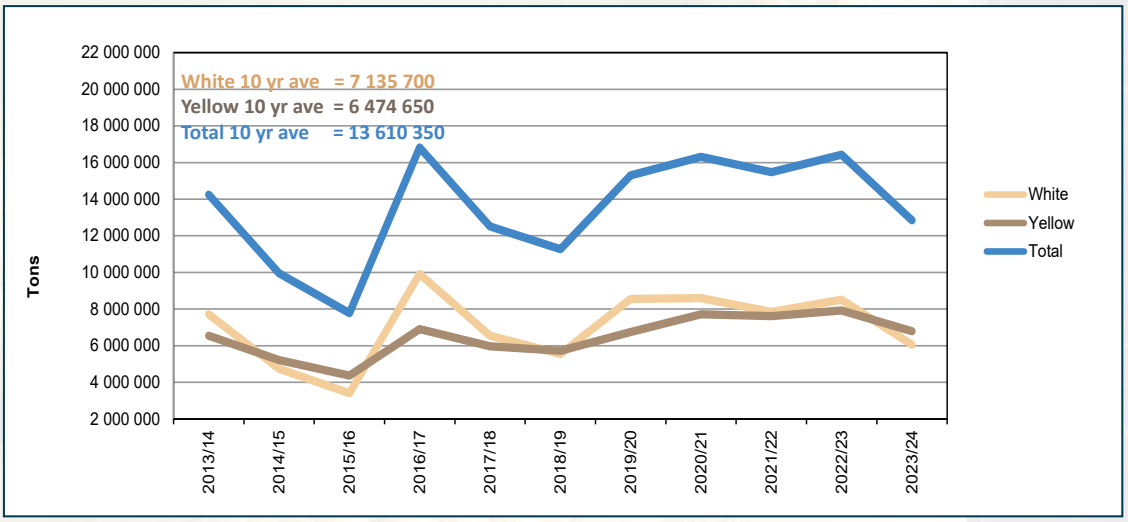
The quality data generated is also referred to by various role players in the maize industry, adds value to research projects and serves as the basis for discussions when maize grading regulations have to be revised.

With funding from the Maize Trust, a data mining project on thirteen season's crop quality data was conducted and the results transferred to a Geographic Information System (GIS) map system, reflecting all the maize producing areas of South Africa. These maps are updated annually.

Production

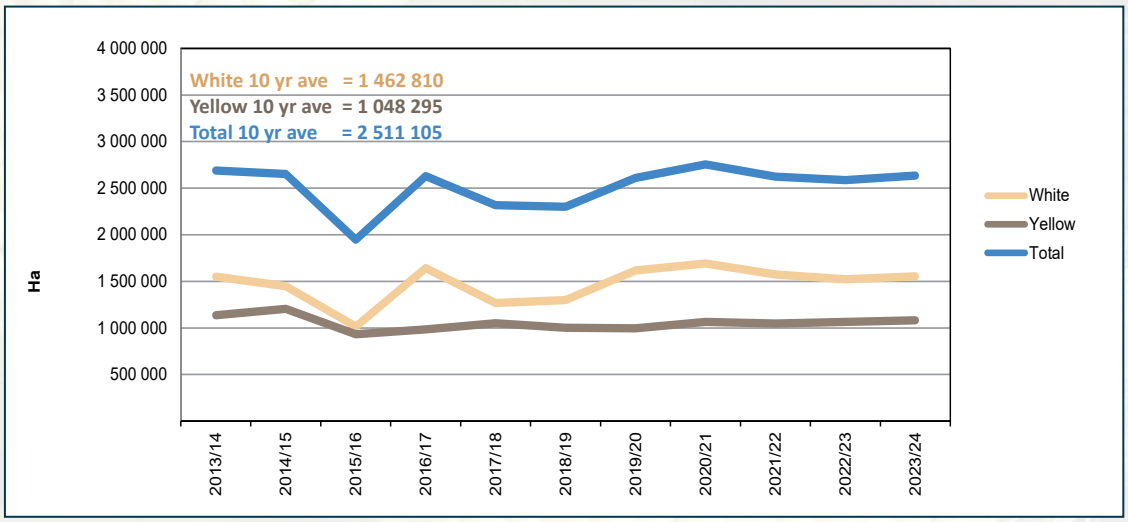
The final figure for the 2023/24 season's commercial maize crop as overseen by the National Crop Estimates Liaison Committee (CELC) and shown in Graph 2, is 12 850 000 tons. This figure represents a year-on-year decrease of almost 22% and is also almost 6% lower than the 10-year crop average (13 610 350 tons). White maize's contribution to the total production was 6 055 000 tons (47.1%) and that of yellow maize 6 795 000 tons (52.9%).

The national Crop Estimates Committee's (CEC) estimated total production figures were revised, using the South African Grain Information Services' (SAGIS) published figures of actual deliveries as basis for the calculations. Figures from the maize utilisation survey, conducted by the Department of Agriculture, Land Reform and Rural Development (DALLRD) to determine on-farm usage and retentions as well as the telephonic survey conducted by the National Crop Statistics Consortium (NCSC), were added to the SAGIS delivery figures to calculate the final crop production figures.



Graph 2: Maize production in RSA from 2013/14 to 2023/24

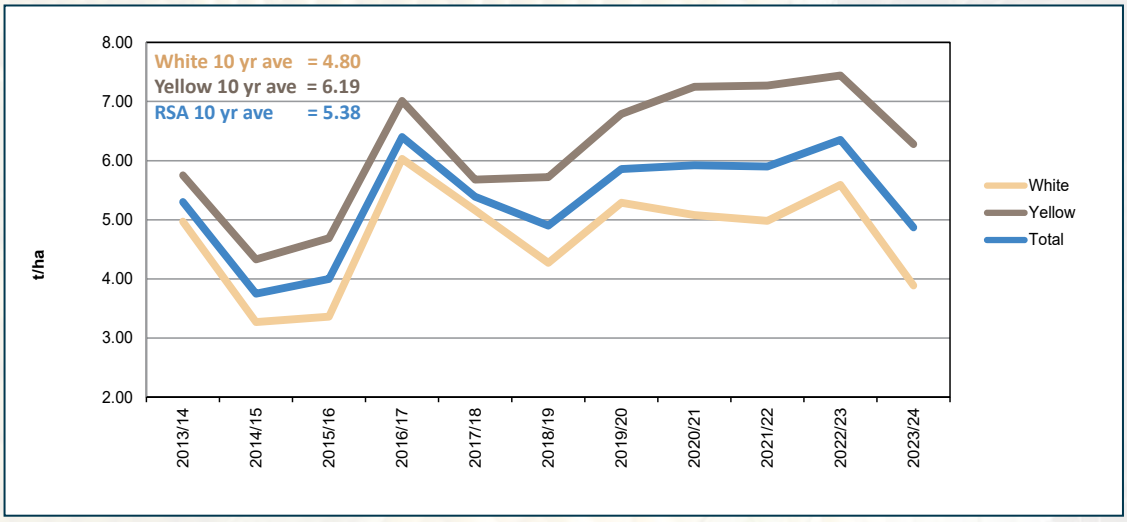
As shown in Graph 3, the total area utilised for maize production in the 2023/24 season was 2 636 250 hectares, representing increases of 1.9% compared to the previous season and 5% compared to the 10-year average. White maize was produced on 1 554 750 hectares and yellow maize on 1 081 500 hectares (1 521 300 and 1 064 800 hectares respectively in the 2022/23 season).



Graph 3: Total RSA area utilised for maize production from 2013/14 to 2023/24

Graph 4 depicts the maize yield of 4.87 tons per hectare (t/ha), which was 23% lower than the previous season (6.35 t/ha) and 9.5% lower than the 10-year average (5.38 t/ha). White maize yielded 3.89 t/ha and yellow maize 6.28 t/ha (5.59 t/ha and 7.44 t/ha respectively during the previous season).

According to the CEC, the maize area planted in the non-commercial agricultural sector is estimated at 347 000 ha, representing a 3.24% decrease compared to the 358 620 ha of the previous season. The expected maize crop for this sector is 575 000 tons, which is 13.41% less than the 664 040 tons of last season. Approximately 46% of non-commercial maize is produced in the Eastern Cape, followed by KwaZulu-Natal with 22%.



Graph 4: RSA Maize yield from 2013/14 to 2023/24

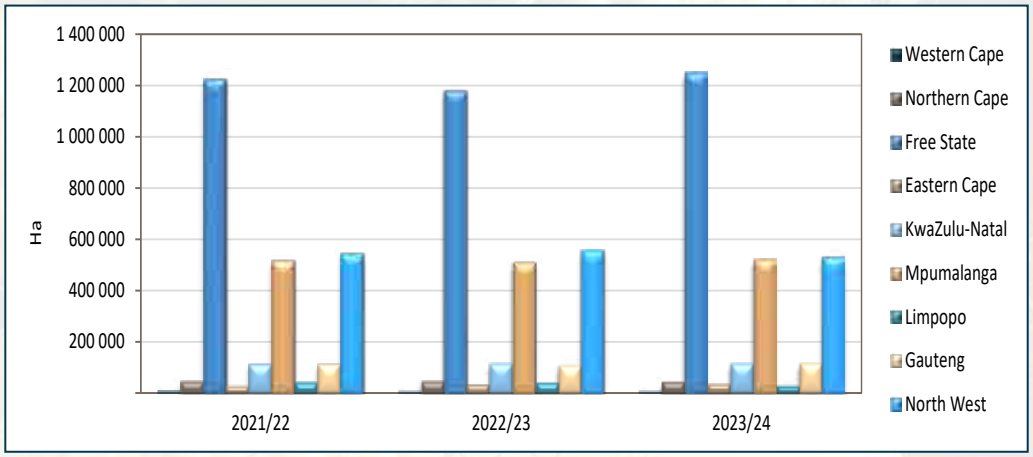
The major commercial maize-producing provinces are the Free State, Mpumalanga and North West, contributing 79% of the total maize production in the RSA (Table 1). The Free State produced 5 377 000 tons of maize on 1 250 000 hectares with a yield of 4.30 t/ha. Mpumalanga produced 3 474 000 tons of maize on 520 000 hectares with a yield of 6.68 t/ha and North West produced 1 298 500 tons of maize on 530 000 hectares yielding 2.45 t/ha. Yellow maize contributed 71.7% of the total maize production in Mpumalanga while the majority of maize produced in the Free State (63%) and North West (74.7%) was white.

Table 1: Maize production overview - 2023/24 season

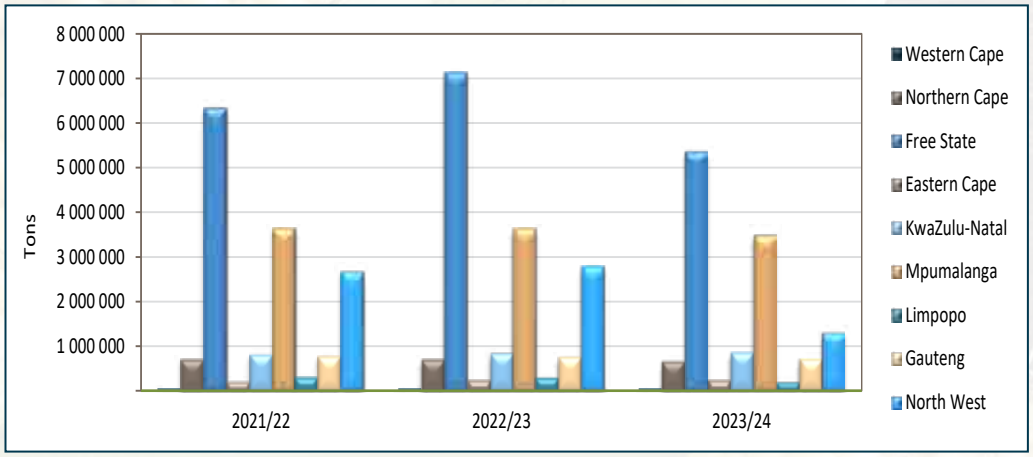
Province	Type of production	White			Yellow		
		Hectares planted, ha	Production, tons	Yield, t/ha	Hectares planted, ha	Production, tons	Yield, t/ha
Western Cape	Dryland	-	-	-	-	-	-
	Irrigation	250	2 300	9.20	3 500	32 200	9.20
	Total	250	2 300	9.20	3 500	32 200	9.20
Northern Cape	Dryland	10	50	5.00	100	425	4.25
	Irrigation	1 490	18 850	12.65	41 900	648 475	15.48
	Total	1 500	18 900	12.60	42 000	648 900	15.45
Free State	Dryland	816 000	3 242 000	3.97	374 000	1 553 000	4.15
	Irrigation	19 000	143 000	7.53	41 000	439 000	10.71
	Total	835 000	3 385 000	4.05	415 000	1 992 000	4.80
Eastern Cape	Dryland	4 200	18 400	4.38	18 000	85 050	4.73
	Irrigation	1 800	22 400	12.44	9 000	106 650	11.85
	Total	6 000	40 800	6.80	27 000	191 700	7.10
KwaZulu-Natal	Dryland	39 500	216 000	5.47	475 000	352 000	7.41
	Irrigation	7 500	70 700	9.43	19 500	224 200	11.50
	Total	47 000	286 700	6.10	67 000	576 200	8.60
Mpumalanga	Dryland	151 700	903 000	5.95	337 000	2 258 000	6.70
	Irrigation	8 300	81 000	9.76	23 000	232 000	10.09
	Total	160 000	984 000	6.15	360 000	2 490 000	6.92
Limpopo	Dryland	4 900	20 800	4.24	4 000	12 000	3.00
	Irrigation	6 100	54 000	8.85	11 000	108 000	9.82
	Total	11 000	74 800	6.80	15 000	120 000	8.00
Gauteng	Dryland	50 400	257 000	5.10	53 400	372 350	6.13
	Irrigation	3 600	35 500	9.86	8 600	88 150	10.25
	Total	54 000	292 500	5.42	62 000	415 500	6.70
North West	Dryland	425 500	857 000	2.01	75 000	188 000	2.51
	Irrigation	14 500	113 000	7.79	15 000	140 500	9.37
	Total	440 000	970 000	2.20	90 000	328 500	3.65
RSA	**Dryland**	**1 492 210**	**5 514 250**	**3.70**	**909 000**	**4 755 825**	**5.25**
	Irrigation	**62 540**	**540 750**	**8.65**	**172 500**	**2 019 175**	**11.71**
	Total	**1 554 750**	**6 055 000**	**3.89**	**1 081 500**	**6 795 000**	**6.28**

Figures provided by the CEC.

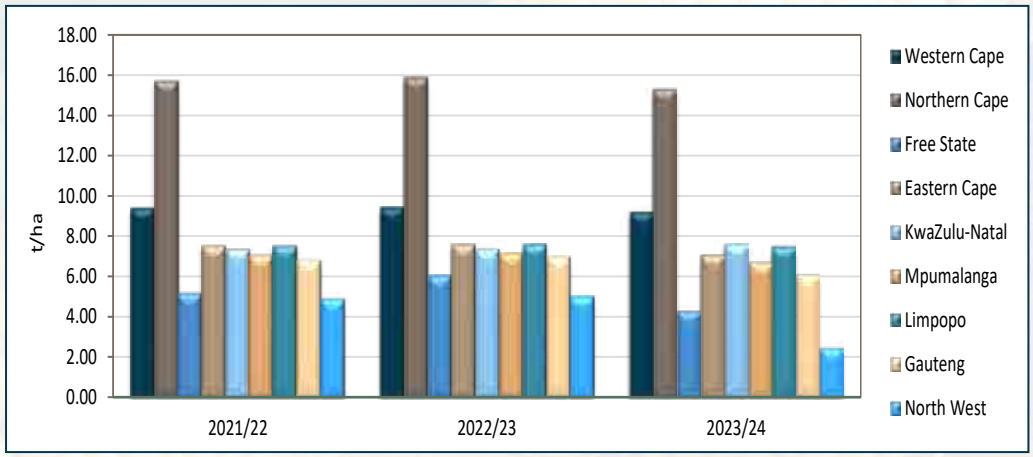
Please see graphs 5 to 7 for provincial figures of area planted, production and yield over the last three seasons.



Graph 5: Area utilised for maize production (dryland and/or irrigation) per province over three seasons



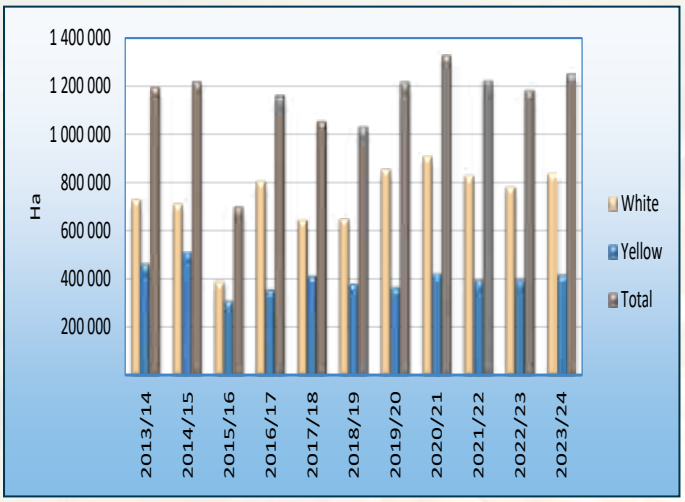
Graph 6: Maize production (dryland and/or irrigation) per province over three seasons



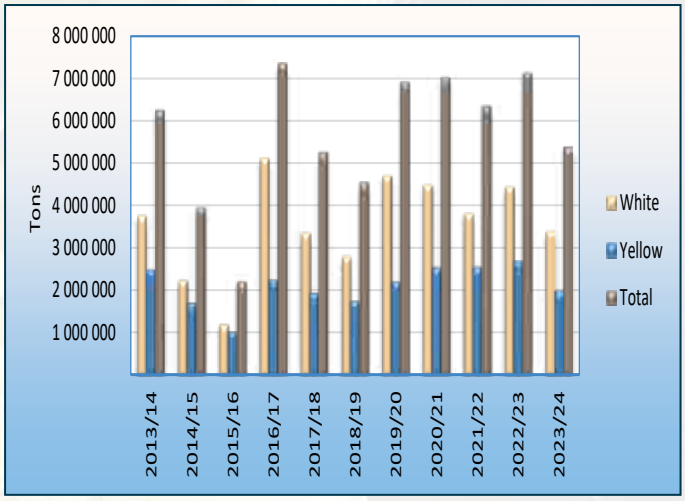
Graph 7: Maize yield (dryland and/or irrigation) per province over three seasons

Figures provided by the CEC.

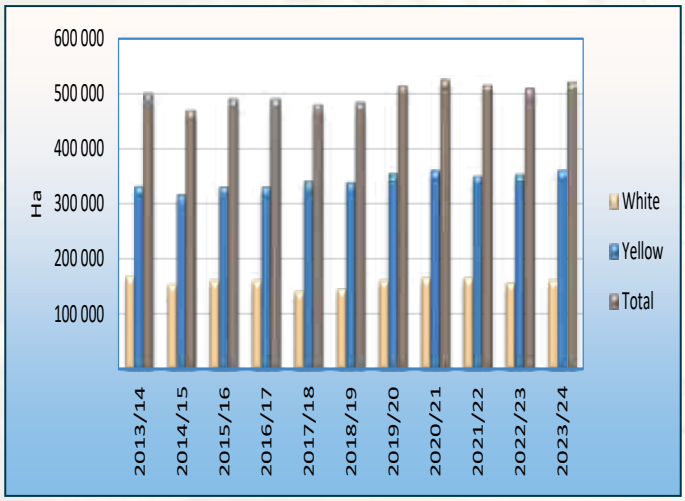
Graphs 8 to 13 provide an overview of the area planted and production figures for the Free State, Mpumalanga and North West from the 2013/14 to 2023/24 seasons.



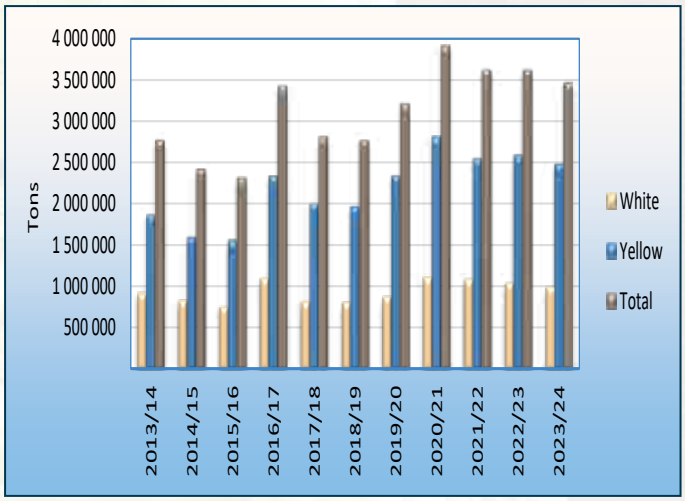
Graph 8: Area utilised for maize production in the Free State since 2013/14



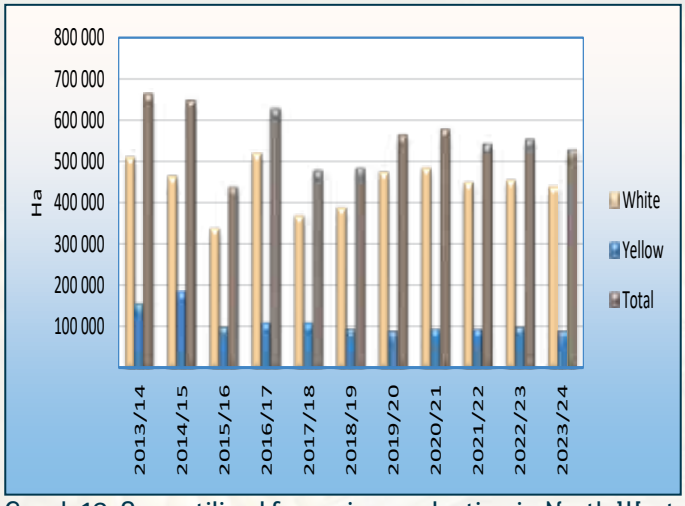
Graph 9: Maize production in the Free State since 2013/14



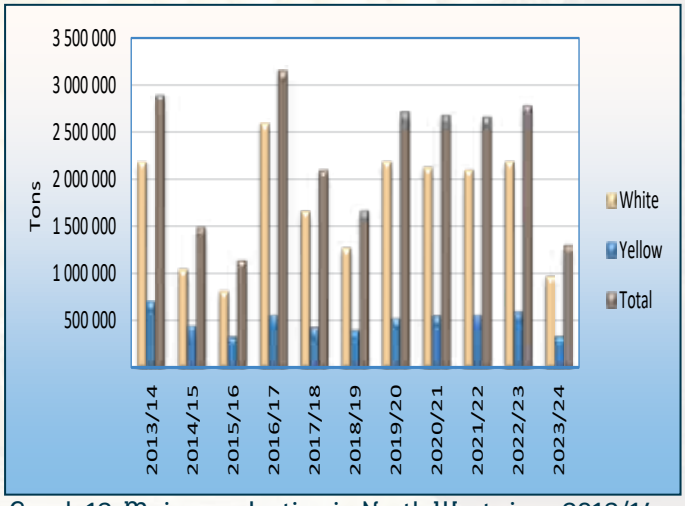
Graph 10: Area utilised for maize production in Mpumalanga since 2013/14



Graph 11: Maize production in Mpumalanga since 2013/14



Graph 12: Area utilised for maize production in North West since 2013/14



Graph 13: Maize production in North West since 2013/14

Figures provided by the CEC.

Supply and Demand

World maize production for the 2023/24 season was set at 1 233.7 million tons according to the *International Grains Council Grain Market Report GMR 570 – 23 October 2025*, with the major maize producing countries being the USA (389.7 million tons), China (288.8 million tons) and Brazil (131.9 million tons). The USA (58.2 million tons) and Brazil (54.0 million tons) were the biggest exporters of maize during the 2023/24 season, followed by Ukraine and Argentina. World maize usage figures were 140.9, 325.3 and 727.0 million tons respectively for food, industrial and feed purposes. World production for the 2024/25 season is estimated at 1 238.8 million tons and the 2025/26 figure is forecasted to be 1 297.3 million tons.

During the 2024/2025 marketing year, South Africa imported a total of 937 559 tons of maize. This is the largest amount of maize imported since the 2016/17 marketing season. The 10-year import average is 586 011 tons.

Yellow maize comprised 87% of the imported maize, with Argentina the main country of origin (86%). Yellow maize was also imported from Brazil and the USA. See Table S5 and Graph 28 on page 16.

119 394 tons of white maize was imported from the USA. The 10-year white maize import figure is 87 192 tons. See Table S4 and Graph 27 on page 15.

Please see also pages 17 to 21 for a summary of the quality of imported yellow and white maize compared to that of the local crop.

4 918 377 tons of white maize was processed (24% less than during the previous marketing season), with 98% going towards human consumption and the remainder towards animal feed/industrial use and gristing.

The amount of yellow maize processed increased by 26% to 6 649 505 tons compared to the 2023/24 marketing season. Almost 91% of this amount was used for animal feed/industrial use.

South African whole white maize exports amounted to 1 491 687 tons, with 97% exported to neighbouring countries, mainly Zimbabwe, but also Namibia, Botswana and Mozambique. Last season, 1 269 650 tons of white maize was exported. The 10-year average is 952 960 tons.

Whole yellow maize exports totaled 780 994 tons, a decline of 64% compared to the 2 173 348 tons of the previous season and the 10-year average of 1 345 588 tons. Neighbouring countries like Zimbabwe and Botswana was also the main buyers of local yellow maize.

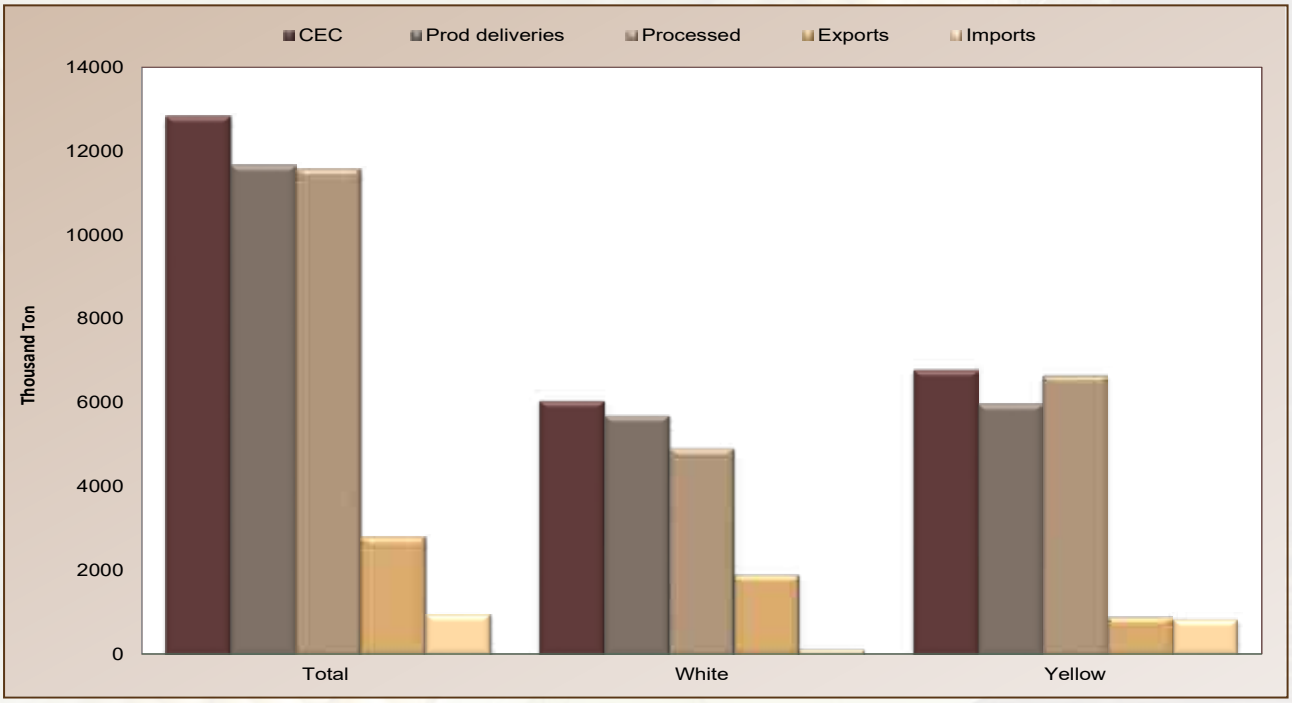
White maize ending stock as on 30 April 2025 was 365 498 tons, 73% less than at the end of the 2023/24 marketing season and 70% less than the 10-year figure of 1 222 282 tons.

Yellow maize ending stock was 288 292 tons, 73% less than the previous season and 64% less than the 10-year average of 794 943 tons.

Please refer to the tables and graphs on pages 9 to 14 for supply and demand figures of total, white and yellow maize over several seasons.

Whole maize (total/white/yellow) processing figures per province as well as maize product (manufactured/imported/exported) figures over several seasons are provided on pages 22 to 24 and pages 25 to 28.

Local Supply and Demand figures for the 2024/25 marketing season are provided in Graph 14 below.



Graph 14: Maize supply and demand overview 2024/25 marketing season

Information provided by SAGIS.

Table: S1

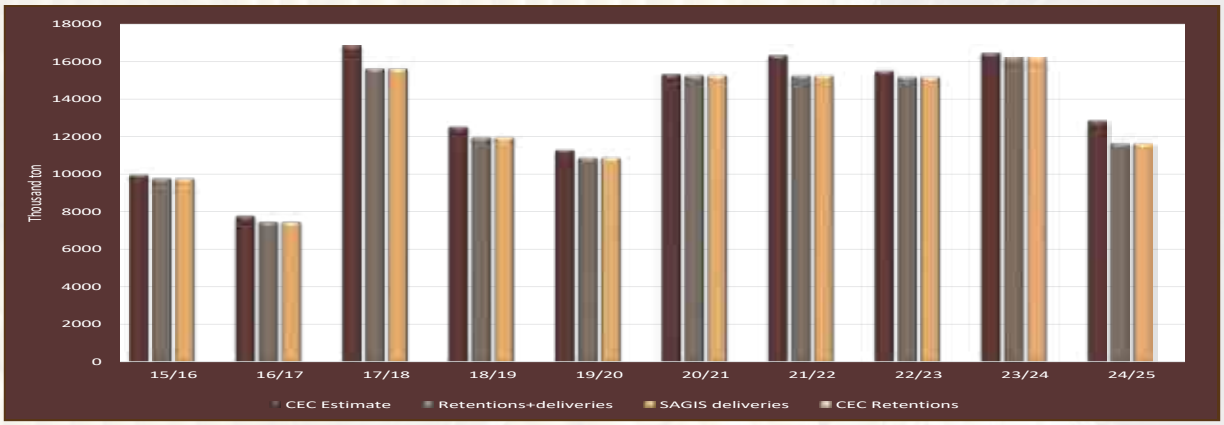
South African Grain Information Service NPC
Suid Afrikaanse Graaninligtingsdiens NWM
Reg no. 1997/019186/08

TOTAL MAIZE: SUPPLY AND DEMAND TABLE BASED ON SAGIS' INFO (TON)

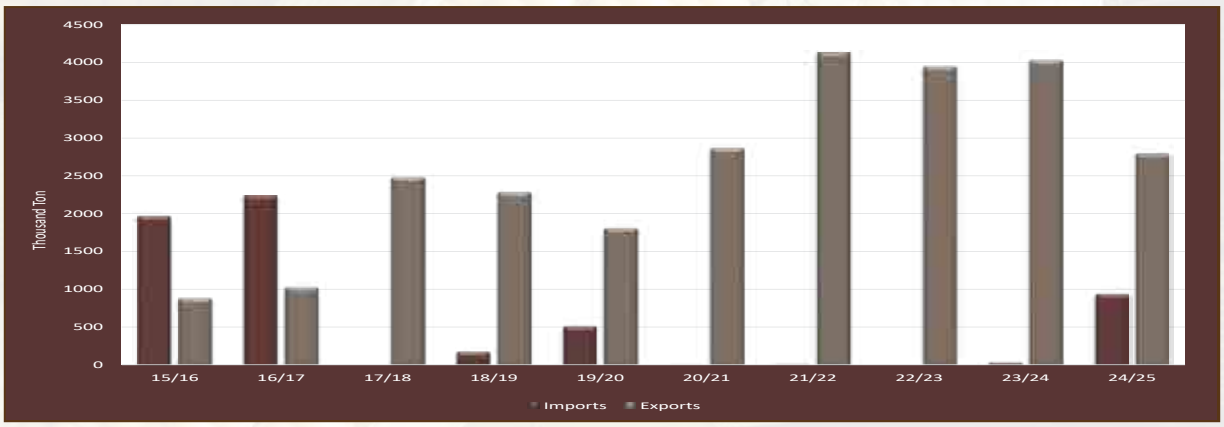
Publication date: 2025-08-26

	Marketing Season (May - Apr)																		Current Season May - Jul	10 Year average
Season	**06/07**	**07/08**	**08/09**	**09/10**	**10/11**	**11/12**	**12/13**	**13/14**	**14/15**	**15/16**	**16/17**	**17/18**	**18/19**	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**	**24/25**	**25/26**	**2015/16-2024/25**
																				***	
																				3	
CEC (Crop Estimate)	6 618 000	7 125 000	12 700 000	12 050 000	12 815 000	10 360 000	12 120 656	11 810 600	14 250 000	9 955 000	7 778 500	16 820 000	12 510 000	11 275 000	15 300 000	16 315 000	15 470 000	16 430 000	12 850 000	15 031 175	13 470 350
CEC (Retention)	480 000	337 000	554 000	389 000	527 000	474 000	433 000	457 810	550 000	0	0	0	0	0	0	0	0	0	0	0	0
SUPPLY																					
Opening stock (1 May)	3 169 000	2 070 000	1 049 000	1 581 000	2 131 000	2 336 000	994 000	1 417 393	589 028	2 073 635	2 471 067	1 094 638	3 689 476	2 663 086	1 000 601	2 116 906	2 124 219	1 953 931	2 404 540	653 790	2 159 210
Prod deliveries*	6 707 000	6 882 000	11 899 000	11 629 000	12 016 000	10 340 000	11 929 000	10 991 995	13 827 632	9 794 332	7 469 600	15 628 682	11 983 852	10 887 053	15 278 983	15 266 562	15 189 328	16 222 935	11 660 689	11 738 835	12 938 202
Imports	931 000	1 120 000	27 000	27 000	0	421 000	11 000	79 682	65 250	1 963 610	2 236 743	0	171 622	509 684	463	7 583	0	32 844	937 559	0	586 011
Surplus	32 000	29 000	30 000	68 000	77 000	54 000	42 000	122 608	26 153	52 930	44 417	46 657	22 173	22 336	20 079	43 389	24 045	20 198	46 141	3 559	34 237
Total Supply	**10 839 000**	**10 101 000**	**13 005 000**	**13 305 000**	**14 224 000**	**13 151 000**	**12 976 000**	**12 611 678**	**14 508 063**	**13 884 507**	**12 221 827**	**16 769 977**	**15 867 123**	**14 087 764**	**16 300 126**	**17 434 440**	**17 337 592**	**18 229 908**	**15 048 929**	**12 396 184**	**15 718 219**
DEMAND																					
Processed	7 660 000	8 029 000	8 613 000	8 658 000	8 857 000	8 941 000	8 935 000	9 348 670	9 926 519	10 248 994	9 838 709	10 299 680	10 690 977	11 106 412	11 201 202	11 087 127	11 353 240	11 753 244	11 567 882	2 933 912	10 914 747
-human	3 816 000	3 809 000	4 524 000	4 471 000	4 513 000	4 512 000	4 499 000	4 582 310	4 840 021	4 698 482	4 809 221	4 993 476	5 160 772	5 387 572	5 657 836	5 171 981	5 387 927	5 942 143	5 424 650	1 487 496	5 263 406
-animal/industrial	3 763 000	4 157 000	4 020 000	4 101 000	4 271 000	4 362 000	4 378 000	4 715 295	5 040 647	5 520 248	5 003 810	5 276 447	5 507 180	5 698 317	5 527 649	5 897 871	5 948 222	5 792 740	6 125 040	1 440 988	5 629 752
-gristing	81 000	63 000	69 000	86 000	73 000	67 000	58 000	51 065	45 851	30 264	25 678	29 757	23 025	20 523	15 717	17 275	17 091	18 361	18 192	5 428	21 588
-bio-fuel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Withdrawn by producers	241 000	217 000	273 000	291 000	267 000	142 000	138 000	148 909	124 508	76 888	94 948	102 906	64 264	57 104	35 736	36 663	28 857	15 820	8 259	1 560	52 145
Released to end-consumers	235 000	230 000	220 000	378 000	526 000	484 000	478 000	280 432	205 577	186 296	157 460	180 544	151 643	99 815	69 329	48 882	36 453	22 251	16 117	3 429	96 879
Net receipts(-)/disp(+)	36 000	42 000	49 000	51 000	44 000	15 000	62 000	12 043	22 100	21 451	9 770	15 663	13 095	8 654	9 163	2 338	3 434	3 010	4 352	627	9 093
Deficit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11 871	0	0	0	1 187
Total Exports	597 000	534 000	2 269 000	1 796 000	2 194 000	2 575 000	1 946 000	2 232 596	2 155 724	879 811	1 026 302	2 481 708	2 284 058	1 809 573	2 867 790	4 135 211	3 949 806	4 031 043	2 798 529	580 406	2 626 383
Products	49 000	62 000	107 000	126 000	128 000	129 000	133 000	176 978	198 319	186 383	189 112	192 874	213 592	360 812	320 926	403 225	297 531	588 045	525 848	120 719	327 835
African Countries	28 000	35 000	67 000	87 000	84 000	86 000	95 000	123 040	137 742	132 900	144 229	117 797	142 117	320 754	282 678	360 891	247 012	538 694	480 869	110 498	276 794
Other Countries	21 000	27 000	40 000	39 000	44 000	43 000	38 000	53 938	60 577	53 483	44 883	75 077	71 475	40 058	38 248	42 334	50 519	49 351	44 979	10 221	51 041
Whole maize	548 000	472 000	2 162 000	1 670 000	2 066 000	2 446 000	1 813 000	2 055 618	1 957 405	693 428	837 190	2 288 834	2 070 466	1 448 761	2 546 864	3 731 986	3 652 275	3 442 998	2 272 681	459 687	2 298 548
Border Posts	488 000	472 000	1 332 000	703 000	629 000	584 000	613 000	921 454	691 659	684 834	804 322	591 692	630 572	1 230 762	1 380 017	764 557	837 958	1 610 222	2 224 792	234 100	1 075 973
Harbours	60 000	0	830 000	967 000	1 437 000	1 862 000	1 200 000	1 134 164	1 264 326	8 594	32 868	1 697 142	1 439 894	217 999	1 166 847	1 166 847	2 814 317	1 832 776	47 889	225 587	1 042 517
Total Demand	**8 769 000**	**9 052 000**	**11 424 000**	**11 174 000**	**11 888 000**	**12 157 000**	**11 559 000**	**12 022 650**	**12 434 428**	**11 413 440**	**11 127 189**	**13 080 501**	**13 204 037**	**13 087 163**	**14 183 220**	**15 310 221**	**15 383 661**	**15 825 368**	**14 395 139**	**3 519 934**	**13 700 994**
Ending Stock (30 Apr)	2 070 000	1 049 000	1 581 000	2 131 000	2 336 000	994 000	1 417 000	589 028	2 073 635	2 471 067	1 094 638	3 689 476	2 663 086	1 000 601	2 116 906	2 124 219	1 953 931	2 404 540	653 790	8 876 250	2 017 225
- processed p/month	638 300	669 100	717 800	721 500	738 100	745 100	744 583	779 056	827 210	854 083	819 892	858 307	890 915	925 534	933 434	923 927	946 103	979 437	963 990	977 971	909 562
- months' stock	3.2	1.6	2.2	3.0	3.2	1.3	1.9	0.8	2.5	2.9	1.3	4.3	3.0	1.1	2.3	2.3	2.1	2.5	0.7	9.1	2

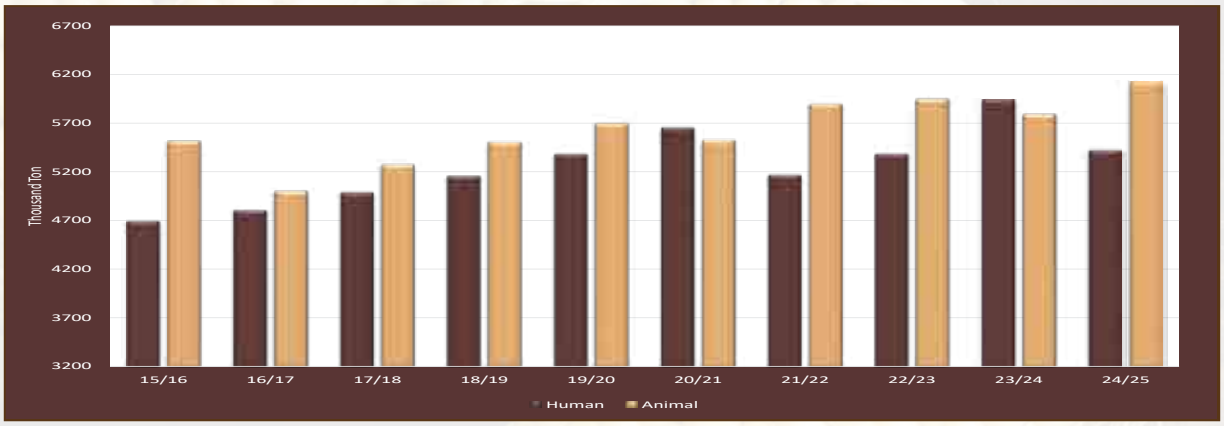
Note: *** Figures for current season up to date



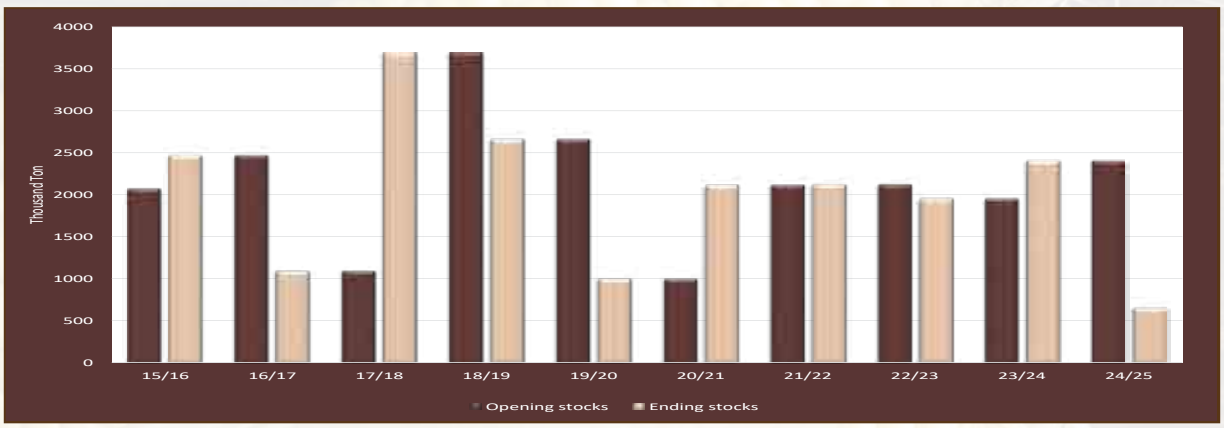
Graph 15: Maize: CEC Estimate, Retentions and SAGIS deliveries over 10 marketing seasons



Graph 16: Maize: Imports and exports over 10 marketing seasons



Graph 17: Maize: RSA consumption over 10 marketing seasons



Graph 18: Maize: Opening and ending stocks over 10 marketing seasons

Information provided by SAGIS.

Table: S2

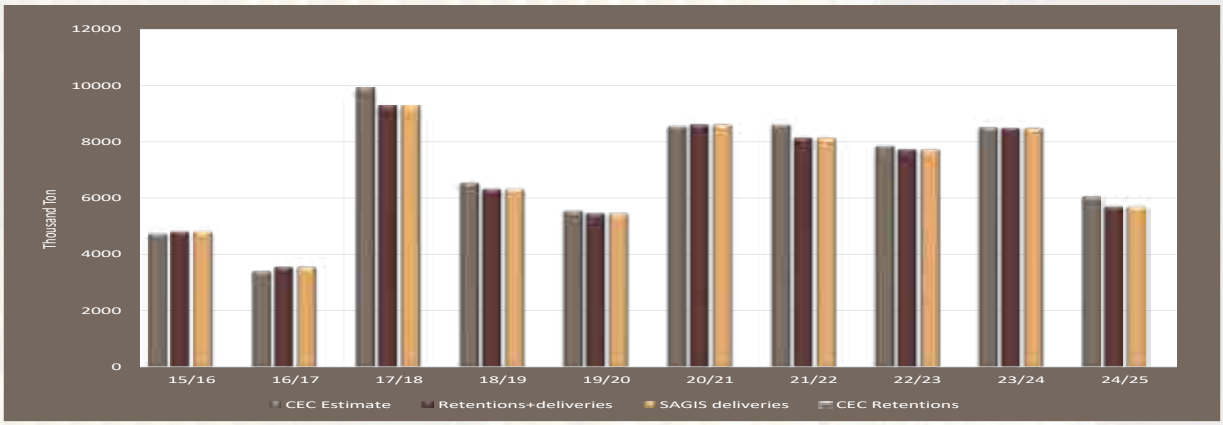
South African Grain Information Service NPC
Suid Afrikaanse Graaninligtingsdiens NWM
Reg no. 1997/019186/08

WHITE MAIZE: SUPPLY AND DEMAND TABLE BASED ON SAGIS' INFO (TON)

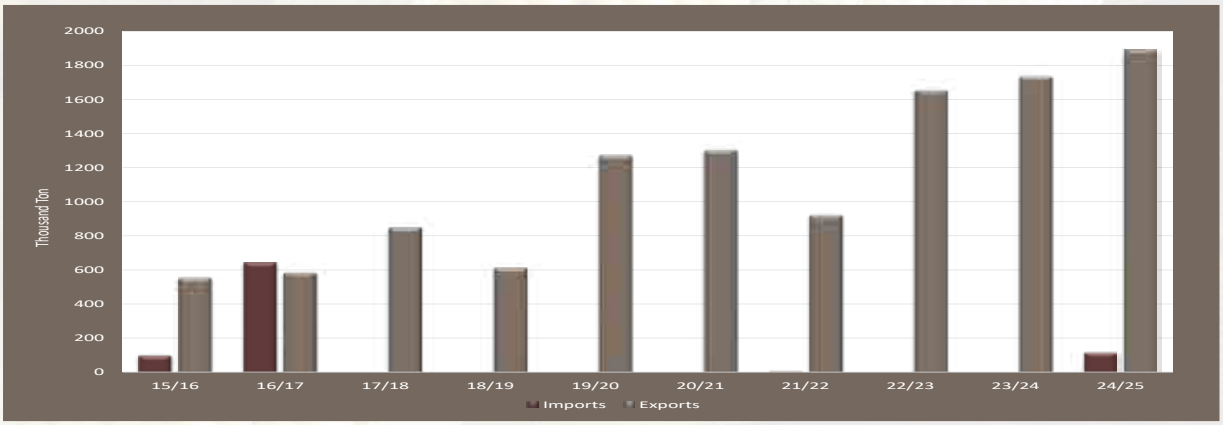
Publication date: 2025-08-26

	Marketing Season (May - Apr)																		Current Season May - Jul	10 Year average
Season	**06/07**	**07/08**	**08/09**	**09/10**	**10/11**	**11/12**	**12/13**	**13/14**	**14/15**	**15/16**	**16/17**	**17/18**	**18/19**	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**	**24/25**	**25/26**	**2015/16-2024/25**
																				***	
																				3	
CEC (Crop Estimate)	4 187 000	4 315 000	7 480 000	6 775 000	7 830 000	6 052 000	6 903 656	5 606 800	7 710 000	4 735 000	3 408 500	9 916 000	6 540 000	5 545 000	8 547 500	8 600 000	7 850 000	8 505 000	6 055 000	7 735 900	6 970 200
CEC (Retention)	144 000	11 000	120 000	83 000	119 000	100 000	114 000	110 910	150 000	0	0	0	0	0	0	0	0	0	0	0	0
SUPPLY																					
Opening stock (1 May)	2 301 000	1 630 000	618 000	762 000	1 362 000	1 609 000	518 000	757 214	274 318	1 282 581	1 307 867	597 837	2 428 653	1 798 998	473 964	1 354 953	1 465 537	1 082 640	1 346 876	365 498	1 313 991
Prod deliveries*	4 392 000	4 309 000	7 190 000	6 737 000	7 518 000	6 105 000	6 880 000	5 342 204	7 592 893	4 808 279	3 551 822	9 268 593	6 308 941	5 442 474	8 606 334	8 135 392	7 723 640	8 473 350	5 692 357	5 877 931	6 801 118
Imports	1 000	46 000	0	0	0	133 000	11 000	0	0	100 803	644 144	0	0	0	0	7 583	0	0	119 394	0	87 192
Surplus	20 000	19 000	25 000	48 000	45 000	18 000	22 000	69 859	8 808	17 474	31 994	21 751	1 403	0	11 215	25 495	0	10 840	26 868	1 855	14 704
Total Supply	6 714 000	6 004 000	7 833 000	7 547 000	8 925 000	7 865 000	7 431 000	6 169 277	7 876 019	6 209 137	5 535 827	9 888 181	8 738 997	7 241 472	9 091 513	9 523 423	9 189 177	9 566 830	7 185 495	6 245 284	8 217 005
DEMAND																					
Processed	4 385 000	4 751 000	4 922 000	4 555 000	5 871 000	5 374 000	5 047 000	4 808 674	5 862 438	4 319 697	4 331 787	6 533 966	6 283 320	5 449 415	6 410 756	7 116 774	6 421 561	6 470 653	4 918 377	1 335 982	5 825 631
-human	3 526 000	3 552 000	4 198 000	4 125 000	4 157 000	4 119 000	4 095 000	4 118 448	4 361 295	4 183 067	4 232 583	4 459 504	4 594 123	4 809 569	5 073 886	4 697 765	4 827 300	5 364 513	4 813 933	1 302 932	4 705 624
-animal/industrial	787 000	1 142 000	662 000	362 000	1 658 000	1 202 000	904 000	651 925	1 469 002	118 522	86 153	2 061 649	1 677 236	629 076	1 325 959	2 407 049	1 583 331	1 096 958	97 257	31 033	1 108 319
-gristing	72 000	57 000	62 000	68 000	56 000	53 000	48 000	38 301	32 141	18 108	13 051	12 813	11 961	10 770	10 911	11 960	10 930	9 182	7 187	2 017	11 687
-bio-fuel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Withdrawn by producers	112 000	107 000	111 000	81 000	108 000	46 000	36 000	32 409	36 940	13 385	14 083	35 885	12 844	13 111	10 089	13 766	15 442	11 260	6 054	1 386	14 592
Released to end-consumers	80 000	69 000	45 000	62 000	189 000	126 000	95 000	43 000	38 934	13 987	5 660	30 125	22 946	17 649	5 827	3 404	1 905	1 325	200	167	10 303
Net receipts(-)/disp(+)	27 000	28 000	27 000	10 000	22 000	7 000	28 000	1 953	14 319	-2 862	-963	7 583	4 238	6 282	5 413	-492	1 233	1 783	1 763	1 672	2 398
Deficit	0	0	0	0	0	0	0	0	0	0	0	0	0	5 605	0	0	11 871	0	0	0	1 748
Total Exports	480 000	431 000	1 966 000	1 477 000	1 126 000	1 794 000	1 468 000	1 008 923	640 807	557 063	587 423	851 969	616 651	1 275 446	1 304 475	924 434	1 654 525	1 734 933	1 893 603	225 388	1 140 052
Products	20 000	31 000	69 000	69 000	77 000	60 000	68 000	82 877	93 307	83 636	41 042	42 038	72 280	236 537	182 824	189 492	155 871	465 283	401 916	87 118	187 092
African Countries	14 000	24 000	57 000	58 000	62 000	47 000	56 000	72 032	77 930	73 061	36 573	40 695	70 726	236 162	182 297	186 977	153 806	464 760	401 167	86 997	184 622
Other Countries	6 000	7 000	12 000	11 000	15 000	13 000	12 000	10 845	15 377	10 575	4 469	1 343	1 554	375	527	2 515	2 065	523	749	121	2 470
Whole maize	460 000	400 000	1 897 000	1 408 000	1 049 000	1 734 000	1 400 000	926 046	547 500	473 427	546 381	809 931	544 371	1 038 909	1 121 651	734 942	1 498 654	1 269 650	1 491 687	138 270	952 960
Border Posts	400 000	400 000	1 241 000	566 000	509 000	439 000	462 000	727 989	538 128	473 427	520 200	417 327	397 657	836 596	953 736	560 540	616 837	1 158 047	1 448 121	120 404	738 249
Harbours	60 000	0	656 000	842 000	540 000	1 295 000	938 000	198 057	9 372	0	26 181	392 604	146 714	202 313	167 915	174 402	881 817	111 603	43 566	17 866	214 712
Total Demand	5 084 000	5 386 000	7 071 000	6 185 000	7 316 000	7 347 000	6 674 000	5 894 959	6 593 438	4 901 270	4 937 990	7 459 528	6 939 999	6 767 508	7 736 560	8 057 886	8 106 537	8 219 954	6 819 997	1 564 595	6 994 723
Ending Stock (30 Apr)	1 630 000	618 000	762 000	1 362 000	1 609 000	518 000	757 000	274 318	1 282 581	1 307 867	597 837	2 428 653	1 798 998	473 964	1 354 953	1 465 537	1 082 640	1 346 876	365 498	4 680 689	1 222 282
- processed p/month	365 400	395 900	410 200	379 600	489 300	447 800	420 583	400 723	488 537	359 975	360 982	544 497	523 610	454 118	534 230	593 065	535 130	539 221	409 865	445 327	485 469
- months' stock	4.5	1.6	1.9	3.6	3.3	1.2	1.8	0.7	2.6	3.6	1.7	4.5	3.4	1.0	2.5	2.5	2.0	2.5	0.9	10.5	3

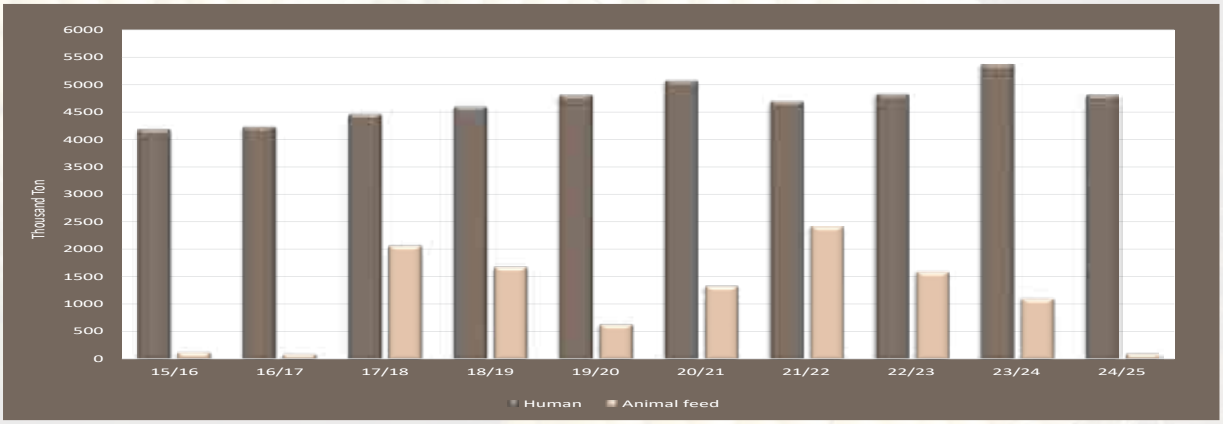
Note: *** Figures for current season up to date



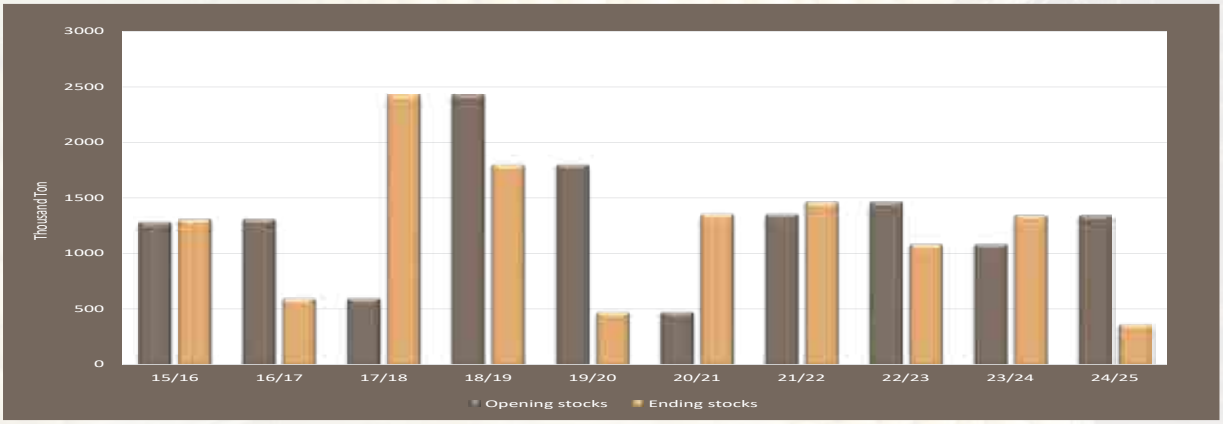
Graph 19: White Maize: CEC Estimate, Retentions and SAGIS deliveries over 10 marketing seasons



Graph 20: White Maize: Imports and exports over 10 marketing seasons



Graph 21: White Maize: RSA consumption over 10 marketing seasons



Graph 22: White Maize: Opening and ending stocks over 10 marketing seasons

Information provided by SAGIS.

Table: S3

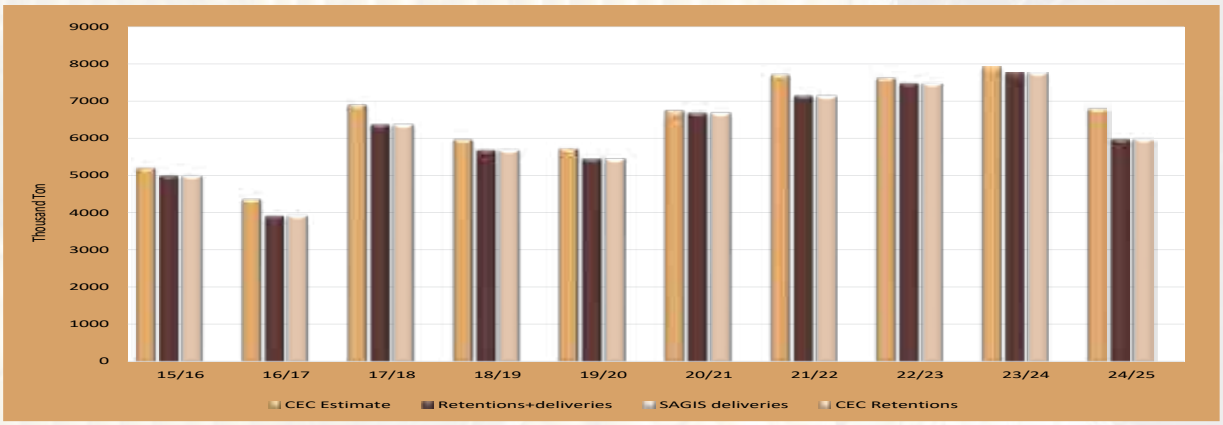
South African Grain Information Service NPC
Suid Afrikaanse Graaninligtingsdiens NWM
Reg no. 1997/019186/08

YELLOW MAIZE: SUPPLY AND DEMAND TABLE BASED ON SAGIS' INFO (TON)

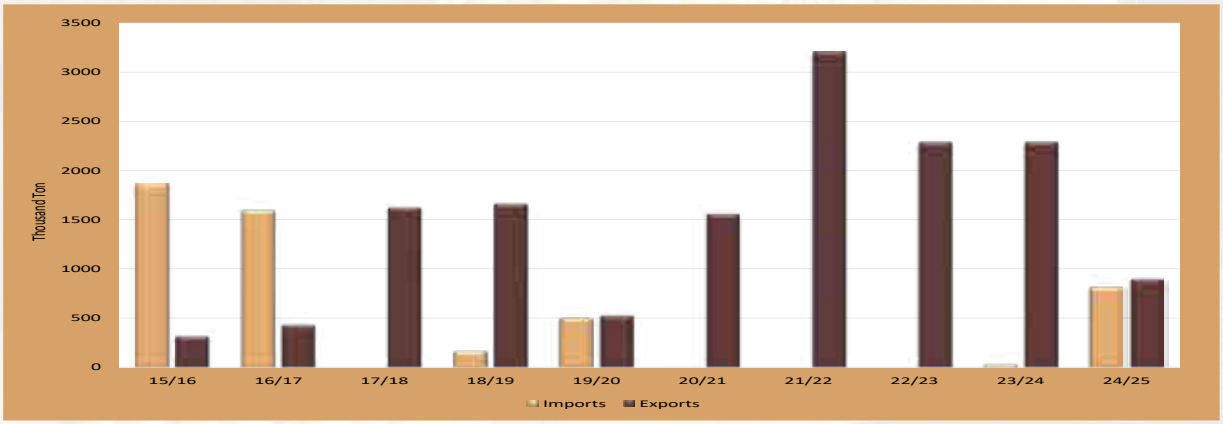
Publication date: 2025-08-26

	Marketing Season (May - Apr)																		Current Season May-Mar	10 Year average
Season	**06/07**	**07/08**	**08/09**	**09/10**	**10/11**	**11/12**	**12/13**	**13/14**	**14/15**	**15/16**	**16/17**	**17/18**	**18/19**	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**	**24/25**	**25/26**	**2015/16-2024/25**
																				***	
																				3	
CEC (Crop Estimate)	2 431 000	2 810 000	5 220 000	5 275 000	4 985 000	4 308 000	5 217 000	6 203 800	6 540 000	5 220 000	4 370 000	6 904 000	5 970 000	5 730 000	6 752 500	7 715 000	7 620 000	7 925 000	6 795 000	7 295 275	6 500 150
CEC (Retention)	336 000	326 000	434 000	306 000	408 000	374 000	319 000	346 900	400 000	0	0	0	0	0	0	0	0	0	0	0	0
SUPPLY																					
Opening stock (1 May)	868 000	440 000	431 000	819 000	769 000	727 000	476 000	660 179	314 710	791 054	1 163 200	496 801	1 260 823	864 088	526 637	761 953	658 682	871 291	1 057 664	288 292	845 219
Prod deliveries*	2 315 000	2 573 000	4 709 000	4 892 000	4 498 000	4 235 000	5 049 000	5 649 791	6 234 739	4 986 053	3 917 778	6 360 089	5 674 911	5 444 579	6 672 649	7 131 170	7 465 688	7 749 585	5 968 332	5 860 904	6 137 083
Imports	930 000	1 074 000	27 000	27 000	0	288 000	0	79 682	65 250	1 862 807	1 592 599	0	171 622	509 684	463	0	0	32 844	818 165	0	498 818
Surplus	12 000	10 000	5 000	20 000	32 000	36 000	20 000	52 749	17 345	35 456	12 423	24 906	20 770	27 941	8 864	17 894	24 045	9 358	19 273	1 704	20 093
Total Supply	**4 125 000**	**4 097 000**	**5 172 000**	**5 758 000**	**5 299 000**	**5 286 000**	**5 545 000**	**6 442 401**	**6 632 044**	**7 675 370**	**6 686 000**	**6 881 796**	**7 128 126**	**6 846 292**	**7 208 613**	**7 911 017**	**8 148 415**	**8 663 078**	**7 863 434**	**6 150 900**	**7 501 214**
DEMAND																					
Processed	3 275 000	3 278 000	3 691 000	4 103 000	2 986 000	3 567 000	3 888 000	4 539 996	4 064 081	5 929 297	5 506 922	3 765 714	4 407 657	5 656 997	4 790 446	3 970 353	4 931 679	5 282 591	6 649 505	1 597 930	5 089 116
-human	290 000	257 000	326 000	346 000	356 000	393 000	404 000	463 862	478 726	515 415	576 638	533 972	566 649	578 003	583 950	474 216	560 627	577 630	610 717	184 564	557 782
-animal/industrial	2 976 000	3 015 000	3 358 000	3 739 000	2 613 000	3 160 000	3 474 000	4 063 370	3 571 645	5 401 726	4 917 657	3 214 798	3 829 944	5 069 241	4 201 690	3 490 822	4 364 891	4 695 782	6 027 783	1 409 955	4 521 433
-gristing	9 000	6 000	7 000	18 000	17 000	14 000	10 000	12 764	13 710	12 156	12 627	16 944	11 064	9 753	4 806	5 315	6 161	9 179	11 005	3 411	9 901
-bio-fuel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Withdrawn by producers	129 000	110 000	162 000	210 000	159 000	96 000	102 000	116 500	87 568	63 503	80 865	67 021	51 420	43 993	25 647	22 897	13 415	4 560	2 205	174	37 553
Released to end-consumers	155 000	161 000	175 000	316 000	337 000	358 000	383 000	237 432	166 643	172 309	151 800	150 419	128 697	82 166	63 502	45 478	34 548	20 926	15 917	3 262	86 576
Net receipts(-)/disp(+)	9 000	14 000	22 000	41 000	22 000	8 000	34 000	10 090	7 781	24 313	10 733	8 080	8 857	2 372	3 750	2 830	2 201	1 227	2 589	-1 045	6 695
Deficit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Exports	117 000	103 000	303 000	319 000	1 068 000	781 000	478 000	1 223 673	1 514 917	322 748	438 879	1 629 739	1 667 407	534 127	1 563 315	3 210 777	2 295 281	2 296 110	904 926	355 018	1 486 331
Products	29 000	31 000	38 000	57 000	51 000	69 000	65 000	94 101	105 012	102 747	148 070	150 836	141 312	124 275	138 102	213 733	141 660	122 762	123 932	33 601	140 743
African Countries	14 000	11 000	10 000	29 000	22 000	39 000	39 000	51 008	59 812	59 839	107 656	77 102	71 391	84 592	100 381	173 914	93 206	73 934	79 702	23 501	92 172
Other Countries	15 000	20 000	28 000	28 000	29 000	30 000	26 000	43 093	45 200	42 908	40 414	73 734	69 921	39 683	37 721	39 819	48 454	48 828	44 230	10 100	48 571
Whole maize	88 000	72 000	265 000	262 000	1 017 000	712 000	413 000	1 129 572	1 409 905	220 001	290 809	1 478 903	1 526 095	409 852	1 425 213	2 997 044	2 153 621	2 173 348	780 994	321 417	1 345 588
Border Posts	88 000	72 000	91 000	137 000	120 000	145 000	151 000	193 465	153 531	211 407	284 122	174 365	232 915	394 166	426 281	204 017	221 121	452 175	776 671	113 696	337 724
Harbours	0	0	174 000	125 000	897 000	567 000	262 000	936 107	1 254 954	8 594	6 687	1 304 538	1 293 180	15 686	998 932	2 793 027	1 932 500	1 721 173	4 323	207 721	1 007 864
Total Demand	**3 685 000**	**3 666 000**	**4 353 000**	**4 989 000**	**4 572 000**	**4 810 000**	**4 885 000**	**6 127 691**	**5 840 990**	**6 512 170**	**6 189 199**	**5 620 973**	**6 264 038**	**6 319 655**	**6 446 660**	**7 252 335**	**7 277 124**	**7 605 414**	**7 575 142**	**1 955 339**	**6 706 271**
Ending Stock (30 Apr)	**440 000**	**431 000**	**819 000**	**769 000**	**727 000**	**476 000**	**660 000**	**314 710**	**791 054**	**1 163 200**	**496 801**	**1 260 823**	**864 088**	**526 637**	**761 953**	**658 682**	**871 291**	**1 057 664**	**288 292**	**4 195 561**	**794 943**
- processed p/month	272 900	273 200	307 600	341 900	248 800	297 300	324 000	378 333	338 673	494 108	458 910	313 810	367 305	471 416	399 204	330 863	410 973	440 216	554 125	532 643	424 093
- months' stock	1.6	1.6	2.7	2.2	2.9	1.6	2.0	0.8	2.3	2.4	1.1	4.0	2.4	1.1	1.9	2.0	2.1	2.4	0.5	7.9	2

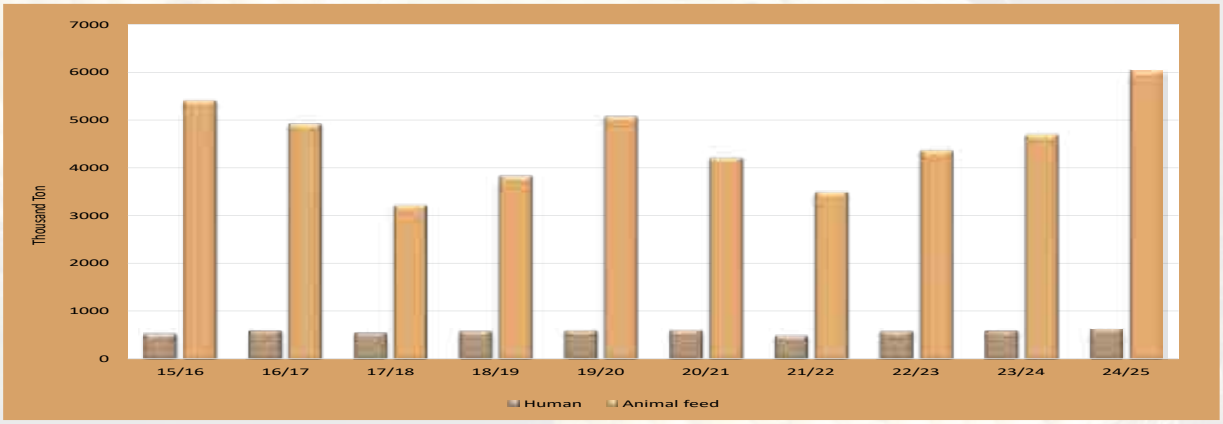
Note: *** Figures for current season up to date



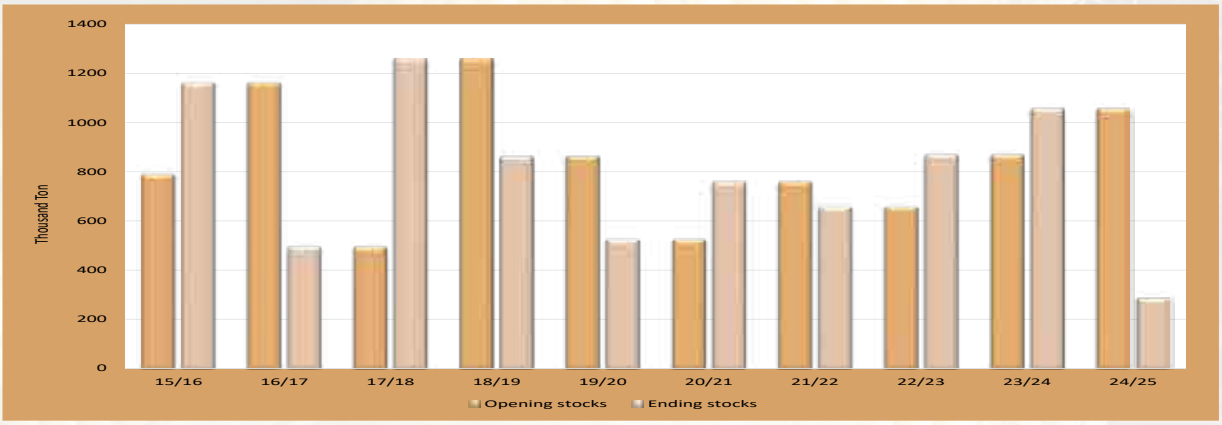
Graph 23: Yellow Maize: CEC Estimate, Retentions and SAGIS deliveries over 10 marketing seasons



Graph 24: Yellow Maize: Imports and exports over 10 marketing seasons



Graph 25: Yellow Maize: RSA consumption over 10 marketing seasons



Graph 26: Yellow Maize: Opening and ending stocks over 10 marketing seasons

Information provided by SAGIS.

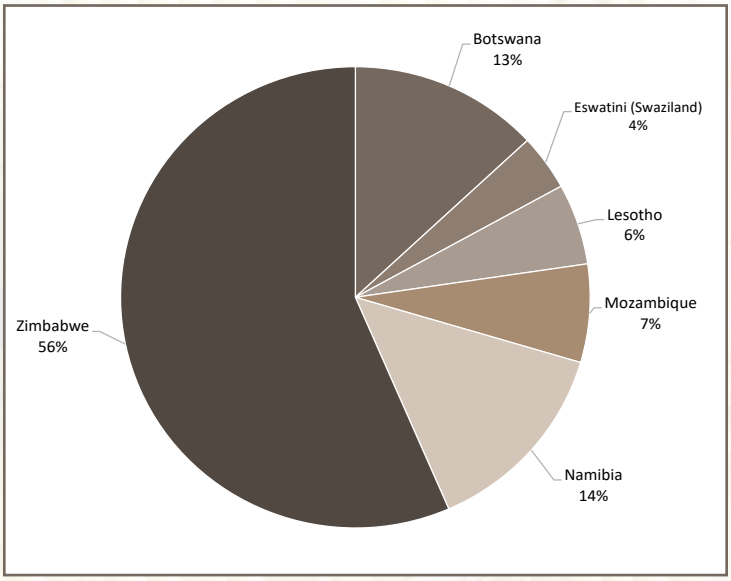
Table: S4

SAGIS South African Grain Information Service NPC
Suid Afrikaanse Graaninligtingsdiens NWM

WHITE MAIZE EXPORTS/IMPORTS (Tons)
2024/25 MARKETING SEASON (27 Apr 2024 - 25 April 2025)

RSA EXPORTS		IMPORTS FOR RSA		IMPORTS FOR OTHER COUNTRIES		EXPORTS OF IMPORTED MAIZE		IMPORTS PER HARBOUR		EXPORTS PER HARBOUR	
To Country	Tons	From Country	Tons	From Country	Tons	To Country	Tons	Harbour	Tons	Harbour	Tons
Botswana	193 695	United States of America	118 429	United States of America	22 672	Lesotho	476	Durban	141 101	Durban	43 566
Eswatini (Swaziland)	57 906	-	-	-	-	Zimbabwe	16 223	-	-	-	-
Lesotho	84 013	-	-	-	-			-	-	-	-
Mozambique	101 898	-	-	-	-	-	-	-	-	-	-
Namibia	206 096	-	-	-	-	-	-	-	-	-	-
Zambia	137	-	-	-	-	-	-	-	-	-	-
Zimbabwe	836 407	-	-	-	-	-	-	-	-	-	-
Total	**1 480 152**	**Total**	**118 429**	**Total**	**22 672**	**Total**	**16 699**	**Total***	**141 101**	**Total**	**43 566**

** Includes imports for RSA and Other Countries*



Graph 27: Major destinations for RSA white maize exported during the 2024/25 marketing season

Table: S5

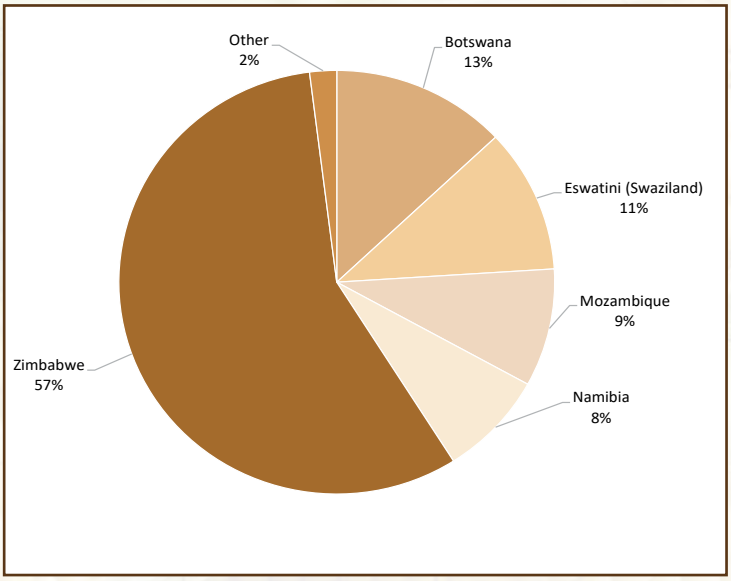
SAGIS South African Grain Information Service NPC
Suid Afrikaanse Graaninligtingsdiens NWM

YELLOW MAIZE EXPORTS/IMPORTS (Tons)

2024/25 MARKETING SEASON (27 Apr 2024 - 25 April 2025)

RSA EXPORTS		IMPORTS FOR RSA		IMPORTS FOR OTHER COUNTRIES		EXPORTS OF IMPORTED MAIZE		IMPORTS PER HARBOUR		EXPORTS PER HARBOUR	
To Country	Tons	From Country	Tons	From Country	Tons	To Country	Tons	Harbour	Tons	Harbour	Tons
Botswana	103 898	Argentina	705 190	Argentina	486	Zimbabwe	1 928	Cape Town	493 703	Durban	4 323
Eswatini (Swaziland)	84 924	Brazil	105 707	United States of America	1 449	-	-	Durban	114 828	-	-
Lesotho	5 773	United States of America	7 513	-	-	-	-	Port Elizabeth	211 814	-	-
Madagascar	301	-	-	-	-	-	-	-	-	-	-
Mozambique	71 530	-	-	-	-	-	-	-	-	-	-
Namibia	58 793	-	-	-	-	-	-	-	-	-	-
Saudi Arabia	4 022	-	-	-	-	-	-	-	-	-	-
Zambia	1 356	-	-	-	-	-	-	-	-	-	-
Zimbabwe	439 780	-	-	-	-	-	-	-	-	-	-
Total	**770 377**	**Total**	**818 410**	**Total**	**1 935**	**Total**	**1 928**	**Total***	**820 345**	**Total**	**4 323**

** Includes imports for RSA and Other Countries*



Graph 28: Major destinations for RSA yellow maize exported during the 2024/25 marketing season

TABLE 2a: QUALITY OF YELLOW MAIZE IMPORTED FROM ARGENTINA FOR THE PERIOD 1 MAY 2024 TO 30 APRIL 2025

Country of origin	Argentina					RSA Crop Quality Average 2023/2024				
Class and Grade Yellow maize	YM1	YM2	YM3	COM	Average	YM1	YM2	YM3	COM	Average
RSA Grading										
Defective kernels above 6.35mm screen, %	1.9	1.9	3.0	2.9	2.3	1.5	1.7	1.9	1.9	1.6
Defective kernels below 6.35mm screen, %	2.7	5.7	8.9	6.8	5.9	2.1	4.9	8.9	4.4	3.3
Total defective kernels, %	4.6	7.6	11.9	9.7	8.2	3.7	6.6	10.8	6.2	5.0
Other colour maize kernels %	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.1
Foreign matter, % (all matter other than maize, glass, stone, coal, dung or metal)	0.1	0.1	0.4	0.6	0.3	0.0	0.1	0.5	0.7	0.2
Combined deviation, %	4.8	7.8	12.4	10.3	8.5	3.8	6.9	11.4	7.2	5.3
No. of samples	*5*	*29*	*3*	*14*	*51*	*299*	*98*	*27*	*58*	*482*
USA Grading factors according to RSA grades										
Heat damaged kernels, %	0.0	0.2	1.5	1.0	0.5	0.0	0.0	0.0	0.0	0.0
Total damaged kernels, %	3.6	2.5	4.8	3.7	3.1	2.3	2.4	2.6	3.1	2.4
Broken corn and foreign material, %	1.4	1.8	3.0	2.7	2.1	0.5	1.1	1.6	1.7	0.8
No. of samples	*5*	*29*	*3*	*14*	*51*	*299*	*98*	*27*	*58*	*482*
Physical Quality Characteristics										
100 Kernel mass, g (as is)	30.3	27.7	26.7	28.1	28.0	30.1	26.3	24.1	27.9	28.7
Stress cracks, %	11	7	12	6	7	5	4	3	6	5
Milling Index	77	76	76	73	75	77	75	74	76	76
Grit Yield	64	64	64	63	64	64	64	63	64	64
Test weight, kg/hl	74.7	74.7	74.6	74.0	74.5	76.2	74.9	74.5	74.6	75.7
No. of samples	*5*	*29*	*3*	*14*	*51*	*299*	*98*	*27*	*58*	*482*
Kernel size										
% above 10 mm	2.4	2.4	1.7	2.3	2.4	7.0	3.0	3.0	5.6	5.8
% above 8 mm	58.1	53.1	50.2	53.9	53.7	60.4	49.8	42.6	58.0	57.0
% below 8 mm	44.0	44.4	48.1	43.8	44.4	32.6	47.1	54.4	36.4	37.2
No. of samples	*5*	*29*	*3*	*14*	*51*	*299*	*98*	*27*	*58*	*482*
Breakage susceptibility										
% below 6.35 mm	0.2	0.2	0.2	0.4	0.2	1.0	1.4	1.4	1.2	1.1
% below 4.75 mm	0.5	0.6	0.7	0.9	0.6	0.8	0.9	0.9	0.8	0.8
No. of samples	*5*	*29*	*3*	*14*	*51*	*299*	*98*	*27*	*58*	*482*
Nutritional Factors										
Protein, %(db)	9.3	9.3	9.4	9.1	9.3	9.2	9.4	9.6	9.5	9.3
Fat, %(db)	4.0	4.0	3.9	4.0	4.0	3.9	3.8	3.8	3.8	3.9
Starch, %(db)	74	73.7	74.3	73.3	73.7	73.6	73.5	73.2	73.2	73.5
Crude fibre, % (db)	2.2	2.2	2.0	2.1	2.1	2.2	2.2	2.3	2.2	2.2
No. of samples	*5*	*29*	*3*	*14*	*51*	*299*	*98*	*27*	*58*	*482*

Mycotoxins (µg/kg)	Average of positive results	*Number of positive results*	Average of positive results	*Number of positive results*
Aflatoxin B_1 [max. value]	10 [10]	*1*	19 [19]	*1*
Aflatoxin B_2 [max. value]	0 [0]	*0*	0 [0]	*0*
Aflatoxin G_1 [max. value]	0 [0]	*0*	26 [26]	*1*
Aflatoxin G_2 [max. value]	0 [0]	*0*	0 [0]	*0*
Fumonisin B_1 [max. value]	1428 [2976]	*22*	168 [927]	*37*
Fumonisin B_2 [max. value]	403 [921]	*22*	66 [351]	*26*
Fumonisin B_3 [max. value]	132 [326]	*21*	50 [70]	*6*
Deoxynivalenol [max. value]	235 [476]	*14*	230 [741]	*34*
15-ADON [max. value]	0 [0]	*0*	163 [262]	*3*
Ochratoxin A [max. value]	0 [0]	*0*	0 [0]	*0*
Zearalenone [max. value]	77 [192]	*7*	62 [113]	*5*
HT2 [max. value]	0 [0]	*0*	34 [34]	*1*
T2 [max. value]	0 [0]	*0*	0 [0]	*0*
No. of samples	*22*		*168*	

TABLE 2b: QUALITY OF YELLOW MAIZE IMPORTED FROM BRAZIL FOR THE PERIOD 1 MAY 2024 TO 30 APRIL 2025

Country of origin	Brazil				RSA Crop Quality Average 2023/2024				
Class and Grade Yellow maize	YM1	YM2	COM	Average	YM1	YM2	YM3	COM	Average
RSA Grading									
Defective kernels above 6.35mm screen, %	3.4	2.0	6.9	3.6	1.5	1.7	1.9	1.9	1.6
Defective kernels below 6.35mm screen, %	3.5	4.4	2.1	3.6	2.1	4.9	8.9	4.4	3.3
Total defective kernels, %	6.9	6.4	9.0	7.2	3.7	6.6	10.8	6.2	5.0
Other colour maize kernels %	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.1
Foreign matter, % (all matter other than maize, glass, stone, coal, dung or metal)	0.2	0.1	0.1	0.1	0.0	0.1	0.5	0.7	0.2
Combined deviation, %	7.1	6.5	9.1	7.3	3.8	6.9	11.4	7.2	5.3
No. of samples	*1*	*2*	*1*	*4*	*299*	*98*	*27*	*58*	*482*
USA Grading factors according to RSA grades									
Heat damaged kernels, %	1.7	0.1	1.4	0.8	0.0	0.0	0.0	0.0	0.0
Total damaged kernels, %	3.4	2.0	3.5	2.7	2.3	2.4	2.6	3.1	2.4
Broken corn and foreign material, %	0.4	1.5	2.6	1.5	0.5	1.1	1.6	1.7	0.8
No. of samples	*1*	*2*	*1*	*4*	*299*	*98*	*27*	*58*	*482*
Physical Quality Characteristics									
100 Kernel mass, g (as is)	27.6	28.1	27.5	27.8	30.1	26.3	24.1	27.9	28.7
Stress cracks, %	7	4	44	15	5	4	3	6	5
Milling Index	76	77	85	79	77	75	74	76	76
Grit Yield	64	64	66	65	64	64	63	64	64
Test weight, kg/hl	74.1	74.5	75.6	74.7	76.2	74.9	74.5	74.6	75.7
No. of samples	*1*	*2*	*1*	*4*	*299*	*98*	*27*	*58*	*482*
Kernel size									
% above 10 mm	0.9	2.9	5.2	3.0	7.0	3.0	3.0	5.6	5.8
% above 8 mm	56.7	61.4	62.4	60.5	60.4	49.8	42.6	58.0	57.0
% below 8 mm	42.4	35.7	32.4	36.6	32.6	47.1	54.4	36.4	37.2
No. of samples	*1*	*2*	*1*	*4*	*299*	*98*	*27*	*58*	*482*
Breakage susceptibility									
% below 6.35 mm	0.0	0.0	1.2	0.3	1.0	1.4	1.4	1.2	1.1
% below 4.75 mm	0.3	0.2	2.8	0.9	0.8	0.9	0.9	0.8	0.8
No. of samples	*1*	*2*	*1*	*4*	*299*	*98*	*27*	*58*	*482*
Nutritional Factors									
Protein, %(db)	8.9	9.1	9.1	9.0	9.2	9.4	9.6	9.5	9.3
Fat, %(db)	3.9	4.0	4.0	4.0	3.9	3.8	3.8	3.8	3.9
Starch, %(db)	74.4	74.4	74.8	74.5	73.6	73.5	73.2	73.2	73.5
Crude fibre, % (db)	2.2	2.2	2.1	2.2	2.2	2.2	2.3	2.2	2.2
No. of samples	*1*	*2*	*1*	*4*	*299*	*98*	*27*	*58*	*482*

Mycotoxins (µg/kg)	Average of positive results	*Number of positive results*	Average of positive results	*Number of positive results*
Aflatoxin B_1 [max. value]	0 [0]	*0*	19 [19]	*1*
Aflatoxin B_2 [max. value]	0 [0]	*0*	0 [0]	*0*
Aflatoxin G_1 [max. value]	0 [0]	*0*	26 [26]	*1*
Aflatoxin G_2 [max. value]	0 [0]	*0*	0 [0]	*0*
Fumonisin B_1 [max. value]	711 [757]	*2*	168 [927]	*37*
Fumonisin B_2 [max. value]	211 [235]	*2*	66 [351]	*26*
Fumonisin B_3 [max. value]	50 [75]	*2*	50 [70]	*6*
Deoxynivalenol [max. value]	0 [0]	*0*	230 [741]	*34*
15-ADON [max. value]	0 [0]	*0*	163 [262]	*3*
Ochratoxin A [max. value]	0 [0]	*0*	0 [0]	*0*
Zearalenone [max. value]	0 [0]	*0*	62 [113]	*5*
HT2 [max. value]	0 [0]	*0*	34 [34]	*1*
T2 [max. value]	0 [0]	*0*	0 [0]	*0*
No. of samples	*2*		*168*	

TABLE 2c: QUALITY OF YELLOW MAIZE IMPORTED FROM THE USA FOR THE PERIOD 1 MAY 2024 TO 30 APRIL 2025

Country of origin	USA				RSA Crop Quality Average 2023/2024				
Class and Grade Yellow maize	YM1	YM2	COM	Average	YM1	YM2	YM3	COM	Average
RSA Grading									
Defective kernels above 6.35mm screen, %	1.8	3.6	3.1	3.0	1.5	1.7	1.9	1.9	1.6
Defective kernels below 6.35mm screen, %	3.1	4.4	5.7	4.9	2.1	4.9	8.9	4.4	3.3
Total defective kernels, %	4.9	8.0	8.9	7.9	3.7	6.6	10.8	6.2	5.0
Other colour maize kernels %	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.1
Foreign matter, % (all matter other than maize, glass, stone, coal, dung or metal)	0.0	0.2	1.1	0.7	0.0	0.1	0.5	0.7	0.2
Combined deviation, %	4.9	8.2	9.9	8.6	3.8	6.9	11.4	7.2	5.3
No. of samples	*1*	*1*	*3*	*5*	*299*	*98*	*27*	*58*	*482*
USA Grading factors according to RSA grades									
Heat damaged kernels, %	0.0	0.3	0.4	0.3	0.0	0.0	0.0	0.0	0.0
Total damaged kernels, %	1.8	3.9	3.5	3.3	2.3	2.4	2.6	3.1	2.4
Broken corn and foreign material, %	0.9	2.3	3.0	2.4	0.5	1.1	1.6	1.7	0.8
No. of samples	*1*	*1*	*3*	*5*	*299*	*98*	*27*	*58*	*482*
Physical Quality Characteristics									
100 Kernel mass, g (as is)	37.3	29.9	29.1	30.9	30.1	26.3	24.1	27.9	28.7
Stress cracks, %	10	3	5	6	5	4	3	6	5
Milling Index	54	83	75	72	77	75	74	76	76
Grit Yield	59	66	64	63	64	64	63	64	64
Test weight, kg/hl	74.9	75.4	74.7	74.9	76.2	74.9	74.5	74.6	75.7
No. of samples	*1*	*1*	*3*	*5*	*299*	*98*	*27*	*58*	*482*
Kernel size									
% above 10 mm	3.0	2.0	3.1	2.9	7.0	3.0	3.0	5.6	5.8
% above 8 mm	69.3	47.5	56.1	57.0	60.4	49.8	42.6	58.0	57.0
% below 8 mm	27.8	50.5	41.4	40.5	32.6	47.1	54.4	36.4	37.2
No. of samples	*1*	*1*	*3*	*5*	*299*	*98*	*27*	*58*	*482*
Breakage susceptibility									
% below 6.35 mm	0.2	0.0	0.2	0.2	1.0	1.4	1.4	1.2	1.1
% below 4.75 mm	1.8	0.4	0.8	0.9	0.8	0.9	0.9	0.8	0.8
No. of samples	*1*	*1*	*3*	*5*	*299*	*98*	*27*	*58*	*482*
Nutritional Factors									
Protein, %(db)	8.3	9.3	9.1	9.0	9.2	9.4	9.6	9.5	9.3
Fat, %(db)	3.9	4.1	4.1	4.0	3.9	3.8	3.8	3.8	3.9
Starch, %(db)	74.5	74.6	73.1	73.7	73.6	73.5	73.2	73.2	73.5
Crude fibre, % (db)	2.0	2.0	2.0	2.0	2.2	2.2	2.3	2.2	2.2
No. of samples	*1*	*1*	*3*	*5*	*299*	*98*	*27*	*58*	*482*

Mycotoxins (µg/kg)	Average of positive results	*Number of positive results*	Average of positive results	*Number of positive results*
Aflatoxin B_1 [max. value]	0 [0]	*0*	19 [19]	*1*
Aflatoxin B_2 [max. value]	0 [0]	*0*	0 [0]	*0*
Aflatoxin G_1 [max. value]	0 [0]	*0*	26 [26]	*1*
Aflatoxin G_2 [max. value]	0 [0]	*0*	0 [0]	*0*
Fumonisin B_1 [max. value]	771 [894]	*2*	168 [927]	*37*
Fumonisin B_2 [max. value]	162 [168]	*2*	66 [351]	*26*
Fumonisin B_3 [max. value]	86 [127]	*2*	50 [70]	*6*
Deoxynivalenol [max. value]	354 [524]	*2*	230 [741]	*34*
15-ADON [max. value]	0 [0]	*0*	163 [262]	*3*
Ochratoxin A [max. value]	0 [0]	*0*	0 [0]	*0*
Zearalenone [max. value]	0 [0]	*0*	62 [113]	*5*
HT2 [max. value]	0 [0]	*0*	34 [34]	*1*
T2 [max. value]	0 [0]	*0*	0 [0]	*0*
No. of samples	*2*		*168*	

TABLE 2d: QUALITY OF WHITE MAIZE IMPORTED FROM THE USA FOR THE PERIOD 1 MAY 2024 TO 30 APRIL 2025

Country of origin	USA				RSA Crop Quality Average 2023/2024				
Class and Grade White maize	WM1	WM2	COM	Average	WM1	WM2	WM3	COM	Average
RSA Grading									
Defective kernels above 6.35mm screen, %	1.6	1.6	1.9	1.7	1.0	1.6	2.7	1.2	1.1
Defective kernels below 6.35mm screen, %	3.3	5.7	4.2	4.1	1.8	4.4	4.5	4.1	2.3
Total defective kernels, %	4.9	7.3	6.1	5.7	2.8	6.0	7.2	5.3	3.5
Other colour maize kernels %	0.5	0.4	0.2	0.4	0.1	0.3	0.2	0.6	0.2
Foreign matter, % (all matter other than maize, glass, stone, coal, dung or metal)	0.1	0.3	1.1	0.3	0.0	0.2	0.5	1.0	0.2
Combined deviation, %	5.4	7.9	7.4	6.4	3.0	6.6	7.9	7.0	3.8
No. of samples	*8*	*4*	*2*	*14*	*409*	*43*	*18*	*48*	*518*
USA Grading factors according to RSA grades									
Heat damaged kernels, %	0.1	0.3	0.0	0.1	0.0	0.0	0.8	0.0	0.0
Total damaged kernels, %	1.8	1.3	2.1	1.7	2.5	3.9	4.4	3.0	2.7
Broken corn and foreign material, %	1.4	3.0	2.8	2.1	0.6	1.5	2.4	2.5	0.9
No. of samples	*8*	*4*	*2*	*14*	*409*	*43*	*18*	*48*	*518*
Physical Quality Characteristics									
100 Kernel mass, g (as is)	34.1	33.7	33.8	33.9	31.7	28.0	31.0	31.6	31.4
Stress cracks, %	16	17	28	18	4	4	6	5	4
Milling Index	84	87	85	85	73	76	76	73	73
Grit Yield	66	66	66	66	63	64	64	63	63
Test weight, kg/hl	78.4	78.4	78.3	78.4	76.4	75.5	76.0	75.5	76.2
No. of samples	*8*	*4*	*2*	*14*	*409*	*43*	*18*	*48*	*518*
Kernel size									
% above 10 mm	3.1	4.2	2.5	3.3	18.9	13.5	18.2	22.6	18.8
% above 8 mm	62.2	64.6	60.0	62.5	63.4	58.2	59.1	58.1	62.3
% below 8 mm	34.8	31.3	37.6	34.2	17.7	28.3	22.7	19.3	18.9
No. of samples	*8*	*4*	*2*	*14*	*409*	*43*	*18*	*48*	*518*
Breakage susceptibility									
% below 6.35 mm	0.3	0.3	1.2	0.4	0.9	1.1	1.4	1.3	0.9
% below 4.75 mm	1.3	0.9	2.5	1.4	0.7	0.7	0.9	0.9	0.7
No. of samples	*8*	*4*	*2*	*14*	*409*	*43*	*18*	*48*	*518*
Nutritional Factors									
Protein, %(db)	8.9	8.9	8.8	8.9	8.9	9.3	9.0	9.0	8.9
Fat, %(db)	3.8	3.7	3.9	3.7	3.9	4.0	4.0	3.9	3.9
Starch, %(db)	73.5	74.6	73.3	73.8	74.3	73.7	73.9	74.1	74.3
Crude fibre, % (db)	2.3	2.8	2.2	2.4	2.2	2.2	2.2	2.2	2.2
No. of samples	*8*	*4*	*2*	*14*	*409*	*43*	*18*	*48*	*518*
Roff Milling									
Break 1, %	12.8	13.0	13.0	12.9	14.1	13.2	14.2	13.8	14.0
Break 2, %	6.5	6.8	6.7	6.6	7.5	7.4	7.7	7.5	7.5
Break 3, %	10.7	11	10.8	10.8	9.8	9.7	9.8	9.5	9.8
Grits, %	44.9	44.3	44.1	44.6	44.4	44.5	43.5	44.3	44.3
Bran and Germ, %	25.1	25.0	25.6	25.1	24.3	25.2	24.8	24.9	24.5
Extraction (Total meal), %	74.9	75.1	74.5	74.9	75.7	74.8	75.2	75.1	75.5
No. of samples	*8*	*4*	*2*	*14*	*196*	*25*	*9*	*30*	*260*
Whiteness Index									
Whiteness Index, 87:13, sifted	35.5	34.2	34.3	34.9	38.4	37.6	38.6	38.4	38.4
Whiteness Index, unsifted	36.8	35.5	36.3	36.3	40.5	39.7	40.2	40.2	40.4
No. of samples	*8*	*4*	*2*	*14*	*196*	*25*	*9*	*30*	*260*

TABLE 2d: QUALITY OF WHITE MAIZE IMPORTED FROM THE USA FOR THE PERIOD 1 MAY 2024 TO 30 APRIL 2025 (continue)

Country of origin	USA				RSA Crop Quality Average 2023/2024				
Class and Grade White maize	WM1	WM2	COM	Average	WM1	WM2	WM3	COM	Average
***Bühler MCKA Milling**									
*Fraction B1 - B3, %	21.9	23.2	24.2	22.6	24.1	24.5	24.1	24.2	24.1
*Fraction C1 - C3, %	42.6	42.5	40.6	42.3	40.1	40.9	40.1	40.4	40.2
*Grits (Fraction G3), %	14.0	13.6	14.9	14.0	14.0	14.7	14.2	13.9	14.1
*Germ/Bran (Degermer overs + Fractions G1 & G2)	21.6	20.7	20.3	21.2	21.8	20.0	21.7	21.5	21.7
*Extraction (Total meal), %	78.4	79.3	79.7	78.8	78.2	80.0	78.3	78.5	78.3
No. of samples	***8***	***4***	***2***	***14***	***408***	***43***	***18***	***48***	***517***
Whiteness Index									
Whiteness Index, 87:13, sifted	11.4	11.3	11.5	11.4	17.9	14.7	15.7	16.7	17.5
Whiteness Index, unsifted	13.1	12.7	15.8	13.4	19.7	16.5	16.9	18.3	19.2
No. of samples	***8***	***4***	***2***	***14***	***408***	***43***	***18***	***48***	***517***

Mycotoxins (µg/kg)	Average of positive results	*Number of positive results*	Average of positive results	*Number of positive results*
Aflatoxin B_1 [max. value]	0 [0]	*0*	41 [41]	*1*
Aflatoxin B_2 [max. value]	0 [0]	*0*	0 [0]	*0*
Aflatoxin G_1 [max. value]	0 [0]	*0*	0 [0]	*0*
Aflatoxin G_2 [max. value]	0 [0]	*0*	0 [0]	*0*
Fumonisin B_1 [max. value]	577 [1852]	*14*	204 [1354]	*44*
Fumonisin B_2 [max. value]	182 [538]	*4*	108 [434]	*28*
Fumonisin B_3 [max. value]	73 [157]	*9*	45 [124]	*12*
Deoxynivalenol [max. value]	118 [184]	*4*	316 [908]	*33*
15-ADON [max. value]	0 [0]	*0*	138 [154]	*2*
Ochratoxin A [max. value]	0 [0]	*0*	0 [0]	*0*
Zearalenone [max. value]	118 [118]	*1*	43 [107]	*7*
HT2 [max. value]	0 [0]	*0*	0 [0]	*0*
T2 [max. value]	0 [0]	*0*	0 [0]	*0*
No. of samples	***14***		***168***	

Table: S6

SAGIS South African Grain Information Service NPC
Suid Afrikaanse Graaninligtingsdiens NWM
Reg no. 1997/019186/08

TOTAL WHOLE MAIZE PROCESSED PER PROVINCE

PROGRESSIVE: May 2020 to April 2021 (2020/21 Full Marketing Year)

Processed For	Cape Provinces	Free State	Kwazulu-Natal	Mpumalanga	Limpopo	Gauteng	Northwest	Total
Human Consumption and Gristing	259 782	2 013 461	402 528	777 393	399 818	920 505	1 160 019	5 933 506
Animal Feed and Industrial	1 387 012	728 135	503 310	849 138	139 147	1 392 472	589 408	5 588 622
	1 646 794	**2 741 596**	**905 838**	**1 626 531**	**538 965**	**2 312 977**	**1 749 427**	**11 522 128**

PROGRESSIVE: May 2021 to April 2022 (2021/22 Full Marketing Year)

Processed For	Cape Provinces	Free State	Kwazulu-Natal	Mpumalanga	Limpopo	Gauteng	Northwest	Total
Human Consumption and Gristing	251 947	1 859 544	329 889	756 717	356 859	1 013 953	964 240	5 533 149
Animal Feed and Industrial	1 378 107	825 703	669 153	829 215	206 236	1 430 940	617 849	5 957 203
	1 630 054	**2 685 247**	**999 042**	**1 585 932**	**563 095**	**2 444 893**	**1 582 089**	**11 490 352**

PROGRESSIVE: May 2022 to April 2023 (2022/23 Full Marketing Year)

Processed For	Cape Provinces	Free State	Kwazulu-Natal	Mpumalanga	Limpopo	Gauteng	Northwest	Total
Human Consumption and Gristing	247 314	1 893 287	377 519	813 357	361 295	1 011 617	937 033	5 641 422
Animal Feed and Industrial	1 390 758	738 973	703 096	835 790	196 505	1 538 652	605 575	6 009 349
	1 638 072	**2 632 260**	**1 080 615**	**1 649 147**	**557 800**	**2 550 269**	**1 542 608**	**11 650 771**

PROGRESSIVE: May 2023 to April 2024 (2023/24 Full Marketing Year)

Processed For	Cape Provinces	Free State	Kwazulu-Natal	Mpumalanga	Limpopo	Gauteng	Northwest	Total
Human Consumption and Gristing	308 944	2 137 863	397 062	1 101 395	387 983	974 689	1 168 142	6 476 078
Animal Feed and Industrial	1 412 698	750 297	773 965	674 710	212 729	1 407 245	633 567	5 865 211
	1 721 642	**2 888 160**	**1 171 027**	**1 776 105**	**600 712**	**2 381 934**	**1 801 709**	**12 341 289**

PROGRESSIVE: May 2024 to April 2025 (2024/25 Full Marketing Year)

Processed For	Cape Provinces	Free State	Kwazulu-Natal	Mpumalanga	Limpopo	Gauteng	Northwest	Total
Human Consumption and Gristing	290 427	1 961 946	308 341	980 564	331 793	843 105	1 172 906	5 889 082
Animal Feed and Industrial	1 456 009	793 110	832 871	645 673	222 070	1 580 975	673 940	6 204 648
	1 746 436	**2 755 056**	**1 141 212**	**1 626 237**	**553 863**	**2 424 080**	**1 846 846**	**12 093 730**

** Please note that included are the products destined for exports*

Table: S7

SAGIS South African Grain Information Service NPC
Suid Afrikaanse Graaninligtingsdiens NWM
Reg no. 1997/019186/08

WHOLE WHITE MAIZE PROCESSED PER PROVINCE

PROGRESSIVE: May 2020 to April 2021 (2020/21 Full Marketing Year)

Processed For	Cape Provinces	Free State	Kwazulu-Natal	Mpumalanga	Limpopo	Gauteng	Northwest	Total
Human Consumption and Gristing	242 155	1 734 660	355 306	604 682	399 818	789 544	1 141 456	5 267 621
Animal Feed and Industrial	629 902	179 240	10 806	10 912	3 488	192 885	298 726	1 325 959
	872 057	**1 913 900**	**366 112**	**615 594**	**403 306**	**982 429**	**1 440 182**	**6 593 580**

PROGRESSIVE: May 2021 to April 2022 (2021/22 Full Marketing Year)

Processed For	Cape Provinces	Free State	Kwazulu-Natal	Mpumalanga	Limpopo	Gauteng	Northwest	Total
Human Consumption and Gristing	232 143	1 624 113	297 523	587 693	356 235	851 718	949 792	4 899 217
Animal Feed and Industrial	818 947	345 380	133 466	75 175	34 861	463 682	535 538	2 407 049
	1 051 090	**1 969 493**	**430 989**	**662 868**	**391 096**	**1 315 400**	**1 485 330**	**7 306 266**

PROGRESSIVE: May 2022 to April 2023 (2022/23 Full Marketing Year)

Processed For	Cape Provinces	Free State	Kwazulu-Natal	Mpumalanga	Limpopo	Gauteng	Northwest	Total
Human Consumption and Gristing	225 342	1 681 418	337 216	633 211	360 924	832 565	923 425	4 994 101
Animal Feed and Industrial	518 034	245 440	57 790	6 407	1 304	324 320	430 036	1 583 331
	743 376	**1 926 858**	**395 006**	**639 618**	**362 228**	**1 156 885**	**1 353 461**	**6 577 432**

PROGRESSIVE: May 2023 to April 2024 (2023/24 Full Marketing Year)

Processed For	Cape Provinces	Free State	Kwazulu-Natal	Mpumalanga	Limpopo	Gauteng	Northwest	Total
Human Consumption and Gristing	286 437	1 910 405	334 177	851 697	387 983	911 872	1 156 407	5 838 978
Animal Feed and Industrial	410 135	210 305	30 141	499	4 583	180 359	260 936	1 096 958
	696 572	**2 120 710**	**364 318**	**852 196**	**392 566**	**1 092 231**	**1 417 343**	**6 935 936**

PROGRESSIVE: May 2024 to April 2025 (2024/25 Full Marketing Year)

Processed For	Cape Provinces	Free State	Kwazulu-Natal	Mpumalanga	Limpopo	Gauteng	Northwest	Total
Human Consumption and Gristing	264 154	1 728 520	238 463	719 111	331 793	772 809	1 168 186	5 223 036
Animal Feed and Industrial	3 775	10 794	2 348	0	0	72 465	7 875	97 257
	267 929	**1 739 314**	**240 811**	**719 111**	**331 793**	**845 274**	**1 176 061**	**5 320 293**

** Please note that included are the products destined for exports*

Table: S8

SAGIS South African Grain Information Service NPC
Suid Afrikaanse Graaninligtingsdiens NWM
Reg no. 1997/019186/08

WHOLE YELLOW MAIZE PROCESSED PER PROVINCE

PROGRESSIVE: May 2020 to April 2021 (2020/21 Full Marketing Year)

Processed For	Cape Provinces	Free State	Kwazulu-Natal	Mpumalanga	Limpopo	Gauteng	Northwest	Total
Human Consumption and Gristing	17 627	278 801	47 222	172 711		130 961	18 563	665 885
Animal Feed and Industrial	757 110	548 895	492 504	838 226	135 659	1 199 587	290 682	4 262 663
	774 737	**827 696**	**539 726**	**1 010 937**	**135 659**	**1 330 548**	**309 245**	**4 928 548**

PROGRESSIVE: May 2021 to April 2022 (2021/22 Full Marketing Year)

Processed For	Cape Provinces	Free State	Kwazulu-Natal	Mpumalanga	Limpopo	Gauteng	Northwest	Total
Human Consumption and Gristing	19 804	235 431	32 366	169 024	624	162 235	14 448	633 932
Animal Feed and Industrial	559 160	480 323	535 687	754 040	171 375	967 258	82 311	3 550 154
	578 964	**715 754**	**568 053**	**923 064**	**171 999**	**1 129 493**	**96 759**	**4 184 086**

PROGRESSIVE: May 2022 to April 2023 (2022/23 Full Marketing Year)

Processed For	Cape Provinces	Free State	Kwazulu-Natal	Mpumalanga	Limpopo	Gauteng	Northwest	Total
Human Consumption and Gristing	21 972	211 869	40 303	180 146	371	179 052	13 608	647 321
Animal Feed and Industrial	872 724	493 533	645 306	829 383	195 201	1 214 332	175 539	4 426 018
	894 696	**705 402**	**685 609**	**1 009 529**	**195 572**	**1 393 384**	**189 147**	**5 073 339**

PROGRESSIVE: May 2023 to April 2024 (2023/24 Full Marketing Year)

Processed For	Cape Provinces	Free State	Kwazulu-Natal	Mpumalanga	Limpopo	Gauteng	Northwest	Total
Human Consumption and Gristing	22 507	227 458	62 885	249 698	0	62 817	11 735	637 100
Animal Feed and Industrial	1 002 563	539 992	743 824	674 211	208 146	1 226 886	372 631	4 768 253
	1 025 070	**767 450**	**806 709**	**923 909**	**208 146**	**1 289 703**	**384 366**	**5 405 353**

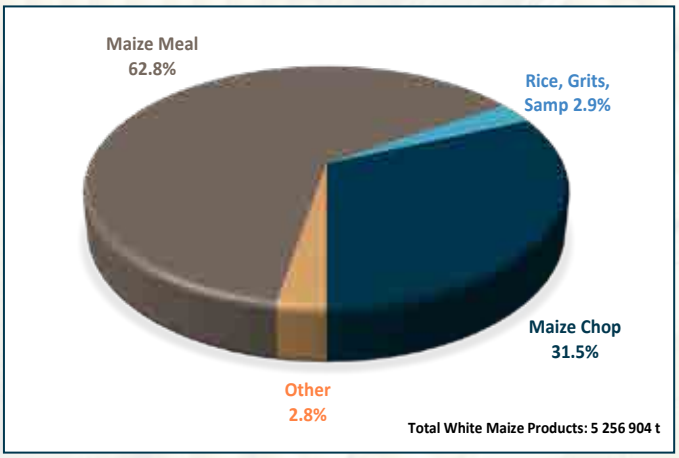
PROGRESSIVE: May 2024 to April 2025 (2024/25 Full Marketing Year)

Processed For	Cape Provinces	Free State	Kwazulu-Natal	Mpumalanga	Limpopo	Gauteng	Northwest	Total
Human Consumption and Gristing	26 273	233 426	69 878	261 453	0	70 296	4 720	666 046
Animal Feed and Industrial	1 452 234	782 316	830 523	645 673	222 070	1 508 510	666 065	6 107 391
	1 478 507	**1 015 742**	**900 401**	**907 126**	**222 070**	**1 578 806**	**670 785**	**6 773 437**

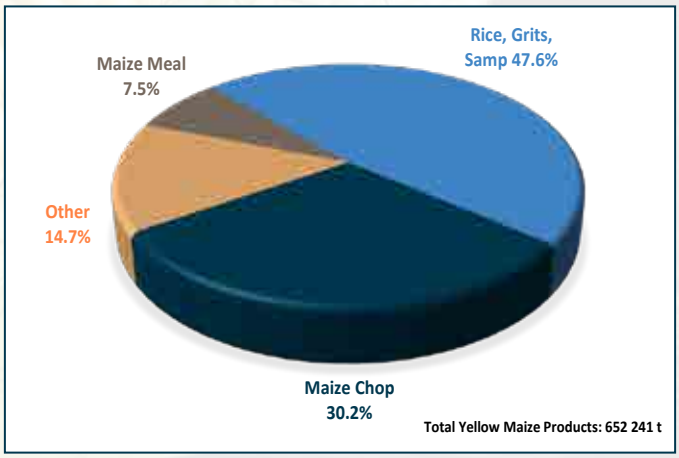
** Please note that included are the products destined for exports*

SAGIS Maize Product Information

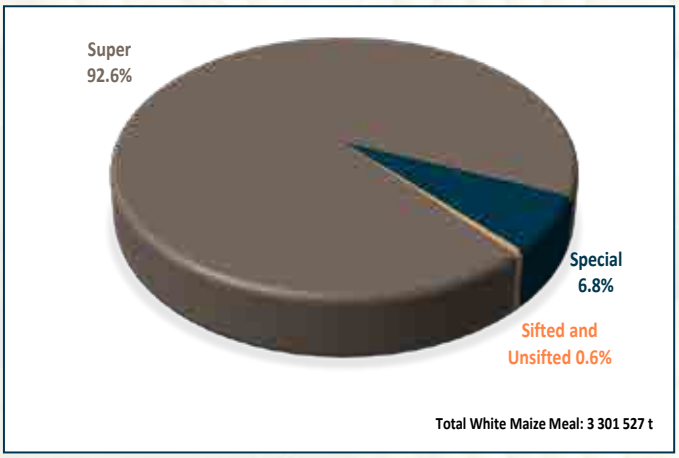
Please see graphs 29 to 32 (compiled from Table S9) below for an overview of the white and yellow maize products as well as white and yellow maize meal manufactured for the period May 2024 to April 2025. The tables on pages 26 to 28 provide a summary of the figures for maize products manufactured, imported and exported during the previous three marketing seasons (May to April).



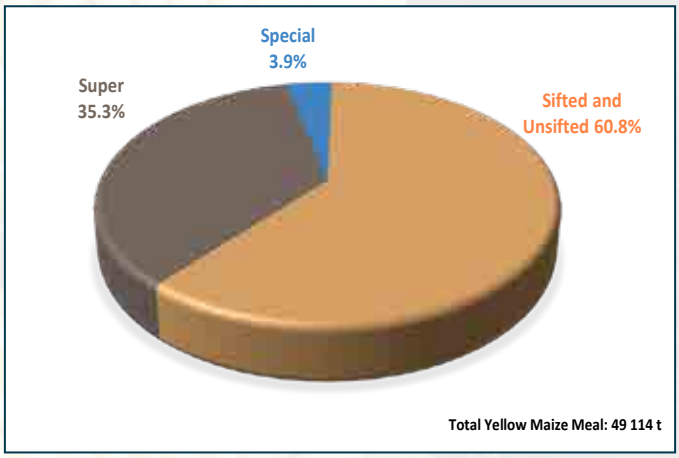
Graph 29: White maize products manufactured from May 2024 to April 2025



Graph 30: Yellow maize products manufactured from May 2024 to April 2025



Graph 31: White maize meal manufactured from May 2024 to April 2025



Graph 32: Yellow maize meal manufactured from May 2024 to April 2025

Table: S9

SAGIS South African Grain Information Service NPC
Suid Afrikaanse Graaninligtingsdiens NWM
Reg no. 1997/019186/08

MAIZE PRODUCTS MANUFACTURED PER MARKETING YEAR

	Marketing year: May 2022 - Apr 2023 Manufactured Tons Progressive: 12 Months			Marketing year: May 2023 - Apr 2024 Manufactured Tons Progressive: 12 Months			Marketing year: May 2024 - Apr 2025 Manufactured Tons Progressive: 12 Months		
	White Maize	Yellow Maize	Total Maize	White Maize	Yellow Maize	Total Maize	White Maize	Yellow Maize	Total Maize
Maize Chop	1 715 327	201 409	1 916 736	1 909 269	200 829	2 110 098	1 656 947	197 250	1 854 197
Maize Rice	6 406	*	6 406	5 883	*	5 883	4 643	*	4 643
Maize Grits	75 557	*	75 557	77 617	*	77 617	51 178	*	51 178
Samp	102 705	*	102 705	111 556	*	111 556	96 657	*	96 657
**** Total Yellow Maize Rice / Maize Grits / Samp***		***296 499***	***296 499***		***299 683***	***299 683***		***310 317***	***310 317***
Sifted Maize Meal	25 979	45 550	71 529	19 898	30 016	49 914	18 821	29 826	48 647
Special Maize Meal	249 467	2 811	252 278	287 553	884	288 437	224 779	1 895	226 674
Super Maize Meal	2 719 115	21 814	2 740 929	3 268 041	15 335	3 283 376	3 057 913	17 380	3 075 293
Unsifted Maize Meal	957	8	965	30	9	39	14	13	27
Other maize products intended for Human consumption	124 949	65 765	190 714	145 264	81 444	226 708	145 952	95 560	241 512
Total	***5 020 462***	***633 856***	***5 654 318***	***5 825 111***	***628 200***	***6 453 311***	***5 256 904***	***652 241***	***5 909 145***

** Included total for yellow rice, grits and samp*

Table: S10

SAGIS South African Grain Information Service NPC
Suid Afrikaanse Graaninligtingsdiens NWM
Reg no. 1997/019186/08

MAIZE PRODUCTS IMPORTED PER MARKETING YEAR

	Marketing year: May 2022 - Apr 2023 Imported Tons Progressive: 12 Months			Marketing year: May 2023 - Apr 2024 Imported Tons Progressive: 12 Months			Marketing year: May 2024 - Apr 2025 Imported Tons Progressive: 12 Months		
	White Maize	Yellow Maize	Total Maize	White Maize	Yellow Maize	Total Maize	White Maize	Yellow Maize	Total Maize
Maize Chop	22 467	0	22 467	6 419	0	6 419	8 595	0	8 595
Maize Rice	0	*	0	0	*	0	0	*	0
Maize Grits	0	*	0	0	*	0	0	*	0
Samp	0	*	0	0	*	0	0	*	0
**** Total Yellow Maize Rice / Maize Grits / Samp***		***0***	***0***		***0***	***0***		***0***	***0***
Sifted Maize Meal	0	0	0	0	0	0	0	0	0
Special Maize Meal	2 206	0	2 206	2 692	0	2 692	1 997	0	1 997
Super Maize Meal	159	0	159	302	0	302	587	0	587
Unsifted Maize Meal	0	0	0	0	0	0	0	0	0
Other maize products intended for Human consumption	0	0	0	0	0	0	0	0	0
Total	***24 832***	***0***	***24 832***	***9 413***	***0***	***9 413***	***11 179***	***0***	***11 179***

** Included total for yellow rice, grits and samp*

Table: S11

SAGIS South African Grain Information Service NPC
Suid Afrikaanse Graaninligtingsdiens NWM
Reg no. 1997/019186/08

MAIZE PRODUCTS EXPORTED PER MARKETING YEAR

	Marketing year: May 2022 - Apr 2023 Exported Tons Progressive: 12 Months			Marketing year: May 2023 - Apr 2024 Exported Tons Progressive: 12 Months			Marketing year: May 2024 - Apr 2025 Exported Tons Progressive: 12 Months		
	White Maize	Yellow Maize	Total Maize	White Maize	Yellow Maize	Total Maize	White Maize	Yellow Maize	Total Maize
Maize Chop	124	0	124	162	0	162	116	0	116
Maize Rice	46	*	46	27	*	27	61	*	61
Maize Grits	278	*	278	459	*	459	453	*	453
Samp	1 195	*	1 195	2 218	*	2 218	1 550	*	1 550
**** Total Yellow Maize Rice / Maize Grits / Samp***		***44 446***	***44 446***		***26 253***	***26 253***		***25 536***	***25 536***
Sifted Maize Meal	0	12 416	12 416	257	3 738	3 995	0	2 187	2 187
Special Maize Meal	13 260	1 158	14 418	50 313	0	50 313	24 233	0	24 233
Super Maize Meal	57 118	3 799	60 917	260 323	1 378	261 701	247 642	3 237	250 879
Unsifted Maize Meal	0	0	0	0	0	0	699	0	699
Other maize products intended for Human consumption	35 539	3	35 542	26 728	9 211	35 939	17 705	3 596	21 301
Total	***107 560***	***61 822***	***169 382***	***340 487***	***40 580***	***381 067***	***292 459***	***34 556***	***327 015***

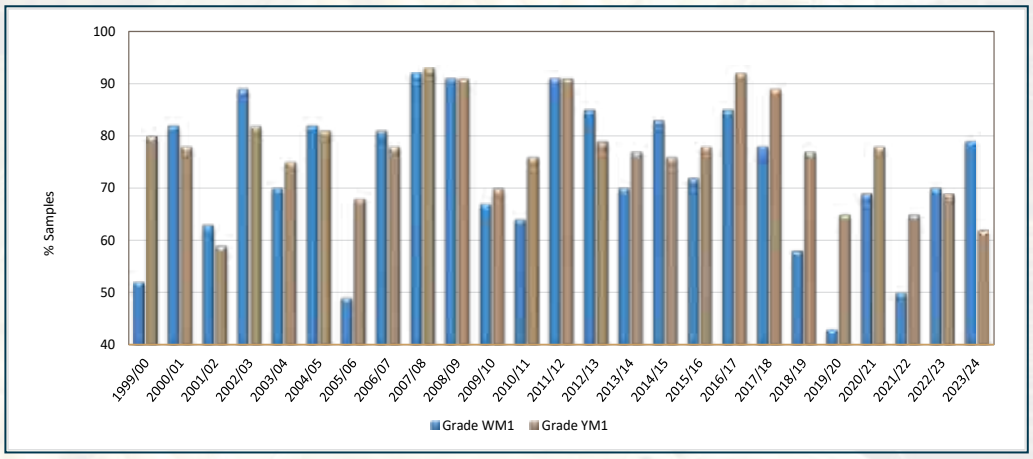
** Included total for yellow rice, grits and samp*

Maize Crop Quality 2023/24 - summary of results

RSA Grading

The latest maize grading regulations were published in Government Notices No. R. 4368 of 16 February 2024 and No. R. 4433 of 1 March 2024. This is the first maize crop survey where samples were graded according to these regulations.

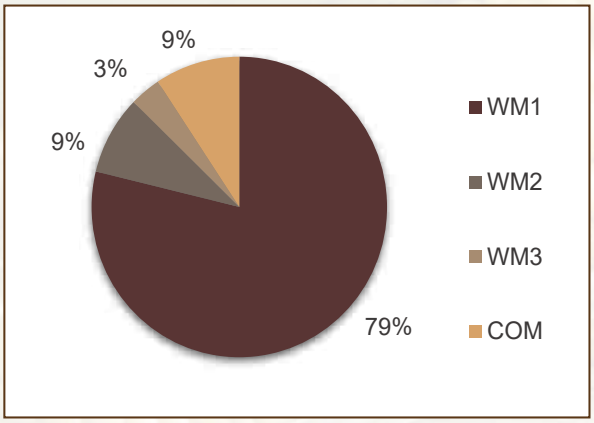
79% of white maize samples received for the purpose of the crop quality survey were graded as maize grade one, last season this figure was 70%. 62% of yellow maize samples received and graded were graded as grade one, compared to 69% the previous season. Please see Graph 33 for the percentages of samples (white and yellow) per season graded as grade 1, since commencement of the annual maize crop quality survey in 1998.



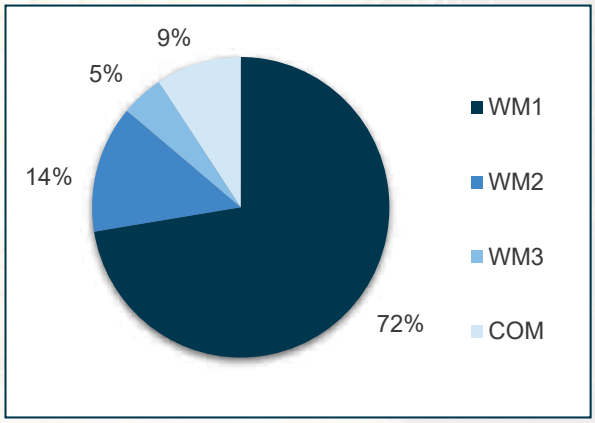
Graph 33: Percentage samples graded as Grade 1 over seasons

For comparison purposes, the samples were also graded according to the previous grading regulations as published in Government Notice No. R.473 of 8 May 2009. The percentages of samples per Class and grade according to the current as well as the previous grading regulations were determined. Please refer to Graphs 34 and 35 for the percentages of samples per Class and grade of white maize according to the current and previous grading regulations respectively. No differences in the percentages were observed for yellow maize.

The percentage total defective kernels above (larger than) and below (smaller than) the 6.35 mm sieve, 3.5% for white and 5.0% for yellow maize, is respectively 1.6% and 0.1% lower than the previous season. Defective white maize kernels above the 6.35 mm sieve decreased by 2.2% to 1.1% and yellow maize decreased by 1.2% to 1.6%. The percentage defective kernels below the 6.35 mm sieve for white maize increased from 1.7% to 2.3% while yellow maize increased from 2.3% to 3.3%.



Graph 34: White maize - Percentage of samples per Class and grade according to the current grading regulations



Graph 35: White maize - Percentage of samples per Class and grade according to the previous grading regulations

The average percentage Diplodia infected kernels in white and yellow maize was 0.2% and 0.3% respectively this season, the previous season's averages were 0.8% and 1.4% respectively. Fusarium infected white maize kernels were 0.7% compared to the 0.4% of 2022/23 and that of yellow maize 1.2% compared to 0.5% previously.

The percentage white maize samples downgraded to Class Other maize as a result of the percentage foreign matter exceeding 0.75%, was 4% (23 samples) and that of yellow maize 7% (35 samples). One white maize sample was downgraded due to other colour maize exceeding the 10% maximum permissible deviation for grade 3 white maize. The average percentage combined deviations of white maize was 3.8% compared to the 5.5% of the 2022/23 season and that of yellow maize 5.3% compared to 5.4% previously.

Please refer to Tables 5 to 9 and Graphs 36 to 38 on pages 40 to 53.

USA Grading

Of the 1 000 maize samples graded according to USA grading regulations, 59% was graded US1, 25% US2, 8% US3, 3% US4, 1% US5, 3% Sample grade and 1% Mixed grade. The percentage samples graded as US1 varies substantially over seasons, varying from 59% to 27%, 62%, 30% and 41% over the previous five seasons. The percentage samples graded as US2 compared well with the 23% of the previous season as did the percentages for Grades 3, 4, 5 and sample grade. The main reason for downgrading the samples was (as in previous seasons) the percentage total damaged kernels exceeding the maximum limit per grade, followed by broken corn and foreign material. Please see Tables 10 and 11 on pages 54 to 59.

Physical Quality characteristics

Bushel weight/Test weight is applied as a grading factor in the USA grading regulations and is also routinely done at most intake points locally for stock verification purposes. White maize had an average test weight of 76.2 kg/hl compared to the 75.7 kg/hl of yellow maize. The average test weights of white and yellow maize were respectively 0.1 kg/hl and 0.7 kg/hl lower than in the previous season. The test weight in total varied from 66.8 kg/hl to 81.5 kg/hl.

Of the 56 samples (5.6%) that reported Bushel weight values below the minimum requirement (56.0 lbs or 72.1 kg/hl) for USA grade 1 maize, four originated in the Eastern Cape, seven were from the North West production regions, 15 from the Free State, 24 from Mpumalanga and six from Gauteng. In the previous season, 2.1% of the samples were below the minimum requirement.

The 100 kernel mass ("as is" basis) of white maize was 31.4 g (35.3 g in 2022/23) and averaged higher than yellow maize's 28.7 g (last season 31.6 g). This trend is also observed in previous seasons. The percentage white maize kernels above the 10 mm sieve (18.8%) decreased by 5.7% compared to the previous season. The percentage yellow maize kernels above the 10 mm sieve (5.8%) was 1.2% lower than last season. The percentage yellow maize kernels above the 10 mm sieve was on average 13% lower than white kernels and the percentage yellow kernels below the 8 mm sieve 18.3% higher than that of white maize. Overall, yellow maize kernels remain smaller than white maize kernels as observed over time.

The percentages maize below the 6.35 mm and 4.75 mm sieves provides an indication of the breakage susceptibility. Both white and yellow maize were slightly less susceptible to breakage than during the previous season. The percentage stress cracks observed varied overall from 0 to 42% and averaged 4%. White maize also averaged 4% and yellow maize 5%, the previous season both averaged 8%.

Refer to Tables 14 to 18 on pages 61 to 71 and Graphs 39 to 42 on pages 71 and 72.

The milling index obtained from the SAGL Milling Index 2024 model, varied from an average of 73 (71 in 2022/23) for white maize to an average of 76 (72 in 2022/23) for yellow maize. Grit Yield (GYA) values averaged 63 for white and 64 for yellow maize, both averaged 63 in the previous season. The development of the new model for Milling Index was commenced in the 2012/13 season. Please refer to pages 117 and 118, Milling Index, in the Methods section of the report.

Roff milling and whiteness index (WI)

Half (50%) of the white maize samples were milled on the Roff laboratory mill this season. The average % extraction of total meal in white maize obtained with the Roff mill, averaged 75.5% (1.4% lower than the previous season) and varied from 61.4% to 80.5%. Please see Graphs 43 to 48 on page 77 for a comparison of the different fractions' percentages as well as the percentage total meal extraction obtained on the Roff mill since 2014/15.

The whiteness index averaged 40.4 for unsifted and 38.4 for sifted maize meal. Sieving the sample eliminates differences in the readings as a result of particle size. The whiteness index of the previous season averaged 40.4 and 36.8 for unsifted and sifted maize meal respectively.

The higher the WI value, the whiter the meal sample. The main contributing factors causing differences in WI values are the presence of other colour maize like yellow maize, the presence of defective kernels, the type of cultivar as well as the soil composition. Please see Tables 19 and 20 on pages 73 to 76.

Bühler MCKA milling and whiteness index (WI)

This was the first season that white maize was milled on the Bühler MCKA maize mill. Prior to milling, the samples were degermed using the Grainman degerminator. All 518 white maize samples were milled on the Bühler MCKA mill. The average % extraction of all meal fractions was 78.3% and ranged from 67.5% to 92.5%.

The whiteness index of the flour obtained from the MCKA mill averaged 19.2 for unsifted and 17.5 for sifted maize meal. The difference in whiteness index results between the two mills can be ascribed to particle size differences, with the Bühler MCKA mill producing meal with larger particle sizes than the Roff mill. Please see Tables 21 and 22 on pages 78 to 83.

Nutritional Values

The average fat content of both white and yellow maize was 3.9% this season. Both also averaged 4.0% the previous season as well as 4.0% for the 10-year average.

The average starch contents of both white (74.3%) and yellow (73.5%) maize were lower than in the previous season (decreasing by 0.8% and 0.4% respectively). Ten-year averages for white and yellow maize are 74.1% and 73.3% respectively.

The average crude fibre content of white and yellow maize was both 2.2% this season. White maize averaged 2.1% last season and yellow maize 2.2%.

The fat, starch, protein and crude fibre nutritional components are reported as % (g/100 g) on a dry base.

Please refer to Tables 23 to 26 on pages 84 to 91 and Graphs 49 to 52 on page 92.

Mycotoxins

A discussion of the mycotoxin results obtained per region over the last 14 seasons, are provided on pages 93 to 112.

A table with the limit of quantification (LOQ) for each of the mycotoxins analysed is provided on page 119 under Methods.

See also pages 113 and 114 for the National Mycotoxin Regulations.

TABLE 3: SOUTH AFRICAN MAIZE CROP QUALITY 2023/24 (Weighted Averages)

Class and grade of maize	WM1	WM2	WM3	WCOM	YM1	YM2	YM3	YCOM	Weighted Ave.
RSA Grading									
Defective kernels above 6.35 mm sieve, %	1.0	1.7	2.7	1.2	1.5	1.7	1.9	1.9	1.4
Defective kernels below 6.35 mm sieve, %	1.8	4.4	4.5	4.1	2.1	4.9	8.9	4.4	2.8
Total defective kernels, %	2.8	6.0	7.2	5.3	3.7	6.6	10.8	6.3	4.2
Other colour maize kernels, %	0.1	0.3	0.2	0.6	0.1	0.2	0.2	0.3	0.2
Foreign matter, %	0.0	0.2	0.5	1.0	0.0	0.1	0.5	0.7	0.2
Combined deviation, %	3.0	6.6	7.9	7.0	3.8	6.9	11.4	7.3	4.5
Pinked maize kernels, %	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Physical Factors									
Test weight, kg/hl	76.4	75.5	76.0	75.5	76.2	74.9	74.5	74.5	75.9
100 Kernel mass, g	31.7	28.1	31.0	31.6	30.1	26.3	24.1	27.8	30.1
Stress cracks, %	4	4	6	5	5	4	3	6	4
Milling Index	73	76	76	73	77	75	74	76	75
Grit Yield	63	64	64	63	64	64	63	64	64
Kernel Size									
% on top 10 mm	19.0	13.2	18.2	22.6	7.0	3.2	3.0	5.7	12.5
% on top 8 mm	63.4	58.3	59.1	58.1	60.4	50.0	42.6	57.9	59.7
% through 8 mm	17.6	28.5	22.7	19.3	32.6	46.8	54.4	36.5	27.7
Breakage susceptibility									
% Below 6.35 mm sieve	0.9	1.1	1.4	1.3	1.0	1.4	1.4	1.2	1.0
% Below 4.75 mm sieve	0.7	0.7	0.9	0.9	0.8	0.9	0.9	0.8	0.8
Nutritional Values									
Fat, % (db)	3.9	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.9
Protein, % (db)	8.9	9.2	9.0	9.0	9.2	9.4	9.6	9.5	9.1
Starch, % (db)	74.3	73.7	73.9	74.1	73.6	73.5	73.2	73.1	73.9
Crude fibre, % (db)	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2
Number of samples	***408***	***44***	***18***	***48***	***299***	***100***	***27***	***56***	***1 000***

WCOM: White maize downgraded to Class Other Maize.
YCOM: Yellow maize downgraded to Class Other Maize.

TABLE 4: COMPARISON OF WEIGHTED AVERAGE RESULTS OF THE MAIN MAIZE PRODUCING PROVINCES

Maize class	White maize			Yellow maize		
Production region	**North West Regions 12 - 20**	**Free State Regions 21 - 28**	**Mpumalanga Regions 29 - 33**	**North West Regions 12 - 20**	**Free State Regions 21 - 28**	**Mpumalanga Regions 29 - 33**
Defective kernels above the 6.35 mm round-hole sieve, %	1.2	0.8	1.3	2.1	1.2	1.9
Defective kernels below the 6.35 mm round-hole sieve, %	2.7	2.4	2.0	5.0	3.8	2.8
Total defective kernels, %	3.9	3.2	3.3	7.1	5.0	4.8
Combined deviations, %	4.4	3.4	3.6	7.7	5.2	5.0
Test weight, kg/hl	76.4	76	76.2	75.9	74.8	75.7
100 kernel mass, g	30.3	32.4	31	28.3	26.9	28.9
Kernel size above 10 mm sieve, %	17.7	26.2	13.8	4.4	5.0	7.6
Kernel size below 8 mm sieve, %	22.2	14.9	20.2	42.3	40.4	33.5
Breakage susceptibility (below the 6.35 mm sieve), %	0.8	1.0	0.9	1.2	1.3	1.0
Stress cracks, %	3	4	4	4	5	4
Milling index	76	71	72	79	76	77
Number of samples	***162***	***145***	***152***	***53***	***99***	***227***
Fat, %	4.0	3.9	3.8	4.0	3.8	3.9
Protein, %	9.2	9.0	8.7	9.3	9.5	9.5
Starch, %	74.0	74.4	74.2	73.7	73.4	73.0
Crude fibre, %	2.2	2.2	2.1	2.2	2.2	2.2
Number of samples	***162***	***145***	***152***	***53***	***99***	***227***
Total extraction, % (Roff mill)	75.4	76.2	75.2	-	-	-
Whiteness index, unsifted	40.6	40.7	40.3	-	-	-
Whiteness index, sifted	38.6	38.6	38.3	-	-	-
Number of samples	***86***	***41***	***94***	***-***	***-***	***-***
Total extraction, % (Bühler MCKA mill)	80.6	78.6	76.4	-	-	-
Whiteness index, unsifted	17.0	20.7	20.0	-	-	-
Whiteness index, sifted	15.3	19.1	18.3	-	-	-
Number of samples	***161***	***145***	***152***	***-***	***-***	***-***

RSA Production Regions

The Republic of South Africa is divided into 9 provinces as illustrated in Figure 1.

Figure 1: RSA Provinces

Provincial map with gratitude to SiQ.

The 9 provinces are divided into 36 grain production regions.

The regions are distributed as follows:

Region 1: Namakwaland
Regions 2 to 4: Swartland
Regions 5 and 6: Rûens
Regions 7 and 8: Eastern Cape
Region 9: Karoo
Region 10: Griqualand West
Region 11: Vaalharts
Regions 12 to 20: North West
Regions 21 to 28: Free State
Regions 29 to 33: Mpumalanga
Region 34: Gauteng
Region 35: Limpopo
Region 36: KwaZulu-Natal

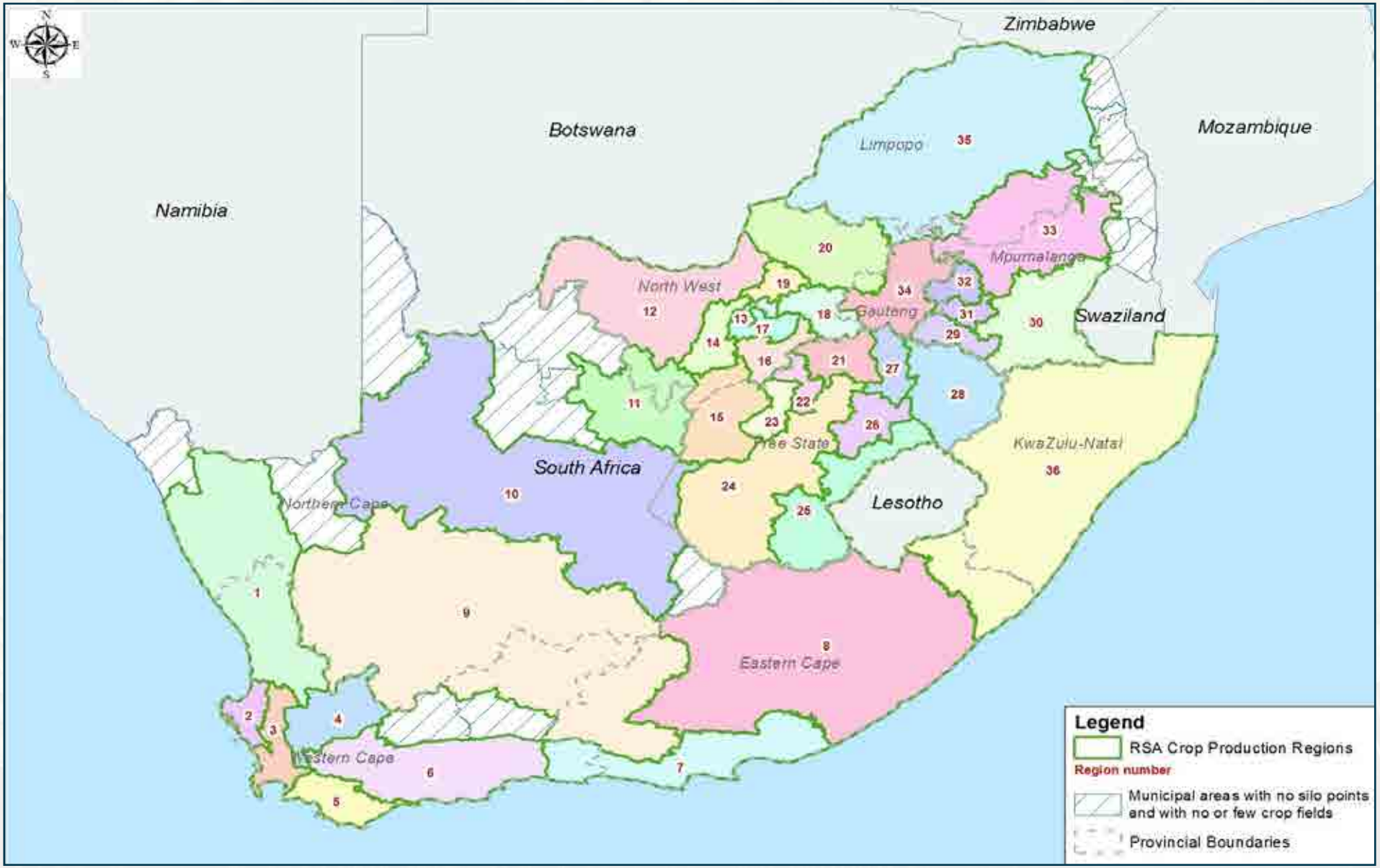
Please see the Crop Production Regions map on the next page.

The production regions from which maize samples have been received for the crop quality survey of the 2023/24 production season, are named and described on pages 36 to 39. All the silo/intake stands as well as the type of storage structure, situated in a particular region, are provided.

The mostly rain-fed maize production area is divided into four major maize production regions according to climatological characteristics:

- The Warm Western Region (western parts of the Free State and most of the North West)
- The Temperate Eastern Region (Gauteng and the central parts of the Free State)
- The Cold Eastern Region (Mpumalanga Highveld and eastern Free State)
- The KwaZulu-Natal Region (the western/upland and central/midland parts of KZN)

Figure 2: RSA Crop Production Regions



Regional map with gratitude to Agbiz Grain and SiQ.

Grain Production Regions

Silo/Intake stands per region indicating type of storage structure

Region 6: Ruens Eastern Region			
SSK	Albertina (Bins)	SSK	Krombeksrivier (Bins)
SSK	Ashton (Bags/Bins)	SSK	Protem (Bags/Bins)
SSK	Heidelberg (Bins)	SSK	Riversdal (Bins)
SSK	Herold (Bins)	SSK	Swellendam (Bags/Bins)
SSK	Karringmelksrivier (Bags/Bins/)		

Region 8: Eastern Cape Northern Region			
OVK	Cradock (Bins/Bunkers)	OVK	Mortimer (Bins/Bunkers)
OVK	Elliot (Bins)		

Region 10: Griqualand West Region			
GWK	Douglas (Bags/Bins)	GWK	Trans Oranje (Bags/Bins/Bunkers)
GWK	Luckhoff (Bins)	OVK	Havenga Brug (Bins)
GWK	Marydale (Bins)	OVK	Morgenzon (Bins)
GWK	Meganisasie (Bungers)	OVK	Oranjerivier (Bins/Bunkers)
GWK	Modderrivier (Bags/Bins/Bulk)	OVK	Prieska (Bins/Bunkers)
GWK	Prieska (Bins/Dams)	OVK	Rietrivier (Bins)
GWK	Rietrivier (Bins)	OVK	Swemkuil (Bunkers)
GWK	Stoffelshoek (Bunkers)		

Region 11: Vaalharts Region			
GWK	Barkly-Wes (Bins/Bulk)	Senwes	Jan Kempdorp (Bins)
GWK	Jan Kempdorp (Bags/Bunkers)	Senwes	Magogong (Bins)
Senwes	Hartswater (Bins)	Senwes	Tadcaster (Bins)

Region 12: North West Western Region			
NWK	Blaauwbank (Bins)	NWK	Mareetsane (Bins)
NWK	Bührmannsdrif (Bins)	Senwes	Kameel (Bins)
NWK	Kameel (Bins)	Senwes	Vryburg (Bins)

Region 13: North West Central Region (Sannieshof)			
NWK	Biesiesvlei (Bins)	NWK	Oppaslaagte (Bins)
NWK	Bossies (Bins)	NWK	Sannieshof (Bins)
NWK	Gerdau (Bins)		

Region 14: North West Southern Region			
NWK	Barberspan (Bins)	NWK	Taaibospan (Bins)
NWK	Delareyville (Bins)	Senwes	Amalia (Bins)
NWK	Excelsior (Bins)	Senwes	Hallatshope (Bins)
NWK	Geysdorp (Bins)	Senwes	Migdol (Bins)
NWK	Migdol (Bins)	Senwes	Schweizer-Reneke (Bins)
NWK	Nooitgedacht (Bins)		

Region 15: North West South Eastern Region			
GWK	Christiana (Bins)	Senwes	Hoopstad (Bins)
Senwes	Bloemhof (Bins)	Senwes	Kingswood (Bins)
Senwes	Christiana (Bins)	Senwes	Krusing (Bunkers)
Senwes	Helpman Depot 726 (Bags)	Senwes	Poppieland (Bunkers)
Senwes	Hertzogville (Bins)		

Grain Production Regions

Silo/Intake stands per region indicating type of storage structure

Region 16: North West Central-Eastern Region			
Senwes	Bamboesspruit (Bins)	Senwes	Regina (Bins)
Senwes	Klerksdorp (Bins)	Senwes	Strydpoort (Bins)
Senwes	Leeudoringstad (Bins)	Senwes	Wolmaranstad (Bins)
Senwes	Makwassie (Bins)	Senwes	Zesto (Bunkers)

Region 17: North West Central-Northern Region (Ottosdal)			
NWK	Boschpoort (Bags/Bins/Bulk)	NWK	Vermaas (Bins)
NWK	Kleinharts (Bins)	Senwes	Hartbeesfontein (Bins)
NWK	Ottosdal (Bins)	Senwes	Melliodora (Bins)
NWK	Rostrataville (Bins)	Senwes	Werda (Bins)

Region 18: North West Central Region (Ventersdorp)			
NWK	Bodenstein (Bins)	Senwes	Makokskraal (Bins)
NWK	Coligny (Bins)	Senwes	Potchefstroom (Bins)
Senwes	Buckingham (Bins)	Senwes	Ventersdorp (Bins)
Senwes	Enselspruit (Bins)		

Region 19: North West Central Region (Lichtenburg)			
Afgri	Lichtenburg (Bunkers)	NWK	Lusthof (Bins)
NWK	Grootpan (Bins)	NWK	Lichtenburg Silo 3 (Bins)
NWK	Halfpad (Bins)	NWK	Lichtenburg Silo 5 (Bins)
NWK	Hibernia (Bins)	NWK	Mafikeng (Bins)
NWK	Lottie Halte (Bins)		

Region 20: North West Eastern Region			
Afgri	Battery (Bins)	NWK	Derby (Bins)
Afgri	Beestekraal (Bunkers)	NWK	Koster (Bins)
Afgri	Brits (Bins)	NWK	Swartruggens (Bins)
NWK	Boons (Bins)	NWK	Syferbult (Bins)

Region 21: Free State North-Western Region (Viljoenskroon)			
Afgri	Kommandonek (Bunkers)	Senwes	Rooiwal (Bins)
Senwes	Attie (Bins)	Senwes	Vierfontein (Bins)
Senwes	Groenebloem (Bins)	Senwes	Viljoenskroon (Bins)
Senwes	Heuningspruit (Bins)	Senwes	Vredefort (Bins)
Senwes	Koppies (Bins)	Senwes	Weiveld (Bins)

Region 22: Free State North-Western Region (Bothaville)			
Senwes	Allanrigde (Bins)	Senwes	Schoonspruit (Bins)
Senwes	Bothaville (Bins)	Senwes	Schuttesdraai (Bins)
Senwes	Mirage (Bins)	Senwes	Misgunst (Bunkers)
Senwes	Odendaalsrus (Bins)		

Region 23: Free State North-Western Region (Bultfontein)			
Senwes	Bultfontein (Bins)	Senwes	Tierfontein (Bins)
Senwes	Kaalplaas (Bins)	Senwes	Wesselsbron (Bins)
Senwes	Losdoorns (Bins)	Senwes	Willemsrus (Bins)
Senwes	Protespan (Bins)		

Grain Production Regions

Silo/Intake stands per region indicating type of storage structure

Region 24: Free State Central Region			
Senwes	Bainsvlei (Bins)	Senwes	Kroonstad (Bins)
Senwes	Bloemfontein (Bins)	Senwes	Petrusburg (Bins)
Senwes	Brandfort (Bins)	Senwes	Theunissen (Bins)
Senwes	De Brug (Bins)	Senwes	Van Tonder (Bins)
Senwes	Geneva (Bins)	Senwes	Welgeleë (Bins)
Senwes	Hennenman (Bins)	Senwes	Winburg (Bins)

Region 25: Free State South-Western Region			
Afgri	Bethlehem (Bins)	OVK	Modderpoort (Bins)
Afgri	Slabberts (Bins)	OVK	Thaba Nchu (Bunkers)
OVK	Clocolan (Bins)	OVK	Tweespruit (Bins)
OVK	Ficksburg (Bins)	OVK	Westminster (Bins)
OVK	Fouriesburg (Bins)	Senwes	Dewetsdorp (Bins)
OVK	Marseilles (Bins)		

Region 26: Free State South-Eastern Region			
Afgri	Kaallaagte (Bins)	Afgri	Monte Video (Bins)
Afgri	Libertas (Bins)	Afgri	Senekal (Bins)
Afgri	Marquard (Bins)	Senwes	Arlington (Bins)
Afgri	Meets (Bins)	Senwes	Steynsrus (Bins)

Region 27: Free State Northern Region			
Senwes	Gottenburg (Bins)	Senwes	Wolwehoek (Bins)
Senwes	Heilbron (Bins)	VKB	Petrus Steyn (Bins)
Senwes	Hoogte Grainlink (Bins)	VKB	Reinette (Bunkers)
Senwes	Mooigeleë (Bins)		

Region 28: Free State Eastern Region			
Afgri	Afrikaskop (Bins/Bunkers)	VKB	Jim Fouché (Bins)
Afgri	Eeram (Bins)	VKB	Memel (Bins)
Afgri	Harrismith (Bins)	VKB	Reitz (Bins)
Afgri	Kransfontein (Bins/Bunkers)	VKB	Tweeling (Bins)
VKB	Ascent (Bins)	VKB	Villiers (Bins/Bulk)
VKB	Cornelia (Bins)	VKB	Vrede (Bins)
VKB	Daniëlsrus (Bins)	VKB	Warden (Bins)
VKB	Frankfort (Bins)	VKB	Windfield (Bins)

Region 29: Mpumalanga Southern Region			
Afgri	Balfour (Bins)	Afgri	Leeuspruit (Bins)
Afgri	Greylingstad (Bins)	Afgri	Platrand (Bins)
Afgri	Grootvlei (Bins)	Afgri	Standerton (Bins)
Afgri	Harvard (Bins)	Afgri	Vaaldrift (Bunkers)
Afgri	Holmdene (Bins)	Afgri	Val (Bins)

Region 30: Mpumalanga Eastern Region			
Afgri	Amersfoort (Bins)	Afgri	Maizefield (Bins)
Afgri	Carolina (Bins)	Afgri	Morgenzon (Bins)
Afgri	Davel (Bins)	Afgri	Overvaal (Bins)
Afgri	Dennegeur (Bunkers)	Afgri	Sandspruit (Bunkers)

Grain Production Regions

Silo/Intake stands per region indicating type of storage structure

Region 30: Mpumalanga Eastern Region (continue)			
Afgri	Eerstelingsfontein (Bunkers)	BKB	Bloekomhoek (Bunkers)
Afgri	Ermelo (Bins)	BKB	Waterval (Bunkers)
Afgri	Estancia (Bins)	TWK	Mkondo (Bins)
Afgri	Hendriksvallei (Bunkers)	TWK	Panbult (Bins)
Afgri	Lothair (Bins)	TWK	Rietspruit (Bunkers)

Region 31: Mpumalanga Central Region			
Afgri	Bakenlaagte (Bunkers)	Afgri	Leslie (Bins)
Afgri	Bethal (Bins)	Afgri	Palmietfontein (Bunkers)
Afgri	Brakfontein (Bunkers)	Afgri	Trichardt (Bins)
Afgri	Devon (Bins/Bunkers)	Afgri	Vaalkrantz (Bunkers)
Afgri	Kinross (Bins/Bunkers)		

Region 32: Mpumalanga Western Region			
Afgri	Argent (Bins/Bunkers)	Afgri	Hawerklip (Bins)
Afgri	Delmas (Bunkers)	Afgri	Kendal (Bins)
Afgri	Dryden (Bins)	Afgri	Ogies (Bins)
Afgri	Eloff (Bins)	Afgri	Vlakfontein (Bunkers)
Afgri	Endicott (Bins)		

Region 33: Mpumalanga Northern Region			
Afgri	Arnot (Bins)	Afgri	Middelburg (Bins)
Afgri	Broodsnyersplaas (Bunkers)	Afgri	Pan (Bins)
Afgri	Driefontein (Bins)	Afgri	Stoffberg (Bins)
Afgri	Lydenburg (Bins)	Afgri	Wonderfontein (Bins)
Afgri	Marble Hall (Bins)	BKB	Wonderfontein (Bunkers)

Region 34: Gauteng Region			
Afgri	Bapsfontein (Bunkers)	Afgri	Meyerton (Bunkers)
Afgri	Bloekomspruit (Bins)	Afgri	Nigel (Bins)
Afgri	Bronkhorstspruit (Bins)	Afgri	Pretoria Wes (Bins)
Afgri	Glenroy (Bins)	Afgri	Vogelvallei (Bunkers)
Afgri	Goeie Hoek (Bins)	Senwes	Middelvlei (Bins)
Afgri	Kaalfontein (Bins)	Senwes	Oberholzer (Bins)
Afgri	Kliprivier (Bunkers)	Senwes	Raathsvlei (Bins)

Region 35: Limpopo Region			
Afgri	Northam (Bins)	VKB	Nylstroom (Modimolle) (Bins)
VKB	Alma (Bins)	VKB	Potgietersrus (Mokopane) (Bins)
VKB	Lehau (Bins)	VKB	Roedtan (Bins)
VKB	Naboomspruit (Mookgophong) (Bins)	VKB	Settlers (Bins)
VKB	Nutfield (Bins)	VKB	Warmbad (Bela-Bela) (Bins)

Region 36: KwaZulu-Natal Region			
Afgri	Bergville (Bins/Bunkers)	Afgri	Mizpah (Bins)
Afgri	Chelmsford Dam (Bunkers)	Afgri	Paulpietersburg (Bins)
Afgri	Bloedrivier (Bins)	Afgri	Pietermaritzburg (Bins)
Afgri	Dannhauser (Bins)	Afgri	Vryheid (Bins)
Afgri	Dundee (Bins)	Afgri	Winterton (Bins/Bunkers)

TABLE 5: RSA GRADING OF WHITE MAIZE ACCORDING TO GRADE (2023/24)

Number of samples	Region	% Defective Kernels						% Total defective			% Foreign matter			% Other Colour			% Combined Deviations			% Diplodia Kernels			% Fusarium Kernels			% Cobrot Kernels		
		Above 6.35 mm sieve			Below 6.35 mm sieve																							
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: WM1																												
7	Region 12	0.4	0.0	0.8	1.5	0.1	3.0	1.9	0.6	3.2	0.1	0.0	0.3	0.0	0.0	0.0	1.9	0.6	3.2	0.0	0.0	0.0	0.3	0.0	0.8	0.3	0.0	0.8
5	Region 13	0.7	0.0	1.9	2.5	0.7	6.2	3.2	1.1	6.2	0.0	0.0	0.1	0.2	0.0	0.4	3.4	1.1	6.2	0.0	0.0	0.0	0.5	0.0	1.2	0.5	0.0	1.2
13	Region 14	0.6	0.0	2.2	2.4	0.6	6.2	3.0	0.6	6.7	0.1	0.0	0.3	0.0	0.0	0.2	3.1	0.6	6.7	0.1	0.0	0.6	0.5	0.0	1.8	0.5	0.0	1.8
10	Region 15	0.9	0.0	3.4	1.1	0.0	2.6	2.0	0.4	6.0	0.1	0.0	0.3	0.1	0.0	0.9	2.2	0.4	6.1	0.5	0.0	3.3	0.4	0.0	1.7	0.8	0.0	3.4
9	Region 16	0.6	0.0	1.2	1.9	0.3	5.7	2.5	1.3	5.9	0.0	0.0	0.1	0.0	0.0	0.2	2.6	1.3	6.1	0.1	0.0	0.5	0.4	0.0	0.9	0.5	0.0	1.1
20	Region 17	1.6	0.0	4.0	2.8	0.0	5.0	4.3	0.4	6.9	0.0	0.0	0.3	0.1	0.0	0.7	4.4	0.4	7.1	0.5	0.0	2.1	0.9	0.0	3.4	1.5	0.0	4.0
21	Region 18	1.2	0.0	4.3	1.2	0.0	4.2	2.4	0.2	5.9	0.0	0.0	0.3	0.0	0.0	0.4	2.5	0.3	5.9	0.2	0.0	0.7	0.8	0.0	3.9	1.0	0.0	4.3
15	Region 19	1.2	0.0	3.3	2.2	0.0	4.4	3.3	1.3	5.6	0.0	0.0	0.3	0.1	0.0	0.5	3.5	1.5	5.6	0.2	0.0	1.4	0.9	0.0	2.7	1.1	0.0	3.2
18	Region 20	0.6	0.0	1.7	2.0	0.5	3.4	2.5	0.6	4.2	0.0	0.0	0.1	0.3	0.0	2.9	2.8	0.8	7.1	0.0	0.0	0.5	0.5	0.0	1.7	0.5	0.0	1.7
17	Region 21	0.7	0.0	2.4	1.9	0.5	3.7	2.5	0.7	4.4	0.0	0.0	0.2	0.0	0.0	0.1	2.6	0.7	4.4	0.1	0.0	1.2	0.5	0.0	1.4	0.6	0.0	2.2
23	Region 22	0.7	0.0	3.6	1.8	0.0	4.5	2.5	0.5	4.9	0.1	0.0	0.2	0.0	0.0	0.2	2.6	0.6	5.0	0.2	0.0	1.1	0.4	0.0	2.6	0.7	0.0	3.6
34	Region 23	0.9	0.0	3.4	1.7	0.2	3.4	2.6	0.8	6.3	0.1	0.0	0.3	0.0	0.0	0.2	2.7	0.8	6.5	0.2	0.0	1.8	0.6	0.0	2.2	0.8	0.0	2.9
23	Region 24	0.6	0.0	1.6	1.8	0.5	4.3	2.3	1.2	5.9	0.0	0.0	0.2	0.1	0.0	0.4	2.4	1.2	6.1	0.1	0.0	0.7	0.4	0.0	1.6	0.5	0.0	1.6
1	Region 25	0.0	-	-	2.7	-	-	2.7	-	-	0.0	-	-	0.1	-	-	2.8	-	-	0.0	-	-	0.0	-	-	0.0	-	-
7	Region 26	0.9	0.3	1.6	1.6	0.4	3.0	2.5	0.7	3.5	0.0	0.0	0.1	0.1	0.0	0.2	2.6	0.9	3.8	0.0	0.0	0.3	0.6	0.2	1.2	0.6	0.2	1.2
11	Region 28	0.5	0.0	1.1	1.2	0.5	2.4	1.7	0.7	2.6	0.0	0.0	0.2	0.3	0.0	1.5	2.1	0.7	3.1	0.1	0.0	0.6	0.2	0.0	1.1	0.3	0.0	1.1
25	Region 29	0.8	0.0	2.3	2.0	0.8	4.0	2.9	1.4	5.1	0.1	0.0	0.3	0.1	0.0	0.3	3.0	1.4	5.2	0.2	0.0	1.0	0.6	0.0	1.4	0.8	0.0	2.1
28	Region 30	1.6	0.0	4.4	1.8	0.9	3.7	3.4	1.4	7.0	0.0	0.0	0.2	0.2	0.0	1.3	3.7	1.6	7.1	0.3	0.0	2.0	1.2	0.0	3.7	1.5	0.0	4.1
9	Region 31	1.2	0.0	3.6	2.0	1.0	3.2	3.2	1.9	6.9	0.0	0.0	0.3	0.1	0.0	0.3	3.3	1.9	7.5	0.4	0.0	1.7	0.7	0.0	1.9	1.1	0.0	3.6
11	Region 32	1.3	0.5	2.4	1.8	0.7	5.6	3.0	1.7	6.8	0.1	0.0	0.3	0.4	0.0	2.8	3.5	1.8	6.8	0.2	0.0	0.8	0.9	0.4	1.7	1.0	0.5	1.7
48	Region 33	1.2	0.0	4.1	1.4	0.1	3.4	2.6	0.6	5.7	0.0	0.0	0.3	0.1	0.0	1.5	2.8	0.6	6.2	0.4	0.0	1.5	0.7	0.0	3.3	1.1	0.0	4.1
31	Region 34	1.1	0.0	3.6	1.9	0.3	5.3	3.0	0.4	6.7	0.1	0.0	0.3	0.1	0.0	1.0	3.2	0.8	6.7	0.3	0.0	1.5	0.7	0.0	2.6	1.0	0.0	3.6
8	Region 35	1.3	0.0	4.3	2.1	1.1	5.2	3.5	1.1	6.6	0.0	0.0	0.2	0.5	0.0	2.1	4.0	1.1	6.6	0.3	0.0	2.1	0.9	0.0	3.1	1.2	0.0	4.1
14	Region 36	1.8	0.2	4.7	1.0	0.0	2.1	2.8	0.2	6.6	0.0	0.0	0.3	0.3	0.0	1.3	3.1	0.2	7.9	0.3	0.0	2.2	1.4	0.2	2.7	1.7	0.2	4.7
408	**Ave. WM1**	**1.0**			**1.8**			**2.8**			**0.0**			**0.1**			**3.0**			**0.2**			**0.7**			**0.9**		
	Min. WM1		**0.0**			**0.0**			**0.2**			**0.0**			**0.0**			**0.2**			**0.0**			**0.0**			**0.0**	
	Max. WM1			**4.7**			**6.2**			**7.0**			**0.3**			**2.9**			**7.9**			**3.3**			**3.9**			**4.7**

TABLE 5: RSA GRADING OF WHITE MAIZE ACCORDING TO GRADE (2023/24) (continue)

Number of samples	Region	% Defective Kernels						% Total defective			% Foreign matter			% Other Colour			% Combined Deviations			% Diplodia Kernels			% Fusarium Kernels			% Cobrot Kernels		
		Above 6.35 mm sieve			Below 6.35 mm sieve																							
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: WM2																												
4	Region 12	0.7	0.0	1.8	3.7	1.1	10.8	4.4	1.5	11.3	0.4	0.2	0.5	0.0	0.0	0.0	4.8	2.0	11.5	0.1	0.0	0.4	0.6	0.0	1.4	0.7	0.0	1.8
3	Region 13	0.7	0.4	1.3	6.1	3.6	8.9	6.8	4.1	9.3	0.2	0.1	0.4	0.2	0.0	0.4	7.3	4.8	9.4	0.2	0.0	0.6	0.4	0.2	0.7	0.6	0.2	1.3
2	Region 14	0.3	0.0	0.6	2.0	1.2	2.7	2.3	1.8	2.7	0.5	0.4	0.5	0.0	0.0	0.0	2.7	2.3	3.2	0.0	0.0	0.0	0.3	0.0	0.6	0.3	0.0	0.6
1	Region 15	1.6	-	-	4.2	-	-	5.8	-	-	0.4	-	-	0.0	-	-	6.2	-	-	0.0	-	-	1.4	-	-	1.4	-	-
3	Region 17	3.7	1.0	6.4	2.4	1.3	4.3	6.1	2.4	8.1	0.0	0.0	0.1	1.9	0.0	5.6	8.0	7.9	8.2	0.9	0.0	1.5	2.4	0.0	4.6	3.3	0.0	6.1
1	Region 18	1.0	-	-	7.5	-	-	8.4	-	-	0.0	-	-	0.1	-	-	8.6	-	-	0.0	-	-	1.0	-	-	1.0	-	-
7	Region 19	2.0	0.4	5.2	6.0	2.8	9.3	8.0	7.1	10.1	0.1	0.0	0.2	0.1	0.0	0.3	8.2	7.2	10.5	0.2	0.0	1.2	1.8	0.4	4.0	2.0	0.4	5.2
4	Region 21	0.3	0.0	0.5	5.7	1.1	11.0	5.9	1.1	11.0	0.2	0.0	0.4	0.0	0.0	0.0	6.1	1.4	11.0	0.0	0.0	0.0	0.3	0.0	0.5	0.3	0.0	0.5
1	Region 22	0.6	-	-	6.5	-	-	7.1	-	-	0.1	-	-	0.0	-	-	7.1	-	-	0.6	-	-	0.0	-	-	0.6	-	-
2	Region 24	2.6	0.0	5.2	7.5	2.3	12.6	10.0	7.5	12.6	0.1	0.0	0.2	0.1	0.0	0.2	10.2	7.5	13.0	1.2	0.0	2.4	1.3	0.0	2.6	2.5	0.0	5.0
6	Region 29	0.9	0.2	2.0	1.9	1.3	3.6	2.8	1.8	4.3	0.4	0.4	0.5	0.1	0.0	0.1	3.3	2.2	4.7	0.3	0.0	0.9	0.5	0.0	0.8	0.8	0.2	1.6
3	Region 30	5.1	0.2	9.1	2.3	1.8	2.9	7.4	2.0	11.4	0.1	0.0	0.4	0.4	0.2	0.6	8.0	2.6	11.9	0.5	0.0	0.9	2.2	0.0	4.3	2.7	0.0	5.2
1	Region 31	0.0	-	-	1.7	-	-	1.7	-	-	0.5	-	-	3.1	-	-	5.2	-	-	0.0	-	-	0.0	-	-	0.0	-	-
4	Region 32	1.6	0.0	3.2	6.3	2.8	9.4	7.9	5.7	9.7	0.1	0.0	0.4	0.5	0.1	1.3	8.5	6.2	11.0	0.0	0.0	0.0	1.5	0.0	3.2	1.5	0.0	3.2
1	Region 34	0.6	-	-	0.8	-	-	1.5	-	-	0.4	-	-	0.0	-	-	1.8	-	-	0.0	-	-	0.6	-	-	0.6	-	-
1	Region 35	5.2	-	-	4.5	-	-	9.7	-	-	0.5	-	-	0.2	-	-	10.4	-	-	0.4	-	-	4.7	-	-	5.0	-	-
44	**Ave. WM2**	**1.7**			**4.4**			**6.0**			**0.2**			**0.3**			**6.6**			**0.3**			**1.1**			**1.4**		
	Min. WM2		**0.0**			**0.8**			**1.1**			**0.0**			**0.0**			**1.4**			**0.0**			**0.0**			**0.0**	
	Max. WM2			**9.1**			**12.6**			**12.6**			**0.5**			**5.6**			**13.0**			**2.4**			**4.7**			**6.1**

TABLE 5: RSA GRADING OF WHITE MAIZE ACCORDING TO GRADE (2023/24) (continue)

Number of samples	Region	% Defective Kernels						% Total defective			% Foreign matter			% Other Colour			% Combined Deviations			% Diplodia Kernels			% Fusarium Kernels			% Cobrot Kernels		
		Above 6.35 mm sieve			Below 6.35 mm sieve																							
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: WM3																												
2	Region 12	1.4	1.0	1.8	1.2	0.9	1.4	2.6	1.9	3.2	0.6	0.6	0.7	0.0	0.0	0.0	3.2	2.4	4.0	0.0	0.0	0.0	1.4	1.0	1.8	1.4	1.0	1.8
1	Region 14	1.5	-	-	1.7	-	-	3.2	-	-	0.7	-	-	0.2	-	-	4.2	-	-	0.3	-	-	0.3	-	-	0.6	-	-
1	Region 17	9.4	-	-	6.0	-	-	15.4	-	-	0.0	-	-	0.0	-	-	15.4	-	-	3.1	-	-	6.2	-	-	9.3	-	-
1	Region 19	0.5	-	-	5.6	-	-	6.0	-	-	0.7	-	-	0.0	-	-	6.8	-	-	0.0	-	-	0.5	-	-	0.5	-	-
2	Region 20	10.7	1.8	19.5	3.3	2.6	3.9	13.9	4.4	23.5	0.3	0.1	0.6	0.3	0.2	0.5	14.6	5.1	24.1	0.3	0.0	0.5	1.4	1.3	1.5	1.7	1.5	1.8
2	Region 21	0.2	0.1	0.4	5.0	3.6	6.4	5.2	3.9	6.5	0.7	0.7	0.7	0.1	0.0	0.3	6.0	4.9	7.2	0.2	0.0	0.4	0.0	0.0	0.0	0.2	0.0	0.4
2	Region 22	0.9	0.2	1.6	1.9	1.2	2.7	2.8	1.4	4.3	0.6	0.6	0.6	0.0	0.0	0.0	3.4	1.9	4.9	0.0	0.0	0.0	0.8	0.0	1.6	0.8	0.0	1.6
1	Region 23	1.8	-	-	18.5	-	-	20.3	-	-	0.0	-	-	0.1	-	-	20.4	-	-	1.2	-	-	0.4	-	-	1.6	-	-
1	Region 28	2.4	-	-	12.2	-	-	14.6	-	-	0.0	-	-	0.0	-	-	14.6	-	-	0.0	-	-	0.8	-	-	0.8	-	-
2	Region 30	0.5	0.4	0.6	1.6	1.4	1.8	2.1	2.0	2.2	0.7	0.6	0.7	0.3	0.0	0.7	3.1	2.9	3.3	0.1	0.0	0.2	0.4	0.2	0.6	0.5	0.4	0.6
2	Region 31	0.9	0.8	1.0	4.0	3.9	4.0	4.9	4.9	5.0	0.7	0.7	0.7	0.5	0.1	0.8	6.1	5.9	6.3	0.0	0.0	0.0	0.8	0.7	0.9	0.8	0.7	0.9
1	Region 36	3.8	-	-	3.1	-	-	6.9	-	-	0.6	-	-	0.2	-	-	7.7	-	-	0.6	-	-	3.0	-	-	3.6	-	-
18	**Ave. WM3**	**2.7**			**4.5**			**7.2**			**0.5**			**0.2**			**7.9**			**0.3**			**1.2**			**1.5**		
	Min. WM3		**0.1**			**0.9**			**1.4**			**0.0**			**0.0**			**1.9**			**0.0**			**0.0**			**0.0**	
	Max. WM3			**19.5**			**18.5**			**23.5**			**0.7**			**0.8**			**24.1**			**3.1**			**6.2**			**9.3**

TABLE 5: RSA GRADING OF WHITE MAIZE ACCORDING TO GRADE (2023/24) (continue)

Number of samples	Region	% Defective Kernels						% Total defective			% Foreign matter			% Other Colour			% Combined Deviations			% Diplodia Kernels			% Fusarium Kernels			% Cobrot Kernels		
		Above 6.35 mm sieve			Below 6.35 mm sieve																							
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: COM																												
4	Region 12	0.6	0.2	1.5	3.1	0.4	6.5	3.7	0.5	7.1	0.9	0.8	1.1	0.1	0.0	0.3	4.7	1.6	7.9	0.0	0.0	0.0	0.4	0.0	1.3	0.4	0.0	1.3
4	Region 14	0.7	0.0	2.7	7.7	2.2	13.8	8.4	4.9	13.8	1.8	0.0	3.6	0.0	0.0	0.0	10.2	4.9	17.4	0.2	0.0	0.7	0.2	0.0	0.8	0.4	0.0	1.5
2	Region 15	0.2	0.0	0.4	0.9	0.4	1.5	1.1	0.8	1.5	1.1	0.8	1.3	0.0	0.0	0.0	2.2	1.6	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	Region 17	1.9	0.5	3.3	6.0	1.6	10.4	7.9	4.9	10.9	2.4	1.7	3.1	0.2	0.0	0.4	10.5	8.0	13.0	0.5	0.2	0.7	1.4	0.3	2.6	1.9	0.5	3.3
2	Region 18	3.8	0.2	7.3	8.9	5.0	12.8	12.7	5.2	20.1	1.0	0.8	1.2	2.1	0.8	3.5	15.8	6.8	24.7	0.5	0.2	0.9	2.5	0.0	5.1	3.1	0.2	6.0
2	Region 20	2.1	0.6	3.7	2.8	2.5	3.2	5.0	3.8	6.2	0.9	0.1	1.7	6.1	0.0	12.1	11.9	3.9	19.9	0.3	0.0	0.6	1.9	0.0	3.7	2.1	0.6	3.7
4	Region 21	0.3	0.1	0.4	4.2	3.3	5.2	4.5	3.7	5.3	2.0	0.8	4.0	0.0	0.0	0.1	6.5	4.7	8.2	0.1	0.0	0.2	0.3	0.1	0.4	0.3	0.1	0.4
6	Region 22	1.7	0.0	4.0	3.6	1.3	6.8	5.4	1.3	10.8	1.1	0.8	1.6	0.0	0.0	0.0	6.4	2.2	11.6	0.4	0.0	0.7	1.2	0.0	3.3	1.7	0.0	4.0
2	Region 23	1.0	0.8	1.3	1.5	0.7	2.3	2.5	2.0	3.1	0.5	0.0	0.9	0.0	0.0	0.0	3.0	2.9	3.1	0.0	0.0	0.0	1.0	0.8	1.3	1.0	0.8	1.3
3	Region 24	0.5	0.0	0.9	4.6	2.4	8.7	5.1	2.4	9.1	0.7	0.1	1.2	0.0	0.0	0.0	5.8	3.7	9.1	0.3	0.0	0.4	0.2	0.0	0.5	0.5	0.0	0.9
1	Region 28	0.5	-	-	2.9	-	-	3.4	-	-	0.8	-	-	0.0	-	-	4.2	-	-	0.0	-	-	0.2	-	-	0.2	-	-
2	Region 29	0.2	0.0	0.4	1.3	1.2	1.4	1.5	1.4	1.6	0.8	0.8	0.8	0.0	0.0	0.0	2.3	2.1	2.4	0.2	0.0	0.4	0.0	0.0	0.0	0.2	0.0	0.4
5	Region 30	2.1	0.0	6.7	2.4	1.3	4.7	4.5	1.5	11.4	1.1	0.0	3.1	1.3	0.0	5.4	6.9	2.8	12.8	0.3	0.0	1.5	1.7	0.0	6.6	2.0	0.0	6.6
2	Region 31	1.5	0.9	2.0	2.5	1.3	3.7	4.0	3.3	4.7	0.1	0.1	0.1	0.3	0.1	0.4	4.4	3.8	4.9	0.0	0.0	0.0	1.3	0.7	1.9	1.3	0.7	1.9
1	Region 32	1.5	-	-	1.3	-	-	2.7	-	-	0.3	-	-	3.2	-	-	6.2	-	-	1.3	-	-	0.1	-	-	1.5	-	-
3	Region 33	1.0	0.0	2.2	5.1	1.8	11.6	6.1	2.5	11.6	0.4	0.0	1.1	0.6	0.0	1.3	7.1	4.2	12.2	0.3	0.0	0.8	0.7	0.0	1.5	1.0	0.0	2.2
1	Region 34	0.1	-	-	6.8	-	-	6.9	-	-	0.0	-	-	0.0	-	-	6.9	-	-	0.0	-	-	0.0	-	-	0.0	-	-
1	Region 35	3.6	-	-	9.4	-	-	13.1	-	-	0.9	-	-	0.0	-	-	14.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
1	Region 36	0.1	-	-	5.2	-	-	5.3	-	-	1.0	-	-	1.0	-	-	7.3	-	-	0.0	-	-	0.0	-	-	0.0	-	-
48	**Ave. COM**	**1.2**			**4.1**			**5.3**			**1.0**			**0.6**			**7.0**			**0.2**			**0.8**			**1.0**		
	Min. COM		**0.0**			**0.4**			**0.5**			**0.0**			**0.0**			**1.6**			**0.0**			**0.0**			**0.0**	
	Max. COM			**7.3**			**13.8**			**20.1**			**4.0**			**12.1**			**24.7**			**1.5**			**6.6**			**6.6**
518	**Ave. WM**	**1.1**			**2.3**			**3.5**			**0.2**			**0.2**			**3.8**			**0.2**			**0.7**			**1.0**		
	Min. WM		**0.0**			**0.0**			**0.2**			**0.0**			**0.0**			**0.2**			**0.0**			**0.0**			**0.0**	
	Max. WM			**19.5**			**18.5**			**23.5**			**4.0**			**12.1**			**24.7**			**3.3**			**6.6**			**9.3**
1000	**Ave. Maize**	**1.4**			**2.8**			**4.2**			**0.2**			**0.2**			**4.5**			**0.2**			**1.0**			**1.2**		
	Min. Maize		**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.2**			**0.0**			**0.0**			**0.0**	
	Max. Maize			**20.3**			**26.9**			**26.9**			**5.1**			**12.1**			**30.9**			**5.3**			**17.5**			**20.1**

TABLE 5: RSA GRADING OF WHITE MAIZE ACCORDING TO GRADE (2023/24) (continue)

***The following yellow maize samples were downgraded to Class Other Maize due to the presence of poisonous seeds exceeding the maximum allowance**

Region	Number of Poisonous seeds (*Crotolaria* spp., *Datura* spp., *Ricinis communis*) Max. allowance 1 seed/1000 g	Number of Poisonous seeds (*Argemone mexicana* L., *Convolvulus* spp., *Ipomoea purpurea* Roth., *Lolium temulentum*, *Xanthium* spp.) Max. allowance 7 seeds/1000 g
14	6 *Datura*	0
20	0	27 *Xanthium Strumarium*
20	6 *Datura*	0
23	11 *Datura*	0
24	6 *Datura*	0
30	6 *Datura*	0
30	6 *Datura*	0
31	0	12 *Xanthium Strumarium*
31	6 *Datura*	0
32	6 *Datura*	0
33	6 *Datura*	0
33	22 *Datura*	5 *Ipomoea purpurea*
34	0	11 *Ipomoea purpurea*
36	6 *Datura*	0

TABLE 6: RSA GRADING OF WHITE MAIZE (2023/24)

Number of samples	Region	% Defective Kernels						% Total defective			% Foreign matter			% Other Colour			% Combined Deviations			% Diplodia Kernels			% Fusarium Kernels			% Cobrot Kernels		
		Above 6.35 mm sieve			Below 6.35 mm sieve																							
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: WHITE																												
17	Region 12	0.6	0.0	1.8	2.3	0.1	10.8	3.0	0.5	11.3	0.4	0.0	1.1	0.0	0.0	0.3	3.4	0.6	11.5	0.0	0.0	0.4	0.5	0.0	1.8	0.5	0.0	1.8
8	Region 13	0.7	0.0	1.9	3.8	0.7	8.9	4.6	1.1	9.3	0.1	0.0	0.4	0.2	0.0	0.4	4.9	1.1	9.4	0.1	0.0	0.6	0.5	0.0	1.2	0.5	0.0	1.3
20	Region 14	0.6	0.0	2.7	3.4	0.6	13.8	4.1	0.6	13.8	0.5	0.0	3.6	0.0	0.0	0.2	4.6	0.6	17.4	0.1	0.0	0.7	0.4	0.0	1.8	0.5	0.0	1.8
13	Region 15	0.9	0.0	3.4	1.3	0.0	4.2	2.2	0.4	6.0	0.2	0.0	1.3	0.1	0.0	0.9	2.5	0.4	6.2	0.4	0.0	3.3	0.4	0.0	1.7	0.8	0.0	3.4
9	Region 16	0.6	0.0	1.2	1.9	0.3	5.7	2.5	1.3	5.9	0.0	0.0	0.1	0.0	0.0	0.2	2.6	1.3	6.1	0.1	0.0	0.5	0.4	0.0	0.9	0.5	0.0	1.1
26	Region 17	2.1	0.0	9.4	3.1	0.0	10.4	5.2	0.4	15.4	0.2	0.0	3.1	0.3	0.0	5.6	5.7	0.4	15.4	0.7	0.0	3.1	1.4	0.0	6.2	2.0	0.0	9.3
24	Region 18	1.4	0.0	7.3	2.1	0.0	12.8	3.5	0.2	20.1	0.1	0.0	1.2	0.2	0.0	3.5	3.8	0.3	24.7	0.2	0.0	0.9	1.0	0.0	5.1	1.2	0.0	6.0
23	Region 19	1.4	0.0	5.2	3.5	0.0	9.3	4.9	1.3	10.1	0.1	0.0	0.7	0.1	0.0	0.5	5.1	1.5	10.5	0.2	0.0	1.4	1.1	0.0	4.0	1.4	0.0	5.2
22	Region 20	1.6	0.0	19.5	2.2	0.5	3.9	3.8	0.6	23.5	0.1	0.0	1.7	0.8	0.0	12.1	4.7	0.8	24.1	0.1	0.0	0.6	0.7	0.0	3.7	0.8	0.0	3.7
27	Region 21	0.5	0.0	2.4	3.0	0.5	11.0	3.5	0.7	11.0	0.4	0.0	4.0	0.0	0.0	0.3	3.9	0.7	11.0	0.1	0.0	1.2	0.4	0.0	1.4	0.5	0.0	2.2
32	Region 22	0.9	0.0	4.0	2.3	0.0	6.8	3.2	0.5	10.8	0.3	0.0	1.6	0.0	0.0	0.2	3.5	0.6	11.6	0.3	0.0	1.1	0.6	0.0	3.3	0.9	0.0	4.0
37	Region 23	0.9	0.0	3.4	2.2	0.2	18.5	3.1	0.8	20.3	0.1	0.0	0.9	0.0	0.0	0.2	3.2	0.8	20.4	0.2	0.0	1.8	0.6	0.0	2.2	0.8	0.0	2.9
28	Region 24	0.7	0.0	5.2	2.5	0.5	12.6	3.2	1.2	12.6	0.1	0.0	1.2	0.1	0.0	0.4	3.3	1.2	13.0	0.2	0.0	2.4	0.5	0.0	2.6	0.7	0.0	5.0
1	Region 25	0.0	-	-	2.7	-	-	2.7	-	-	0.0	-	-	0.1	-	-	2.8	-	-	0.0	-	-	0.0	-	-	0.0	-	-
7	Region 26	0.9	0.3	1.6	1.6	0.4	3.0	2.5	0.7	3.5	0.0	0.0	0.1	0.1	0.0	0.2	2.6	0.9	3.8	0.0	0.0	0.3	0.6	0.2	1.2	0.6	0.2	1.2
13	Region 28	0.6	0.0	2.4	2.2	0.5	12.2	2.8	0.7	14.6	0.1	0.0	0.8	0.3	0.0	1.5	3.2	0.7	14.6	0.1	0.0	0.6	0.3	0.0	1.1	0.4	0.0	1.1
33	Region 29	0.8	0.0	2.3	2.0	0.8	4.0	2.8	1.4	5.1	0.2	0.0	0.8	0.0	0.0	0.3	3.0	1.4	5.2	0.2	0.0	1.0	0.5	0.0	1.4	0.7	0.0	2.1
38	Region 30	1.9	0.0	9.1	1.9	0.9	4.7	3.8	1.4	11.4	0.2	0.0	3.1	0.4	0.0	5.4	4.4	1.6	12.8	0.3	0.0	2.0	1.3	0.0	6.6	1.6	0.0	6.6
14	Region 31	1.1	0.0	3.6	2.3	1.0	4.0	3.5	1.7	6.9	0.2	0.0	0.7	0.4	0.0	3.1	4.0	1.9	7.5	0.2	0.0	1.7	0.7	0.0	1.9	1.0	0.0	3.6
16	Region 32	1.4	0.0	3.2	2.9	0.7	9.4	4.2	1.7	9.7	0.1	0.0	0.4	0.6	0.0	3.2	4.9	1.8	11.0	0.2	0.0	1.3	1.0	0.0	3.2	1.2	0.0	3.2
51	Region 33	1.2	0.0	4.1	1.6	0.1	11.6	2.8	0.6	11.6	0.0	0.0	1.1	0.2	0.0	1.5	3.0	0.6	12.2	0.4	0.0	1.5	0.7	0.0	3.3	1.1	0.0	4.1
33	Region 34	1.0	0.0	3.6	2.0	0.3	6.8	3.0	0.4	6.9	0.1	0.0	0.4	0.1	0.0	1.0	3.2	0.8	6.9	0.3	0.0	1.5	0.6	0.0	2.6	1.0	0.0	3.6
10	Region 35	1.9	0.0	5.2	3.1	1.1	9.4	5.0	1.1	13.1	0.2	0.0	0.9	0.4	0.0	2.1	5.6	1.1	14.0	0.3	0.0	2.1	1.2	0.0	4.7	1.5	0.0	5.0
16	Region 36	1.8	0.1	4.7	1.4	0.0	5.2	3.2	0.2	6.9	0.1	0.0	1.0	0.3	0.0	1.3	3.6	0.2	7.9	0.3	0.0	2.2	1.4	0.0	3.0	1.7	0.0	4.7
518	**Ave. White**	**1.1**			**2.3**			**3.5**			**0.2**			**0.2**			**3.8**			**0.2**			**0.7**			**1.0**		
	Min. white		**0.0**			**0.0**			**0.2**			**0.0**			**0.0**			**0.2**			**0.0**			**0.0**			**0.0**	
	Max. white			**19.5**			**18.5**			**23.5**			**4.0**			**12.1**			**24.7**			**3.3**			**6.6**			**9.3**

TABLE 7: RSA GRADING OF YELLOW MAIZE ACCORDING TO GRADE (2023/24)

Number of samples	Region	% Defective Kernels						% Total defective			% Foreign matter			% Other Colour			% Combined Deviations			% Diplodia Kernels			% Fusarium Kernels			% Cobrot Kernels		
		Above 6.35 mm sieve			Below 6.35 mm sieve																							
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: YM1																												
3	Region 06	0.5	0.0	1.0	2.6	2.2	2.9	3.1	2.2	3.9	0.0	0.0	0.1	0.0	0.0	0.0	3.1	2.2	4.0	0.0	0.0	0.0	0.3	0.0	0.4	0.3	0.0	0.4
8	Region 08	1.4	0.0	3.0	2.9	1.7	3.8	4.2	2.5	5.9	0.1	0.0	0.3	0.1	0.0	0.4	4.4	2.7	5.9	0.4	0.0	1.7	0.5	0.0	1.7	0.9	0.0	3.0
16	Region 10	0.4	0.0	1.9	2.2	0.9	3.9	2.6	0.9	4.2	0.0	0.0	0.1	0.0	0.0	0.0	2.6	0.9	4.2	0.0	0.0	0.2	0.3	0.0	1.5	0.3	0.0	1.5
8	Region 11	0.3	0.0	0.7	2.0	0.8	3.5	2.3	0.9	3.9	0.0	0.0	0.1	0.0	0.0	0.0	2.3	1.0	3.9	0.0	0.0	0.0	0.3	0.0	0.6	0.3	0.0	0.6
1	Region 12	3.5	-	-	1.4	-	-	5.0	-	-	0.0	-	-	0.3	-	-	5.2	-	-	0.3	-	-	3.2	-	-	3.5	-	-
1	Region 13	2.1	-	-	2.7	-	-	4.9	-	-	0.1	-	-	0.0	-	-	4.9	-	-	0.4	-	-	1.6	-	-	2.0	-	-
4	Region 14	0.5	0.2	1.0	1.7	1.4	2.0	2.3	1.9	2.7	0.1	0.0	0.2	0.1	0.0	0.4	2.5	2.1	2.9	0.1	0.0	0.4	0.3	0.0	0.6	0.4	0.2	0.6
5	Region 15	4.5	0.8	6.4	2.2	1.3	3.3	6.7	4.1	8.0	0.1	0.0	0.2	0.5	0.0	1.9	7.4	4.7	8.6	0.2	0.0	0.5	3.9	0.7	6.0	4.0	0.7	6.4
3	Region 17	2.2	0.9	3.1	2.4	1.4	3.3	4.7	2.4	6.4	0.1	0.0	0.3	0.2	0.0	0.7	5.0	2.4	7.4	0.0	0.0	0.0	2.1	0.8	2.7	2.1	0.8	2.7
1	Region 18	0.6	-	-	1.9	-	-	2.5	-	-	0.0	-	-	0.0	-	-	2.5	-	-	0.0	-	-	0.6	-	-	0.6	-	-
6	Region 19	1.9	0.2	4.5	2.6	1.4	4.0	4.4	2.0	8.5	0.0	0.0	0.2	0.1	0.0	0.4	4.6	2.1	8.5	0.1	0.0	0.5	1.4	0.0	3.3	1.5	0.0	3.3
6	Region 20	1.2	0.2	2.4	2.8	2.2	3.4	3.9	2.9	4.9	0.0	0.0	0.1	0.2	0.0	0.7	4.1	2.9	5.2	0.1	0.0	0.5	0.8	0.2	1.9	1.0	0.2	2.4
1	Region 22	0.6	-	-	0.4	-	-	1.0	-	-	0.0	-	-	0.0	-	-	1.0	-	-	0.0	-	-	0.6	-	-	0.6	-	-
5	Region 24	0.2	0.0	0.4	2.1	0.0	3.7	2.3	0.0	4.0	0.1	0.0	0.2	0.1	0.0	0.3	2.5	0.2	4.4	0.0	0.0	0.0	0.1	0.0	0.4	0.1	0.0	0.4
6	Region 25	0.3	0.0	0.6	2.2	0.4	3.9	2.5	0.4	4.4	0.0	0.0	0.1	0.0	0.0	0.0	2.5	0.5	4.4	0.0	0.0	0.0	0.3	0.0	0.6	0.3	0.0	0.6
5	Region 26	1.1	0.0	2.0	2.2	0.7	3.2	3.4	2.5	4.4	0.0	0.0	0.1	0.2	0.0	0.6	3.6	2.6	5.2	0.2	0.0	0.5	0.8	0.0	1.6	1.0	0.0	2.0
2	Region 27	1.1	0.9	1.4	2.7	1.8	3.6	3.8	3.2	4.5	0.1	0.0	0.1	0.0	0.0	0.0	3.9	3.3	4.5	0.2	0.0	0.4	0.9	0.5	1.4	1.1	0.9	1.4
34	Region 28	1.4	0.0	7.3	1.9	0.2	3.7	3.3	0.9	8.1	0.0	0.0	0.2	0.0	0.0	0.2	3.3	0.9	8.2	0.3	0.0	1.7	1.0	0.0	6.9	1.3	0.0	7.2
23	Region 29	1.0	0.0	2.0	2.5	1.0	3.8	3.4	1.7	5.0	0.0	0.0	0.2	0.0	0.0	0.2	3.5	1.7	5.3	0.2	0.0	0.9	0.7	0.0	1.8	0.9	0.0	2.0
27	Region 30	2.6	0.3	6.6	2.0	0.6	3.9	4.7	1.8	8.8	0.0	0.0	0.1	0.0	0.0	0.5	4.7	1.8	8.9	0.6	0.0	2.5	1.7	0.0	3.7	2.3	0.0	6.2
45	Region 31	1.5	0.0	5.9	2.1	0.2	4.0	3.6	1.4	8.1	0.0	0.0	0.3	0.0	0.0	0.2	3.7	1.4	8.4	0.1	0.0	0.5	1.2	0.0	5.3	1.3	0.0	5.6
35	Region 32	1.8	0.0	4.3	2.2	0.4	4.0	3.9	0.9	6.1	0.0	0.0	0.3	0.0	0.0	0.2	4.0	0.9	6.1	0.3	0.0	1.3	1.2	0.0	3.5	1.5	0.0	3.5
22	Region 33	1.8	0.0	4.5	1.8	0.1	3.9	3.7	0.4	6.7	0.1	0.0	0.2	0.3	0.0	1.8	4.0	0.4	7.4	0.4	0.0	2.2	1.2	0.0	3.1	1.6	0.0	4.0
12	Region 34	2.1	0.2	4.0	2.2	1.1	3.4	4.3	2.1	6.0	0.1	0.0	0.3	0.2	0.0	0.6	4.6	2.3	6.1	0.6	0.0	2.2	1.4	0.2	3.1	2.0	0.2	4.0
6	Region 35	0.7	0.0	2.4	2.1	0.9	4.0	2.8	0.9	5.7	0.1	0.0	0.2	0.1	0.0	0.9	3.0	0.9	6.0	0.0	0.0	0.0	0.3	0.0	0.5	0.3	0.0	0.5
14	Region 36	1.9	0.3	7.1	1.7	0.1	3.8	3.6	1.0	8.3	0.1	0.0	0.2	0.4	0.0	1.7	4.1	1.2	8.3	0.1	0.0	0.6	1.7	0.3	6.8	1.8	0.3	7.1
299	**Ave. YM1**	**1.5**			**2.1**			**3.7**			**0.0**			**0.1**			**3.8**			**0.2**			**1.1**			**1.3**		
	Min. YM1		**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.2**			**0.0**			**0.0**			**0.0**	
	Max. YM1			**7.3**			**4.0**			**8.8**			**0.3**			**1.9**			**8.9**			**2.5**			**6.9**			**7.2**

TABLE 7: RSA GRADING OF YELLOW MAIZE ACCORDING TO GRADE (2023/24) (continue)

Number of samples	Region	% Defective Kernels						% Total defective			% Foreign matter			% Other Colour			% Combined Deviations			% Diplodia Kernels			% Fusarium Kernels			% Cobrot Kernels		
		Above 6.35 mm sieve			Below 6.35 mm sieve																							
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: YM2																												
2	Region 06	4.4	1.0	7.7	3.4	2.2	4.6	7.8	5.6	10.0	0.0	0.0	0.1	0.0	0.0	0.0	7.8	5.7	10.0	0.0	0.0	0.0	3.9	1.0	6.9	3.9	1.0	6.9
3	Region 08	0.7	0.0	1.5	6.3	4.9	8.3	7.0	5.6	8.9	0.0	0.0	0.0	0.0	0.0	0.1	7.0	5.8	8.9	0.4	0.0	1.2	0.0	0.0	0.0	0.4	0.0	1.2
3	Region 11	1.5	0.1	4.0	4.8	4.1	6.0	6.3	4.2	8.2	0.1	0.0	0.1	0.0	0.0	0.0	6.3	4.2	8.4	0.6	0.0	1.9	0.7	0.1	1.6	1.3	0.1	3.5
1	Region 12	0.9	-	-	5.2	-	-	6.1	-	-	0.0	-	-	0.0	-	-	6.1	-	-	0.0	-	-	0.7	-	-	0.7	-	-
1	Region 13	2.6	-	-	4.6	-	-	7.2	-	-	0.2	-	-	0.3	-	-	7.6	-	-	0.3	-	-	2.3	-	-	2.6	-	-
2	Region 15	8.1	7.9	8.4	2.6	2.0	3.2	10.8	10.4	11.1	0.1	0.1	0.2	0.3	0.0	0.6	11.2	10.6	11.8	1.7	1.4	2.0	6.4	6.4	6.5	8.1	7.9	8.4
3	Region 17	4.9	0.4	13.1	4.9	1.6	7.4	9.7	6.8	14.6	0.0	0.0	0.1	0.6	0.0	1.9	10.4	6.8	16.5	0.6	0.0	1.8	4.1	0.4	10.9	4.7	0.4	12.7
5	Region 18	1.7	0.2	3.5	4.9	3.7	7.5	6.6	5.0	8.5	0.1	0.0	0.4	0.0	0.0	0.2	6.8	5.2	8.5	0.2	0.0	0.6	1.5	0.2	2.8	1.7	0.2	3.4
4	Region 19	0.8	0.0	1.6	6.0	4.2	7.9	6.8	5.5	9.2	0.0	0.0	0.2	0.9	0.0	3.1	7.7	6.2	9.3	0.1	0.0	0.2	0.7	0.0	1.4	0.8	0.0	1.6
1	Region 21	0.0	-	-	4.1	-	-	4.1	-	-	0.0	-	-	0.0	-	-	4.1	-	-	0.0	-	-	0.3	-	-	0.3	-	-
1	Region 22	0.6	-	-	4.1	-	-	4.8	-	-	0.0	-	-	0.0	-	-	4.8	-	-	0.0	-	-	0.6	-	-	0.6	-	-
7	Region 24	0.5	0.0	3.0	5.0	2.0	7.8	5.5	2.0	7.8	0.1	0.0	0.4	0.1	0.0	0.3	5.7	2.4	7.9	0.0	0.0	0.0	0.5	0.0	2.7	0.5	0.0	2.7
5	Region 25	0.2	0.0	0.4	6.3	4.3	9.7	6.5	4.6	9.7	0.1	0.1	0.1	0.0	0.0	0.0	6.6	4.6	9.8	0.0	0.0	0.0	0.2	0.0	0.4	0.2	0.0	0.4
6	Region 26	1.1	0.2	2.3	4.2	3.2	4.6	5.3	3.7	6.7	0.2	0.0	0.5	0.5	0.0	2.8	6.0	4.1	8.5	0.2	0.0	0.7	0.9	0.2	1.8	1.1	0.2	2.3
3	Region 27	0.7	0.1	1.7	5.5	2.2	9.1	6.2	2.7	10.8	0.2	0.0	0.5	0.0	0.0	0.0	6.4	3.2	10.8	0.2	0.0	0.7	0.5	0.0	1.0	0.7	0.0	1.7
5	Region 28	2.0	0.8	3.0	4.8	4.1	5.9	6.8	5.4	8.2	0.1	0.0	0.2	0.0	0.0	0.2	6.9	5.5	8.2	0.4	0.0	0.9	1.5	0.5	2.1	1.8	0.8	2.8
14	Region 29	0.8	0.0	3.0	6.0	1.7	9.1	6.8	1.7	9.9	0.1	0.0	0.5	0.0	0.0	0.0	6.9	2.2	10.3	0.1	0.0	1.1	0.6	0.0	2.0	0.7	0.0	3.0
5	Region 30	4.8	0.0	18.2	5.1	1.2	9.6	9.9	5.4	19.4	0.1	0.0	0.4	0.2	0.0	0.9	10.2	6.7	19.5	0.9	0.0	3.2	3.8	0.0	15.0	4.7	0.0	18.2
7	Region 31	2.0	0.7	4.7	3.8	0.5	6.2	5.8	4.0	8.9	0.2	0.0	0.5	0.0	0.0	0.0	6.0	4.4	9.0	0.3	0.0	1.5	1.3	0.5	3.0	1.6	0.5	4.5
7	Region 32	1.4	0.3	2.6	4.5	1.6	8.2	5.8	4.1	8.6	0.2	0.0	0.5	0.0	0.0	0.2	6.1	4.6	8.7	0.0	0.0	0.0	0.8	0.3	1.1	0.8	0.3	1.1
5	Region 33	3.0	1.3	6.2	2.8	0.2	5.4	5.8	2.3	9.5	0.2	0.0	0.5	0.6	0.0	2.6	6.6	3.0	9.9	1.2	0.7	2.3	1.6	0.2	4.8	2.9	0.9	6.0
6	Region 34	0.9	0.2	2.1	4.8	2.9	8.0	5.7	3.4	8.6	0.3	0.0	0.5	0.1	0.0	0.4	6.1	4.2	8.9	0.1	0.0	0.8	0.7	0.2	1.3	0.8	0.2	2.1
4	Region 36	1.6	0.8	2.6	5.0	3.0	6.9	6.6	3.8	9.5	0.2	0.0	0.5	0.5	0.0	1.8	7.3	4.7	9.5	0.2	0.0	1.0	1.2	0.2	2.0	1.4	0.2	2.5
100	**Ave. YM2**	**1.7**			**4.9**			**6.6**			**0.1**			**0.2**			**6.9**			**0.3**			**1.3**			**1.6**		
	Min. YM2		**0.0**			**0.2**			**1.7**			**0.0**			**0.0**			**2.2**			**0.0**			**0.0**			**0.0**	
	Max. YM2			**18.2**			**9.7**			**19.4**			**0.5**			**3.1**			**19.5**			**3.2**			**15.0**			**18.2**

TABLE 7: RSA GRADING OF YELLOW MAIZE ACCORDING TO GRADE (2023/24) (continue)

Number of samples	Region	% Defective Kernels						% Total defective			% Foreign matter			% Other Colour			% Combined Deviations			% Diplodia Kernels			% Fusarium Kernels			% Cobrot Kernels		
		Above 6.35 mm sieve			Below 6.35 mm sieve																							
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: YM3																												
2	Region 08	0.3	0.3	0.4	13.6	9.2	18.0	13.9	9.6	18.2	0.4	0.0	0.7	0.0	0.0	0.0	14.3	10.3	18.2	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1
3	Region 14	0.2	0.0	0.5	19.0	10.2	23.8	19.1	10.7	23.8	0.6	0.3	0.7	0.2	0.0	0.5	19.9	11.5	24.5	0.0	0.0	0.0	0.1	0.0	0.4	0.1	0.0	0.4
1	Region 18	0.0	-	-	4.0	-	-	4.0	-	-	0.7	-	-	1.0	-	-	5.8	-	-	0.0	-	-	0.0	-	-	0.0	-	-
1	Region 19	1.9	-	-	6.2	-	-	8.1	-	-	0.7	-	-	0.0	-	-	8.8	-	-	0.0	-	-	1.9	-	-	1.9	-	-
2	Region 21	0.7	0.2	1.2	16.0	14.4	17.6	16.7	14.6	18.8	0.1	0.0	0.2	0.1	0.0	0.2	16.9	14.9	19.0	0.0	0.0	0.0	0.7	0.2	1.1	0.7	0.2	1.1
1	Region 22	0.5	-	-	3.0	-	-	3.5	-	-	0.6	-	-	0.0	-	-	4.1	-	-	0.0	-	-	0.5	-	-	0.5	-	-
1	Region 24	0.0	-	-	13.0	-	-	13.0	-	-	0.4	-	-	0.0	-	-	13.5	-	-	0.0	-	-	0.0	-	-	0.0	-	-
1	Region 25	0.3	-	-	6.7	-	-	7.0	-	-	0.6	-	-	0.0	-	-	7.5	-	-	0.0	-	-	0.0	-	-	0.0	-	-
2	Region 26	10.3	0.4	20.3	7.9	2.1	13.6	18.2	14.0	22.4	0.3	0.1	0.6	0.0	0.0	0.0	18.5	14.6	22.5	1.3	0.0	2.7	8.9	0.4	17.5	10.3	0.4	20.1
1	Region 28	0.4	-	-	15.5	-	-	15.9	-	-	0.1	-	-	0.2	-	-	16.2	-	-	0.0	-	-	0.4	-	-	0.4	-	-
1	Region 29	0.9	-	-	2.9	-	-	3.8	-	-	0.7	-	-	0.0	-	-	4.5	-	-	0.0	-	-	0.4	-	-	0.4	-	-
2	Region 30	4.0	0.0	8.1	13.5	12.4	14.6	17.5	12.4	22.7	0.4	0.4	0.5	1.0	0.0	1.9	18.9	12.8	25.0	1.8	0.0	3.6	2.2	0.0	4.5	4.0	0.0	8.1
2	Region 31	0.3	0.1	0.4	3.2	2.6	3.7	3.5	2.8	4.2	0.6	0.6	0.6	0.1	0.0	0.1	4.1	3.4	4.8	0.0	0.0	0.0	0.2	0.1	0.4	0.2	0.1	0.4
2	Region 32	3.5	2.9	4.1	1.9	1.6	2.2	5.4	4.5	6.4	0.7	0.6	0.7	0.0	0.0	0.0	6.1	5.2	7.0	0.5	0.0	1.1	3.1	2.9	3.4	3.7	2.9	4.4
2	Region 34	0.5	0.2	0.8	2.2	1.9	2.4	2.7	2.1	3.3	0.6	0.6	0.7	0.0	0.0	0.0	3.3	2.8	3.9	0.0	0.0	0.0	0.5	0.2	0.8	0.5	0.2	0.8
1	Region 35	5.0	-	-	11.1	-	-	16.1	-	-	0.0	-	-	0.0	-	-	16.1	-	-	0.0	-	-	1.3	-	-	1.3	-	-
2	Region 36	1.4	0.7	2.2	1.7	1.5	1.9	3.1	2.5	3.7	0.7	0.7	0.7	0.0	0.0	0.0	3.8	3.3	4.3	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5
27	**Ave. YM3**	**1.9**			**8.9**			**10.8**			**0.5**			**0.2**			**11.4**			**0.3**			**1.4**			**1.7**		
	Min. YM3		**0.0**			**1.5**			**2.1**			**0.0**			**0.0**			**2.8**			**0.0**			**0.0**			**0.0**	
	Max. YM3			**20.3**			**23.8**			**23.8**			**0.7**			**1.9**			**25.0**			**3.6**			**17.5**			**20.1**

TABLE 7: RSA GRADING OF YELLOW MAIZE ACCORDING TO GRADE (2023/24) (continue)

Number of samples	Region	% Defective Kernels						% Total defective			% Foreign matter			% Other Colour			% Combined Deviations			% Diplodia Kernels			% Fusarium Kernels			% Cobrot Kernels		
		Above 6.35 mm sieve			Below 6.35 mm sieve																							
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: COM																												
1	Region 08	0.0	-	-	8.6	-	-	8.6	-	-	0.0	-	-	0.0	-	-	8.6	-	-	0.0	-	-	0.0	-	-	0.0	-	-
1	Region 11	0.2	-	-	4.6	-	-	4.8	-	-	0.1	-	-	0.0	-	-	4.9	-	-	0.0	-	-	0.2	-	-	0.2	-	-
1	Region 14	0.0	-	-	26.9	-	-	26.9	-	-	4.0	-	-	0.0	-	-	30.9	-	-	0.0	-	-	0.0	-	-	0.0	-	-
1	Region 18	3.8	-	-	6.0	-	-	9.8	-	-	0.0	-	-	0.0	-	-	9.8	-	-	0.2	-	-	3.7	-	-	3.8	-	-
3	Region 19	1.3	1.1	1.5	8.1	3.9	13.1	9.5	5.4	14.2	1.2	0.5	1.7	1.6	0.2	3.9	12.3	7.5	16.1	0.0	0.0	0.0	1.1	1.0	1.3	1.1	1.0	1.3
3	Region 21	1.9	0.0	3.0	8.7	2.0	20.4	10.6	2.0	23.1	1.8	0.9	3.4	0.5	0.0	0.8	12.8	2.9	27.3	0.1	0.0	0.3	1.7	0.0	2.6	1.9	0.0	2.8
1	Region 24	0.1	-	-	2.9	-	-	2.9	-	-	0.8	-	-	0.0	-	-	3.8	-	-	0.0	-	-	0.0	-	-	0.0	-	-
2	Region 26	1.2	0.9	1.4	1.6	0.3	2.9	2.7	1.8	3.7	0.7	0.0	1.3	0.1	0.0	0.2	3.5	3.3	3.7	0.2	0.0	0.3	0.9	0.7	1.1	1.1	0.7	1.4
4	Region 28	0.7	0.0	1.4	2.7	1.4	3.8	3.4	2.8	3.9	0.5	0.0	0.8	0.1	0.0	0.5	4.0	3.6	4.4	0.0	0.0	0.0	0.7	0.0	1.4	0.7	0.0	1.4
3	Region 29	1.9	0.9	3.7	3.9	0.9	6.9	5.8	2.0	10.6	0.7	0.0	1.1	0.0	0.0	0.0	6.4	2.0	11.7	0.2	0.0	0.6	1.4	0.3	3.1	1.6	0.3	3.7
9	Region 30	4.1	0.3	11.0	4.0	1.2	8.0	8.1	4.0	15.1	0.5	0.0	1.6	0.4	0.0	2.6	9.0	4.3	17.8	1.2	0.0	5.3	2.3	0.0	6.0	3.5	0.0	8.1
11	Region 31	1.7	0.2	3.3	2.5	0.3	5.2	4.2	3.0	7.3	0.2	0.0	0.9	0.1	0.0	0.4	4.5	3.0	7.4	0.1	0.0	0.4	1.4	0.0	2.3	1.5	0.0	2.7
5	Region 32	1.6	1.1	2.3	2.8	2.3	3.6	4.4	3.7	4.7	0.1	0.0	0.4	0.7	0.0	1.2	5.2	4.7	6.1	0.3	0.0	0.5	1.2	0.5	1.8	1.5	1.1	2.1
2	Region 33	2.4	0.0	4.9	5.3	3.6	7.1	7.8	7.1	8.5	0.0	0.0	0.0	0.4	0.0	0.8	8.3	7.3	9.3	0.9	0.0	1.8	1.4	0.0	2.8	2.3	0.0	4.6
6	Region 34	0.7	0.3	1.7	3.3	0.3	9.8	4.0	1.4	10.2	1.6	0.0	5.1	0.0	0.0	0.0	5.6	1.7	11.3	0.1	0.0	0.5	0.4	0.0	1.7	0.5	0.0	1.7
5	Region 36	1.4	0.9	2.3	3.0	1.5	5.1	4.4	3.0	6.0	0.1	0.0	0.4	0.8	0.0	1.7	5.3	4.7	6.1	0.2	0.0	0.5	1.2	0.5	1.8	1.4	0.9	2.1
56	**Ave. COM**	**1.9**			**4.4**			**6.3**			**0.7**			**0.3**			**7.3**			**0.3**			**1.3**			**1.7**		
	Min. COM		**0.0**			**0.3**			**1.4**			**0.0**			**0.0**			**1.7**			**0.0**			**0.0**			**0.0**	
	Max. COM			**11.0**			**26.9**			**26.9**			**5.1**			**3.9**			**30.9**			**5.3**			**6.0**			**8.1**
482	**Ave. YM**	**1.6**			**3.3**			**5.0**			**0.2**			**0.1**			**5.3**			**0.3**			**1.2**			**1.4**		
	Min. YM		**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.2**			**0.0**			**0.0**			**0.0**	
	Max. YM			**20.3**			**26.9**			**26.9**			**5.1**			**3.9**			**30.9**			**5.3**			**17.5**			**20.1**
1000	**Ave. Maize**	**1.4**			**2.8**			**4.2**			**0.2**			**0.2**			**4.5**			**0.2**			**1.0**			**1.2**		
	Min. Maize		**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.2**			**0.0**			**0.0**			**0.0**	
	Max. Maize			**20.3**			**26.9**			**26.9**			**5.1**			**12.1**			**30.9**			**5.3**			**17.5**			**20.1**

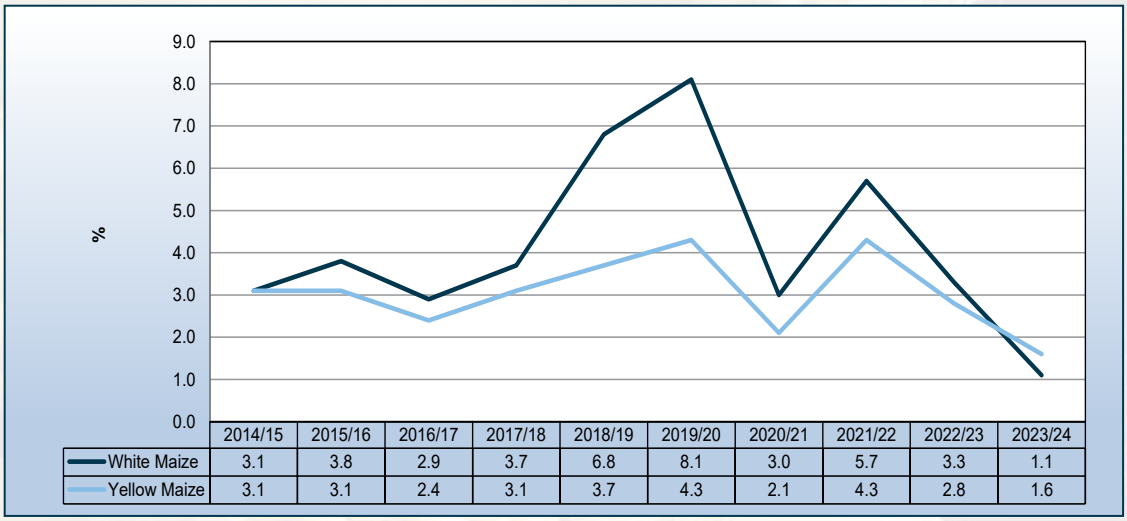
TABLE 7: RSA GRADING OF YELLOW MAIZE ACCORDING TO GRADE (2023/24) (continue) *The following yellow maize samples were downgraded to Class Other Maize due to the presence of poisonous seeds exceeding the maximum allowance		
Region	Number of Poisonous seeds (*Crotolaria* spp., *Datura* spp., *Ricinis communis*) Max. allowance 1 seed/1000 g	Number of Poisonous seeds (*Argemone mexicana* L., *Convolvulus* spp., *Ipomoea purpurea* Roth., *Lolium temulentum*, *Xanthium* spp.) Max. allowance 7 seeds/1000 g
8	0	12 *Ipomoea purpurea*
11	52 *Datura*	0
18	0	12 *Xanthium Strumarium*, 12 *Ipomoea purpurea*
26	6 *Datura*	0
28	0	11 *Xanthium Strumarium*
29	0	12 *Xanthium Strumarium*
30	0	12 *Xanthium Strumarium*
30	0	57 *Xanthium Strumarium*
30	0	12 *Xanthium Strumarium*
31	0	12 *Xanthium Strumarium*
31	0	12 *Xanthium Strumarium*
31	6 *Datura*	0
31	0	12 *Xanthium Strumarium*
31	0	12 *Xanthium Strumarium*
31	0	12 *Xanthium Strumarium*
31	29 *Datura*	11 *Xanthium Strumarium*
31	6 *Datura*	0
31	0	12 *Xanthium Strumarium*
31	0	12 *Xanthium Strumarium*
32	6 *Datura*	0
32	6 *Datura*	12 *Xanthium Strumarium*
34	0	12 *Xanthium Strumarium*
36	6 *Datura*	0
36	11 *Datura*	0
36	0	11 *Xanthium Strumarium*
34	0	12 *Xanthium Strumarium*
36	11 *Datura*	0
36	0	11 *Xanthium Strumarium*
28	0	11 *Xanthium Strumarium*
26	6 *Datura*	0

TABLE 8: RSA GRADING OF YELLOW MAIZE (2023/24)

Number of samples	Region	% Defective Kernels						% Total defective			% Foreign matter			% Other Colour			% Combined Deviations			% Diplodia Kernels			% Fusarium Kernels			% Cobrot Kernels		
		Above 6.35 mm sieve			Below 6.35 mm sieve																							
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: YELLOW																												
5	Region 06	2.0	0.0	7.7	2.9	2.2	4.6	5.0	2.2	10.0	0.0	0.0	0.1	0.0	0.0	0.0	5.0	2.2	10.0	0.0	0.0	0.0	1.7	0.0	6.9	1.7	0.0	6.9
14	Region 08	1.0	0.0	3.0	5.5	1.7	18.0	6.5	2.5	18.2	0.1	0.0	0.7	0.0	0.0	0.4	6.7	2.7	18.2	0.3	0.0	1.7	0.3	0.0	1.7	0.6	0.0	3.0
16	Region 10	0.4	0.0	1.9	2.2	0.9	3.9	2.6	0.9	4.2	0.0	0.0	0.1	0.0	0.0	0.0	2.6	0.9	4.2	0.0	0.0	0.2	0.3	0.0	1.5	0.3	0.0	1.5
12	Region 11	0.6	0.0	4.0	2.9	0.8	6.0	3.5	0.9	8.2	0.0	0.0	0.1	0.0	0.0	0.0	3.5	1.0	8.4	0.2	0.0	1.9	0.4	0.0	1.6	0.5	0.0	3.5
2	Region 12	2.2	0.9	3.5	3.3	1.4	5.2	5.5	5.0	6.1	0.0	0.0	0.0	0.1	0.0	0.3	5.7	5.2	6.1	0.2	0.0	0.3	2.0	0.7	3.2	2.1	0.7	3.5
2	Region 13	2.3	2.1	2.6	3.7	2.7	4.6	6.0	4.9	7.2	0.1	0.1	0.2	0.2	0.0	0.3	6.3	4.9	7.6	0.4	0.3	0.4	1.9	1.6	2.3	2.3	2.0	2.6
8	Region 14	0.3	0.0	1.0	11.3	1.4	26.9	11.7	1.9	26.9	0.8	0.0	4.0	0.1	0.0	0.5	12.6	2.1	30.9	0.0	0.0	0.4	0.2	0.0	0.6	0.2	0.0	0.6
7	Region 15	5.5	0.8	8.4	2.3	1.3	3.3	7.9	4.1	11.1	0.1	0.0	0.2	0.5	0.0	1.9	8.5	4.7	11.8	0.6	0.0	2.0	4.6	0.7	6.5	5.2	0.7	8.4
6	Region 17	3.6	0.4	13.1	3.7	1.4	7.4	7.2	2.4	14.6	0.1	0.0	0.3	0.4	0.0	1.9	7.7	2.4	16.5	0.3	0.0	1.8	3.1	0.4	10.9	3.4	0.4	12.7
8	Region 18	1.6	0.0	3.8	4.6	1.9	7.5	6.2	2.5	9.8	0.2	0.0	0.7	0.1	0.0	1.0	6.5	2.5	9.8	0.1	0.0	0.6	1.5	0.0	3.7	1.6	0.0	3.8
14	Region 19	1.5	0.0	4.5	5.0	1.4	13.1	6.4	2.0	14.2	0.3	0.0	1.7	0.6	0.0	3.9	7.4	2.1	16.1	0.1	0.0	0.5	1.2	0.0	3.3	1.3	0.0	3.3
6	Region 20	1.2	0.2	2.4	2.8	2.2	3.4	3.9	2.9	4.9	0.0	0.0	0.1	0.2	0.0	0.7	4.1	2.9	5.2	0.1	0.0	0.5	0.8	0.2	1.9	1.0	0.2	2.4
6	Region 21	1.2	0.0	3.0	10.3	2.0	20.4	11.5	2.0	23.1	0.9	0.0	3.4	0.3	0.0	0.8	12.7	2.9	27.3	0.1	0.0	0.3	1.1	0.0	2.6	1.2	0.0	2.8
3	Region 22	0.6	0.5	0.6	2.5	0.4	4.1	3.1	1.0	4.8	0.2	0.0	0.6	0.0	0.0	0.0	3.3	1.0	4.8	0.0	0.0	0.0	0.6	0.5	0.6	0.6	0.5	0.6
14	Region 24	0.3	0.0	3.0	4.4	0.0	13.0	4.7	0.0	13.0	0.2	0.0	0.8	0.1	0.0	0.3	5.0	0.2	13.5	0.0	0.0	0.0	0.3	0.0	2.7	0.3	0.0	2.7
12	Region 25	0.3	0.0	0.6	4.3	0.4	9.7	4.5	0.4	9.7	0.1	0.0	0.6	0.0	0.0	0.0	4.6	0.5	9.8	0.0	0.0	0.0	0.2	0.0	0.6	0.2	0.0	0.6
15	Region 26	2.4	0.0	20.3	3.7	0.3	13.6	6.0	1.8	22.4	0.2	0.0	1.3	0.3	0.0	2.8	6.5	2.6	22.5	0.3	0.0	2.7	1.9	0.0	17.5	2.3	0.0	20.1
5	Region 27	0.9	0.1	1.7	4.3	1.8	9.1	5.2	2.7	10.8	0.1	0.0	0.5	0.0	0.0	0.0	5.4	3.2	10.8	0.2	0.0	0.7	0.7	0.0	1.4	0.9	0.0	1.7
44	Region 28	1.3	0.0	7.3	2.6	0.2	15.5	4.0	0.9	15.9	0.1	0.0	0.8	0.0	0.0	0.5	4.1	0.9	16.2	0.3	0.0	1.7	1.0	0.0	6.9	1.3	0.0	7.2
41	Region 29	1.0	0.0	3.7	3.8	0.9	9.1	4.8	1.7	10.6	0.1	0.0	1.1	0.0	0.0	0.2	4.9	1.7	11.7	0.2	0.0	1.1	0.7	0.0	3.1	0.9	0.0	3.7
43	Region 30	3.2	0.0	18.2	3.3	0.6	14.6	6.6	1.8	22.7	0.2	0.0	1.6	0.2	0.0	2.6	6.9	1.8	25.0	0.8	0.0	5.3	2.1	0.0	15.0	2.9	0.0	18.2
65	Region 31	1.6	0.0	5.9	2.4	0.2	6.2	4.0	1.4	8.9	0.1	0.0	0.9	0.0	0.0	0.4	4.1	1.4	9.0	0.1	0.0	1.5	1.2	0.0	5.3	1.3	0.0	5.6
49	Region 32	1.9	0.0	5.1	2.6	0.3	8.5	4.5	0.9	9.4	0.1	0.0	1.5	0.0	0.0	0.7	4.7	0.9	10.8	0.2	0.0	1.3	1.3	0.0	4.8	1.5	0.0	4.8
29	Region 33	2.1	0.0	6.2	2.2	0.1	7.1	4.3	0.4	9.5	0.1	0.0	0.5	0.4	0.0	2.6	4.8	0.4	9.9	0.6	0.0	2.3	1.3	0.0	4.8	1.9	0.0	6.0
26	Region 34	1.4	0.2	4.0	3.0	0.3	9.8	4.4	1.4	10.2	0.5	0.0	5.1	0.1	0.0	0.6	5.1	1.7	11.3	0.3	0.0	2.2	0.9	0.0	3.1	1.3	0.0	4.0
7	Region 35	1.3	0.0	5.0	3.4	0.9	11.1	4.7	0.9	16.1	0.1	0.0	0.2	0.1	0.0	0.9	4.9	0.9	16.1	0.0	0.0	0.0	0.4	0.0	1.3	0.4	0.0	1.3
23	Region 36	1.8	0.3	7.1	2.4	0.1	6.9	4.2	1.0	9.5	0.1	0.0	0.7	0.5	0.0	1.8	4.8	1.2	9.5	0.1	0.0	1.0	1.5	0.2	6.8	1.6	0.2	7.1
482	**Ave. YELLOW**	**1.6**			**3.3**			**5.0**			**0.2**			**0.1**			**5.3**			**0.3**			**1.2**			**1.4**		
	Min. YELLOW		**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.2**			**0.0**			**0.0**			**0.0**	
	Max. YELLOW			**20.3**			**26.9**			**26.9**			**5.1**			**3.9**			**30.9**			**5.3**			**17.5**			**20.1**

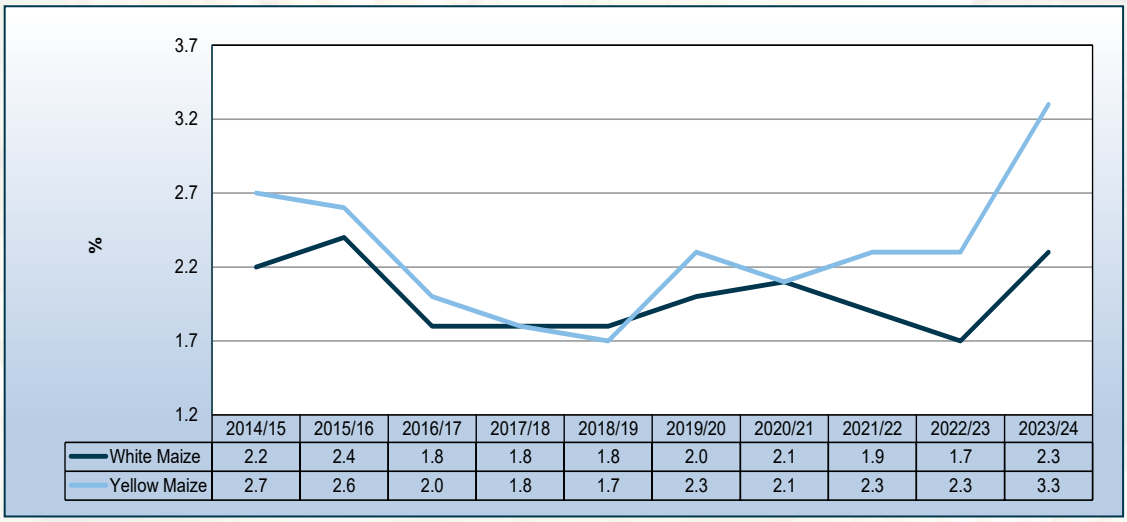
TABLE 9: GRADING QUALITY OF SOUTH AFRICAN WHITE AND YELLOW MAIZE 2014/15 - 2023/24

Season	Number of samples	% Defective kernels above 6.35 mm sieve			% Defective kernels below 6.35 mm sieve			% Foreign matter			% Other colour			% Combined deviations		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
White Maize																
2014/15	485	3.1	0.0	30.0	2.2	0.0	25.5	0.1	0.0	1.2	0.4	0.0	9.6	5.8	0.0	35.3
2015/16	415	3.8	0.7	79.9	2.4	0.0	14.5	0.2	0.0	2.2	0.4	0.0	8.0	6.7	1.9	91.5
2016/17	549	2.9	0.3	25.5	1.8	0.1	12.7	0.2	0.0	6.9	0.2	0.0	7.0	5.1	1.1	36.7
2017/18	451	3.7	0.2	38.6	1.8	0.0	20.7	0.1	0.0	3.0	0.3	0.0	6.2	5.9	0.3	46.2
2018/19	404	6.8	0.2	88.5	1.8	0.0	19.0	0.2	0.0	4.2	0.5	0.0	12.9	9.3	0.6	96.8
2019/20	516	8.1	0.3	95.9	2.0	0.0	18.3	0.2	0.0	7.1	0.4	0.0	18.3	10.7	0.8	98.8
2020/21	560	3.0	0.0	55.1	2.1	0.0	21.1	0.2	0.0	3.9	0.4	0.0	12.8	5.6	0.5	58.7
2021/22	524	5.7	0.2	31.0	1.9	0.0	10.1	0.2	0.0	4.7	0.2	0.0	5.2	8.0	0.3	33.6
2023/24	520	3.3	0.0	51.8	1.7	0.0	8.9	0.2	0.0	3.7	0.2	0.0	4.6	5.5	0.1	55.6
2023/24	518	1.1	0.1	19.5	2.3	0.0	18.5	0.2	0.0	4.0	0.2	0.0	12.1	3.8	0.2	24.7
Weighted Average		**4.1**			**2.0**			**0.2**			**0.3**			**6.6**		
Minimum			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**	
Maximum				**95.9**			**25.5**			**7.1**			**18.3**			**98.8**
Yellow Maize																
2014/15	515	3.1	0.6	23.0	2.7	0.0	19.0	0.1	0.0	2.5	0.3	0.0	13.6	6.2	0.6	34.4
2015/16	505	3.1	0.5	24.4	2.6	0.0	18.1	0.2	0.0	1.7	0.2	0.0	4.5	6.0	0.6	32.4
2016/17	451	2.4	0.4	24.3	2.0	0.0	27.4	0.2	0.0	2.8	0.2	0.0	6.9	4.7	1.3	33.5
2017/18	449	3.1	0.2	21.2	1.8	0.0	13.5	0.1	0.0	1.3	0.1	0.0	6.2	5.1	0.8	28.0
2018/19	404	3.7	0.0	36.9	1.7	0.0	9.5	0.1	0.0	3.4	0.2	0.0	7.4	5.7	0.7	38.9
2019/20	374	4.3	0.1	85.6	2.3	0.0	11.7	0.1	0.0	5.9	0.2	0.0	17.2	6.9	0.3	86.9
2020/21	440	2.1	0.1	22.4	2.1	0.0	30.9	0.1	0.0	4.7	0.2	0.0	9.6	4.5	0.2	34.8
2021/22	476	4.3	0.2	24.0	2.3	0.0	12.7	0.1	0.0	5.5	0.1	0.0	3.2	6.9	0.3	30.9
2023/24	480	2.8	0.0	29.7	2.3	0.1	12.7	0.1	0.0	2.5	0.1	0.0	4.2	5.4	0.5	30.2
2023/24	482	1.6	0.0	20.3	3.3	0.0	26.9	0.2	0.0	5.1	0.1	0.0	3.9	5.3	0.2	30.9
Weighted Average		**3.0**			**2.3**			**0.1**			**0.2**			**5.7**		
Minimum			**0.0**			**0.0**			**0.0**			**0.0**			**0.2**	
Maximum				**85.6**			**30.9**			**5.9**			**17.2**			**86.9**
White and Yellow Maize																
2014/15	1000	3.1	0.0	30.0	2.5	0.0	25.5	0.1	0.0	2.5	0.3	0.0	13.6	6.0	0.0	35.3
2015/16	920	3.4	0.5	79.9	2.5	0.0	18.1	0.2	0.0	2.2	0.3	0.0	8.0	6.3	0.6	91.5
2016/17	1000	2.6	0.3	25.5	1.9	0.0	27.4	0.2	0.0	6.9	0.2	0.0	7.0	4.9	1.1	36.7
2017/18	900	3.4	0.2	38.6	1.8	0.0	20.7	0.1	0.0	3.0	0.2	0.0	6.2	5.5	0.3	46.2
2018/19	808	5.3	0.0	88.5	1.8	0.0	19.0	0.1	0.0	4.2	0.4	0.0	12.9	7.5	0.6	96.8
2019/20	890	6.5	0.1	95.9	2.1	0.0	18.3	0.2	0.0	7.1	0.3	0.0	18.3	9.1	0.3	98.8
2020/21	1000	2.6	0.0	55.1	2.1	0.0	30.9	0.2	0.0	4.7	0.3	0.0	12.8	5.1	0.2	58.7
2021/22	1000	5.0	0.2	31.0	2.1	0.0	12.7	0.2	0.0	5.5	0.2	0.0	5.2	7.5	0.3	33.6
2023/24	1000	3.1	0.0	51.8	2.0	0.0	12.7	0.2	0.0	3.7	0.2	0.0	4.6	5.4	0.1	55.6
2023/24	1000	1.4	0.0	20.3	2.8	0.0	26.9	0.2	0.0	5.1	0.2	0.0	12.1	4.5	0.2	30.9
Weighted Average		**3.6**			**2.2**			**0.2**			**0.3**			**6.1**		
Minimum			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**	
Maximum				**95.9**			**30.9**			**7.1**			**18.3**			**98.8**



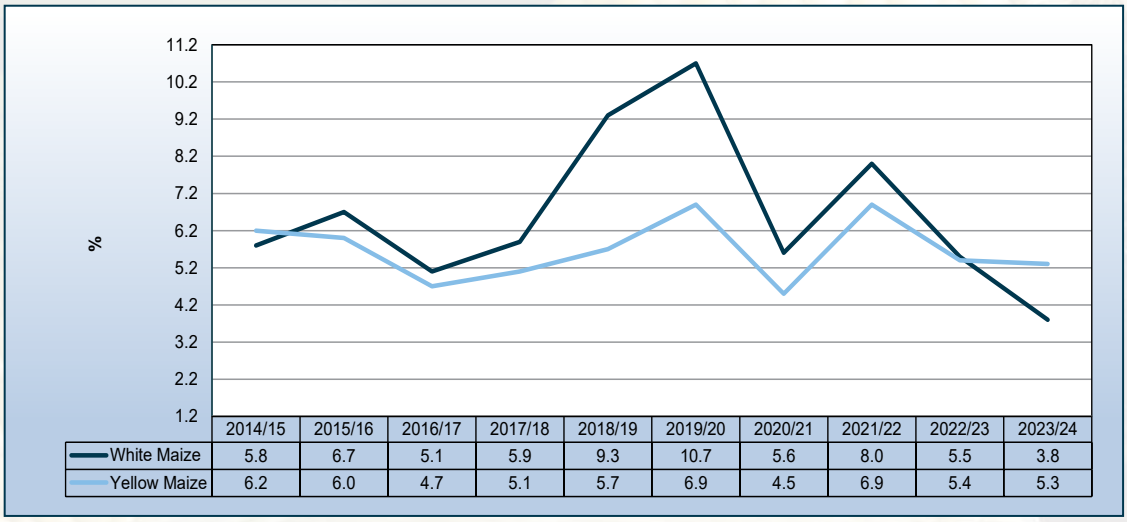
	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
White Maize	3.1	3.8	2.9	3.7	6.8	8.1	3.0	5.7	3.3	1.1
Yellow Maize	3.1	3.1	2.4	3.1	3.7	4.3	2.1	4.3	2.8	1.6

Graph 36: Percentage Defective Kernels above the 6.35 mm sieve over 10 seasons



	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
White Maize	2.2	2.4	1.8	1.8	1.8	2.0	2.1	1.9	1.7	2.3
Yellow Maize	2.7	2.6	2.0	1.8	1.7	2.3	2.1	2.3	2.3	3.3

Graph 37: Percentage Defective Kernels below the 6.35 mm sieve over 10 seasons



	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
White Maize	5.8	6.7	5.1	5.9	9.3	10.7	5.6	8.0	5.5	3.8
Yellow Maize	6.2	6.0	4.7	5.1	5.7	6.9	4.5	6.9	5.4	5.3

Graph 38: Percentage Combined deviations over 10 seasons

TABLE 10: USA GRADING OF WHITE MAIZE (2023/24)

Number of samples	Region	Damaged kernels						% Broken corn and foreign material			Bushel weight (lbs)			% Other colour		
		% Heat damaged			% Total damaged											
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: US No.1																
9	Region 12	0.0	0.0	0.0	1.3	0.5	2.2	0.6	0.0	1.3	59.4	57.2	61.4	0.0	0.0	0.0
7	Region 13	0.0	0.0	0.0	1.7	0.2	2.8	0.8	0.1	2.0	59.3	56.5	60.8	0.2	0.0	0.4
9	Region 14	0.0	0.0	0.0	1.5	0.5	2.8	0.8	0.3	1.2	59.3	58.2	60.1	0.0	0.0	0.0
8	Region 15	0.0	0.0	0.0	2.0	1.0	2.7	0.6	0.0	1.6	59.7	58.4	62.2	0.1	0.0	0.9
9	Region 16	0.0	0.0	0.0	1.5	0.6	2.7	0.4	0.1	0.9	59.6	57.3	60.8	0.0	0.0	0.2
12	Region 17	0.0	0.0	0.0	1.7	0.5	3.0	0.7	0.0	1.9	59.6	56.7	62.5	0.0	0.0	0.2
17	Region 18	0.0	0.0	0.0	1.7	0.4	2.9	0.4	0.0	1.7	59.5	56.2	62.2	0.1	0.0	0.8
9	Region 19	0.0	0.0	0.0	1.6	0.4	2.5	0.6	0.1	1.6	60.1	57.9	62.3	0.2	0.0	0.5
14	Region 20	0.0	0.0	0.0	1.6	0.9	3.0	0.6	0.1	1.5	58.4	56.1	60.8	0.1	0.0	1.1
15	Region 21	0.0	0.0	0.0	1.3	0.4	2.6	0.9	0.0	1.9	59.3	57.1	61.5	0.0	0.0	0.3
22	Region 22	0.0	0.0	0.0	1.4	0.3	2.5	0.7	0.0	1.8	58.8	57.2	60.6	0.0	0.0	0.2
28	Region 23	0.0	0.0	0.0	1.7	0.5	3.0	0.7	0.0	1.7	59.8	58.1	60.8	0.0	0.0	0.2
22	Region 24	0.0	0.0	0.0	1.6	0.4	2.8	0.6	0.1	1.5	59.1	56.5	61.2	0.1	0.0	0.4
1	Region 25	0.0	-	-	1.4	-	-	1.7	-	-	58.0	-	-	0.1	-	-
5	Region 26	0.0	0.0	0.0	2.3	1.6	2.5	0.2	0.1	0.6	58.8	56.0	61.8	0.1	0.0	0.2
12	Region 28	0.0	0.0	0.0	1.4	0.5	2.6	0.4	0.0	2.0	59.0	57.1	61.6	0.3	0.0	1.5
30	Region 29	0.0	0.0	0.0	1.7	0.1	3.0	0.6	0.1	1.6	58.9	56.0	62.0	0.0	0.0	0.3
14	Region 30	0.0	0.0	0.0	1.6	0.5	3.0	0.8	0.2	1.8	59.5	57.7	63.1	0.2	0.0	1.3
5	Region 31	0.0	0.0	0.0	1.4	0.6	2.5	0.4	0.1	0.6	59.5	58.1	60.3	0.0	0.0	0.2
6	Region 32	0.0	0.0	0.0	2.5	1.3	3.0	0.4	0.1	1.0	58.9	58.2	59.3	0.1	0.0	0.4
27	Region 33	0.0	0.0	0.0	1.9	0.4	3.0	0.3	0.0	1.2	60.2	57.7	62.7	0.1	0.0	1.3
17	Region 34	0.0	0.0	0.0	1.8	0.3	2.9	0.6	0.0	1.4	59.1	56.5	60.3	0.1	0.0	0.2
4	Region 35	0.0	0.0	0.0	1.7	1.2	2.5	0.6	0.1	1.5	59.8	57.0	61.6	0.4	0.0	1.2
4	Region 36	0.0	0.0	0.0	2.1	1.1	2.6	0.3	0.1	0.6	59.1	57.0	61.5	0.2	0.0	0.6
306	**Ave. US No.1**	**0.0**			**1.7**			**0.6**			**59.3**			**0.1**		
	Min. US No.1		**0.0**			**0.1**			**0.0**			**56.0**			**0.0**	
	Max. US No.1			**0.0**			**3.0**			**2.0**			**63.1**			**1.5**
GRADE: US No. 2																
6	Region 12	0.0	0.0	0.0	3.7	3.1	4.8	1.1	0.2	2.9	60.0	58.2	61.1	0.1	0.0	0.3
5	Region 14	0.0	0.0	0.0	2.7	0.2	4.8	1.5	0.5	2.9	59.0	55.1	61.4	0.0	0.0	0.2
3	Region 15	0.0	0.0	0.0	3.4	3.1	4.1	0.3	0.0	0.8	60.1	60.0	60.3	0.0	0.0	0.0
4	Region 17	0.0	0.0	0.0	4.3	3.3	4.7	1.4	0.3	2.4	59.3	57.6	60.3	0.0	0.0	0.2
4	Region 18	0.1	0.0	0.2	3.4	3.2	3.9	0.3	0.0	1.1	58.6	56.9	60.1	0.0	0.0	0.0
7	Region 19	0.0	0.0	0.2	3.9	3.0	5.0	0.7	0.0	1.4	60.5	58.4	61.8	0.1	0.0	0.2
4	Region 20	0.0	0.0	0.0	3.5	1.6	4.6	1.0	0.3	2.5	59.3	58.5	59.6	0.1	0.0	0.2
6	Region 21	0.0	0.0	0.2	2.8	0.9	4.3	1.2	0.2	2.7	58.7	54.1	60.6	0.0	0.0	0.1
5	Region 22	0.0	0.0	0.0	2.7	1.6	3.3	1.9	0.4	2.9	58.8	57.2	60.1	0.0	0.0	0.0
6	Region 23	0.0	0.0	0.0	3.3	2.0	4.2	1.4	0.2	2.6	58.4	57.3	59.9	0.0	0.0	0.0
5	Region 24	0.0	0.0	0.0	2.7	1.3	3.5	1.6	0.2	2.6	58.7	57.2	60.6	0.0	0.0	0.2
1	Region 26	0.0	-	-	3.9	-	-	0.8	-	-	60.1	-	-	0.2	-	-
3	Region 29	0.0	0.0	0.0	2.3	0.6	3.8	0.5	0.2	0.7	56.5	55.8	57.8	0.1	0.0	0.2
14	Region 30	0.0	0.0	0.0	4.1	3.2	4.9	0.6	0.2	1.3	59.5	57.3	61.0	0.3	0.0	1.0
6	Region 31	0.0	0.0	0.2	2.9	0.8	4.0	1.1	0.2	2.4	58.6	54.5	61.8	0.2	0.0	0.8
6	Region 32	0.0	0.0	0.0	2.6	0.7	3.6	0.9	0.3	1.7	57.7	55.0	60.8	0.4	0.0	1.3
20	Region 33	0.0	0.0	0.0	3.7	0.5	5.0	0.7	0.0	1.7	59.7	54.2	61.5	0.1	0.0	0.9
13	Region 34	0.0	0.0	0.2	3.2	0.5	4.4	0.5	0.1	1.3	58.5	55.5	60.3	0.2	0.0	1.0
8	Region 36	0.0	0.0	0.0	3.4	0.0	4.8	0.6	0.0	2.7	60.0	59.1	61.3	0.3	0.0	1.0

TABLE 10: USA GRADING OF WHITE MAIZE (2023/24) (continue)

Number of samples	Region	Damaged kernels						% Broken corn and foreign material			Bushel weight (lbs)			% Other colour		
		% Heat damaged			% Total damaged											
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: US No. 2																
126	**Ave. US No.2**	**0.0**			**3.4**			**0.9**			**59.1**			**0.1**		
	Min. US No.2		**0.0**			**0.0**			**0.0**			**54.1**			**0.0**	
	Max. US No.2			**0.2**			**5.0**			**2.9**			**61.8**			**1.3**
GRADE: US No. 3																
1	Region 12	0.0	-	-	4.7	-	-	3.3	-	-	58.2	-	-	0.0	-	-
1	Region 13	0.0	-	-	5.6	-	-	1.0	-	-	56.5	-	-	0.3	-	-
3	Region 14	0.0	0.0	0.0	4.9	2.3	6.4	1.6	0.4	3.3	58.9	56.7	60.8	0.0	0.0	0.0
1	Region 15	0.0	-	-	6.1	-	-	1.0	-	-	59.6	-	-	0.0	-	-
6	Region 17	0.0	0.0	0.0	5.6	4.0	7.0	1.9	0.5	3.8	59.2	55.9	61.3	0.2	0.0	0.7
2	Region 18	0.0	0.0	0.0	4.1	2.4	5.8	1.9	0.3	3.4	59.0	56.6	61.3	0.1	0.0	0.1
5	Region 19	0.0	0.0	0.0	5.6	3.9	7.0	1.3	0.2	3.5	61.2	59.1	63.3	0.1	0.0	0.2
2	Region 21	0.0	0.0	0.0	3.2	0.5	6.0	1.8	0.2	3.5	59.5	58.2	60.8	0.0	0.0	0.0
3	Region 22	0.0	0.0	0.0	4.9	1.9	6.6	1.2	0.0	3.1	59.2	58.1	60.4	0.0	0.0	0.0
1	Region 23	0.0	-	-	5.3	-	-	0.2	-	-	59.2	-	-	0.2	-	-
1	Region 24	0.0	-	-	6.1	-	-	0.8	-	-	60.1	-	-	0.0	-	-
1	Region 26	0.0	-	-	6.4	-	-	0.3	-	-	60.6	-	-	0.2	-	-
1	Region 28	0.0	-	-	4.0	-	-	3.8	-	-	59.1	-	-	0.0	-	-
4	Region 30	0.0	0.0	0.0	5.4	4.0	6.3	1.4	0.3	3.8	59.6	58.3	60.7	0.2	0.0	0.6
1	Region 31	0.0	-	-	6.1	-	-	1.0	-	-	58.4	-	-	0.3	-	-
1	Region 32	0.0	-	-	5.5	-	-	1.3	-	-	58.4	-	-	0.1	-	-
3	Region 33	0.0	0.0	0.0	4.8	1.8	6.9	0.1	0.0	0.3	57.4	53.5	60.2	0.2	0.0	0.5
3	Region 34	0.0	0.0	0.0	2.6	1.3	4.0	3.3	3.1	3.4	60.9	59.8	62.9	0.0	0.0	0.0
4	Region 35	0.0	0.0	0.0	5.7	2.5	7.0	2.1	0.1	3.3	57.4	56.8	57.8	0.0	0.0	0.2
3	Region 36	0.0	0.0	0.0	5.4	5.2	5.6	0.5	0.1	0.8	59.6	59.4	59.9	0.4	0.0	1.3
47	**Ave. US No.3**	**0.0**			**5.1**			**1.5**			**59.2**			**0.1**		
	Min. US No.3		**0.0**			**0.5**			**0.0**			**53.5**			**0.0**	
	Max. US No.3			**0.0**			**7.0**			**3.8**			**63.3**			**1.3**
GRADE: US No. 4																
1	Region 14	0.9	-	-	2.3	-	-	1.3	-	-	58.6	-	-	0.2	-	-
2	Region 19	0.0	0.0	0.0	4.7	2.3	7.1	2.5	0.7	4.4	57.1	56.7	57.4	0.2	0.0	0.3
1	Region 20	0.7	-	-	1.9	-	-	0.5	-	-	57.4	-	-	0.0	-	-
1	Region 21	0.0	-	-	1.3	-	-	4.4	-	-	56.7	-	-	0.0	-	-
1	Region 22	0.0	-	-	4.3	-	-	4.6	-	-	58.8	-	-	0.0	-	-
1	Region 23	0.0	-	-	8.2	-	-	1.4	-	-	59.3	-	-	0.0	-	-
3	Region 30	0.0	0.0	0.0	8.4	7.6	9.4	0.5	0.1	0.9	58.8	58.1	60.0	0.1	0.0	0.2
1	Region 35	0.0	-	-	7.7	-	-	0.3	-	-	56.8	-	-	0.0	-	-
1	Region 36	0.0	-	-	8.7	-	-	0.1	-	-	59.9	-	-	0.5	-	-
12	**Ave. US No.4**	**0.1**			**5.7**			**1.6**			**58.2**			**0.1**		
	Min. US No.4		**0.0**			**1.3**			**0.1**			**56.7**			**0.0**	
	Max. US No.4			**0.9**			**9.4**			**4.6**			**60.0**			**0.5**
GRADE: US No. 5																
1	Region 12	0.0	-	-	3.2	-	-	5.8	-	-	58.6	-	-	0.0	-	-
2	Region 14	0.6	0.0	1.2	2.1	0.5	3.7	3.4	0.6	6.2	56.7	54.8	58.6	0.0	0.0	0.0
1	Region 15	0.0	-	-	10.7	-	-	1.7	-	-	59.7	-	-	0.0	-	-
1	Region 17	0.0	-	-	11.2	-	-	1.3	-	-	61.3	-	-	0.0	-	-
2	Region 21	0.0	0.0	0.0	2.4	1.0	3.8	5.6	5.4	5.8	55.1	51.9	58.2	0.0	0.0	0.0
1	Region 22	0.0	-	-	6.7	-	-	5.1	-	-	57.2	-	-	0.0	-	-
1	Region 30	0.0	-	-	15.0	-	-	2.4	-	-	56.0	-	-	0.6	-	-
1	Region 32	0.0	-	-	11.0	-	-	0.4	-	-	58.4	-	-	0.1	-	-

TABLE 10: USA GRADING OF WHITE MAIZE (2023/24) (continue)

Number of samples	Region	Damaged kernels						% Broken corn and foreign material			Bushel weight (lbs)			% Other colour		
		% Heat damaged			% Total damaged											
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: US No. 5																
10	**Ave. US No.5**	**0.1**			**6.7**			**3.5**			**57.5**			**0.1**		
	Min. US No.5		**0.0**			**0.5**			**0.4**			**51.9**			**0.0**	
	Max. US No.5			**1.2**			**15.0**			**6.2**			**61.3**			**0.6**
GRADE: Sample Grade																
2	Region 17	0.0	0.0	0.0	15.8	15.5	16.1	0.7	0.4	1.0	60.0	59.8	60.1	0.0	0.0	0.0
2	Region 20	7.0	0.0	14.1	14.7	5.4	24.0	2.0	1.6	2.3	57.9	57.4	58.3	6.3	0.5	12.1
1	Region 21	0.0	-	-	1.3	-	-	7.7	-	-	59.4	-	-	0.0	-	-
1	Region 23	0.0	-	-	2.4	-	-	17.2	-	-	57.1	-	-	0.1	-	-
1	Region 30	0.0	-	-	16.8	-	-	0.7	-	-	56.3	-	-	0.5	-	-
1	Region 31	0.0	-	-	2.6	-	-	1.2	-	-	59.6	-	-	0.1	-	-
1	Region 33	0.0	-	-	0.9	-	-	9.1	-	-	58.8	-	-	0.6	-	-
9	**Ave. Sample Grade**	**1.6**			**9.5**			**4.6**			**58.5**			**1.5**		
	Min. Sample Grade		**0.0**			**0.9**			**0.4**			**56.3**			**0.0**	
	Max. Sample Grade			**14.1**			**24.0**			**17.2**			**60.1**			**12.1**
GRADE: Mixed Corn																
1	Region 17	0.0	-	-	1.9	-	-	0.2	-	-	59.3	-	-	5.6	-	-
1	Region 18	0.0	-	-	12.4	-	-	8.6	-	-	57.4	-	-	3.5	-	-
1	Region 20	0.0	-	-	3.3	-	-	0.7	-	-	58.8	-	-	2.9	-	-
1	Region 30	0.0	-	-	2.3	-	-	0.5	-	-	62.0	-	-	5.4	-	-
1	Region 31	0.0	-	-	0.5	-	-	0.6	-	-	57.9	-	-	3.1	-	-
2	Region 32	0.0	0.0	0.0	2.1	1.9	2.4	0.5	0.4	0.5	58.1	58.0	58.1	3.0	2.8	3.2
1	Region 35	0.0	-	-	2.2	-	-	0.1	-	-	60.3	-	-	2.1	-	-
8	**Ave. Mixed Corn**	**0.0**			**3.4**			**1.5**			**59.0**			**3.6**		
	Min. Mixed Corn		**0.0**			**0.5**			**0.1**			**57.4**			**2.1**	
	Max. Mixed Corn			**0.0**			**12.4**			**8.6**			**62.0**			**5.6**
518	**Ave. WM**	**0.0**			**2.7**			**0.9**			**59.2**			**0.2**		
	Min. WM		**0.0**			**0.0**			**0.0**			**51.9**			**0.0**	
	Max. WM			**14.1**			**24.0**			**17.2**			**63.3**			**12.1**
1000	**Ave. Maize**	**0.0**			**2.6**			**0.9**			**59.0**			**0.2**		
	Min. Maize		**0.0**			**0.0**			**0.0**			**51.9**			**0.0**	
	Max. Maize			**14.1**			**24.0**			**17.2**			**63.3**			**12.1**

TABLE 10: USA GRADING OF WHITE MAIZE (2023/24) (continue)

***The following white maize samples were downgraded to Sample Grade due to the number of poisonous seeds exceeding the maximum allowance**

Region	Cockleburs (*Xanthuim* spp.) exceeding 8 seeds
20	27 *Xanthium strumarium*
31	12 *Xanthium strumarium*

TABLE 11: USA GRADING OF YELLOW MAIZE (2023/24)

Number of samples	Region	Damaged kernels						% Broken corn and foreign material			Bushel weight (lbs)			% Other colour		
		% Heat damaged			% Total damaged											
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: US No.1																
4	Region 06	0.0	0.0	0.0	1.3	0.4	1.9	0.7	0.4	1.1	59.1	58.8	59.4	0.0	0.0	0.0
9	Region 08	0.0	0.0	0.0	1.5	0.4	2.9	0.6	0.3	1.5	59.4	56.7	61.8	0.0	0.0	0.4
15	Region 10	0.0	0.0	0.0	0.7	0.0	2.9	0.6	0.0	1.2	61.3	59.3	62.9	0.0	0.0	0.0
11	Region 11	0.0	0.0	0.0	0.9	0.3	1.9	0.7	0.2	1.6	60.7	58.9	61.8	0.0	0.0	0.0
1	Region 12	0.0	-	-	1.4	-	-	0.4	-	-	59.4	-	-	0.0	-	-
1	Region 13	0.0	-	-	2.5	-	-	0.6	-	-	58.2	-	-	0.0	-	-
5	Region 14	0.0	0.0	0.0	1.1	0.3	2.0	0.7	0.2	2.0	60.2	57.9	62.1	0.1	0.0	0.4
1	Region 15	0.0	-	-	2.0	-	-	0.9	-	-	58.9	-	-	0.4	-	-
2	Region 17	0.0	0.0	0.0	0.7	0.5	1.0	0.3	0.3	0.3	61.2	60.6	61.7	0.0	0.0	0.0
3	Region 18	0.0	0.0	0.0	1.4	0.4	2.7	0.6	0.0	1.1	58.8	57.0	59.9	0.1	0.0	0.2
6	Region 19	0.0	0.0	0.0	1.0	0.2	2.2	0.9	0.5	1.4	59.1	57.8	61.8	0.6	0.0	3.1
5	Region 20	0.0	0.0	0.0	1.7	0.6	2.7	0.6	0.4	0.8	58.4	57.4	59.2	0.3	0.0	0.7
2	Region 21	0.0	0.0	0.0	0.7	0.7	0.8	0.6	0.4	0.8	59.3	58.9	59.7	0.1	0.0	0.2
2	Region 22	0.0	0.0	0.0	1.4	1.0	1.8	0.8	0.1	1.6	58.8	57.4	60.1	0.0	0.0	0.0
12	Region 24	0.0	0.0	0.0	0.6	0.0	1.5	0.8	0.0	1.4	59.2	57.0	61.0	0.1	0.0	0.3
7	Region 25	0.0	0.0	0.0	0.7	0.0	1.6	0.5	0.2	0.8	57.8	57.2	58.5	0.0	0.0	0.0
9	Region 26	0.0	0.0	0.0	1.4	0.3	2.9	0.6	0.1	1.9	57.3	56.0	59.1	0.1	0.0	0.6
5	Region 27	0.0	0.0	0.0	1.5	0.4	2.7	0.8	0.3	1.4	59.1	58.2	59.6	0.0	0.0	0.0
31	Region 28	0.0	0.0	0.1	1.4	0.3	3.0	0.4	0.0	1.8	58.7	56.1	62.5	0.0	0.0	0.5
34	Region 29	0.0	0.0	0.0	1.4	0.1	2.7	0.7	0.2	1.8	59.3	56.0	63.1	0.0	0.0	0.2
9	Region 30	0.0	0.0	0.0	2.0	0.4	3.0	0.5	0.2	1.1	60.0	57.3	63.2	0.0	0.0	0.0
41	Region 31	0.0	0.0	0.0	1.7	0.3	3.0	0.5	0.0	1.4	59.2	57.2	60.9	0.0	0.0	0.2
25	Region 32	0.0	0.0	0.0	1.8	0.1	3.0	0.8	0.1	1.9	59.0	56.4	60.3	0.0	0.0	0.2
14	Region 33	0.0	0.0	0.0	1.6	0.3	3.0	0.4	0.0	1.3	59.9	57.7	60.8	0.2	0.0	1.8
17	Region 34	0.0	0.0	0.0	1.7	0.5	2.9	0.8	0.3	1.4	59.1	56.9	61.2	0.1	0.0	0.6
5	Region 35	0.0	0.0	0.0	0.9	0.4	1.6	0.5	0.0	2.0	59.1	57.9	60.3	0.2	0.0	0.9
11	Region 36	0.0	0.0	0.0	2.3	0.9	3.0	0.3	0.0	0.8	59.1	57.3	61.5	0.6	0.0	1.7
287	**Ave. US No.1**	**0.0**			**1.4**			**0.6**			**59.3**			**0.1**		
	Min. US No.1		**0.0**			**0.0**			**0.0**			**56.0**			**0.0**	
	Max. US No.1			**0.1**			**3.0**			**2.0**			**63.2**			**3.1**
GRADE: US No. 2																
2	Region 08	0.0	0.0	0.0	2.1	0.4	3.8	0.6	0.3	0.9	56.4	54.4	58.3	0.1	0.1	0.1
1	Region 10	0.0	-	-	3.8	-	-	0.7	-	-	62.9	-	-	0.0	-	-
1	Region 11	0.0	-	-	4.5	-	-	1.1	-	-	60.2	-	-	0.0	-	-
1	Region 13	0.0	-	-	3.5	-	-	1.0	-	-	59.4	-	-	0.3	-	-
2	Region 14	0.0	0.0	0.0	0.9	0.2	1.5	2.5	2.5	2.6	59.1	57.7	60.4	0.3	0.0	0.5
3	Region 17	0.0	0.0	0.0	3.0	1.4	4.0	1.3	0.6	2.2	57.8	57.2	58.8	0.2	0.0	0.7
4	Region 18	0.0	0.0	0.0	2.5	0.3	4.8	1.8	1.5	2.1	56.2	55.5	57.7	0.3	0.0	1.0
5	Region 19	0.0	0.0	0.0	2.9	0.4	4.7	1.8	0.1	2.6	58.1	56.9	59.8	1.0	0.0	3.9
1	Region 20	0.2	-	-	1.9	-	-	1.4	-	-	61.8	-	-	0.0	-	-
3	Region 21	0.0	0.0	0.0	1.9	0.3	3.2	2.0	1.3	2.4	57.3	55.7	58.3	0.2	0.0	0.6
1	Region 22	0.0	-	-	0.5	-	-	1.0	-	-	55.8	-	-	0.0	-	-
2	Region 24	0.0	0.0	0.0	2.5	1.6	3.4	1.4	1.1	1.6	57.5	55.7	59.2	0.0	0.0	0.0
4	Region 25	0.0	0.0	0.0	0.4	0.1	0.6	1.3	0.1	2.6	55.7	54.8	56.7	0.0	0.0	0.0
5	Region 26	0.0	0.0	0.0	2.8	1.1	4.1	1.2	0.0	2.4	57.8	55.0	60.0	0.7	0.0	2.8
9	Region 28	0.0	0.0	0.0	3.7	3.1	4.8	0.3	0.0	1.0	58.8	55.5	62.7	0.0	0.0	0.0
5	Region 29	0.0	0.0	0.0	1.9	0.0	4.0	0.7	0.1	1.4	57.0	54.8	60.9	0.0	0.0	0.0
19	Region 30	0.0	0.0	0.0	3.3	0.3	4.8	1.0	0.2	2.7	57.7	54.2	62.5	0.1	0.0	0.9
13	Region 31	0.0	0.0	0.0	3.1	0.2	4.3	0.7	0.0	1.5	58.2	54.8	59.8	0.0	0.0	0.1

TABLE 11: USA GRADING OF YELLOW MAIZE (2023/24) (continue)

Number of samples	Region	Damaged kernels						% Broken corn and foreign material			Bushel weight (lbs)			% Other colour		
		% Heat damaged			% Total damaged											
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: US No. 2																
15	Region 32	0.0	0.0	0.0	3.5	1.2	4.7	0.6	0.1	2.3	58.6	54.9	60.8	0.0	0.0	0.2
9	Region 33	0.0	0.0	0.0	3.1	1.2	4.5	1.1	0.2	2.4	59.0	55.8	60.6	0.3	0.0	1.2
5	Region 34	0.0	0.0	0.0	3.9	3.1	4.7	0.8	0.2	2.3	58.9	54.8	60.1	0.3	0.0	0.4
1	Region 35	0.0	-	-	3.3	-	-	0.8	-	-	58.7	-	-	0.0	-	-
10	Region 36	0.0	0.0	0.2	3.0	1.0	4.8	1.1	0.1	3.0	59.0	56.2	60.3	0.4	0.0	1.8
121	**Ave. US No.2**	**0.0**			**3.0**			**1.0**			**58.2**			**0.2**		
	Min. US No.2		**0.0**			**0.0**			**0.0**			**54.2**			**0.0**	
	Max. US No.2			**0.2**			**4.8**			**3.0**			**62.9**			**3.9**
GRADE: US No. 3																
2	Region 08	0.0	0.0	0.0	2.3	1.0	3.5	1.0	0.7	1.4	52.9	52.9	52.9	0.0	0.0	0.0
1	Region 12	0.0	-	-	5.2	-	-	0.0	-	-	61.0	-	-	0.3	-	-
3	Region 15	0.0	0.0	0.0	6.1	5.5	6.8	0.4	0.2	0.6	60.7	60.1	61.6	0.6	0.0	1.9
2	Region 19	0.0	0.0	0.0	4.4	2.5	6.2	3.3	3.1	3.4	58.0	56.8	59.1	0.0	0.0	0.0
1	Region 28	0.0	-	-	2.0	-	-	0.5	-	-	53.1	-	-	0.0	-	-
1	Region 29	0.0	-	-	4.1	-	-	3.7	-	-	61.7	-	-	0.0	-	-
4	Region 30	0.0	0.0	0.0	4.0	1.2	7.0	0.6	0.2	1.5	55.9	52.2	60.3	0.1	0.0	0.5
3	Region 31	0.0	0.0	0.0	6.1	5.8	6.7	0.5	0.2	0.9	59.1	57.0	61.3	0.0	0.0	0.0
6	Region 32	0.0	0.0	0.0	4.6	1.3	6.1	1.3	0.3	3.2	58.6	53.8	61.4	0.2	0.0	0.7
5	Region 33	0.0	0.0	0.0	5.1	2.2	6.2	0.8	0.1	2.4	58.4	53.6	60.7	0.9	0.0	2.6
1	Region 34	0.0	-	-	0.2	-	-	0.3	-	-	53.8	-	-	0.0	-	-
29	**Ave. US No.3**	**0.0**			**4.5**			**1.0**			**57.9**			**0.3**		
	Min. US No.3		**0.0**			**0.2**			**0.0**			**52.2**			**0.0**	
	Max. US No.3			**0.0**			**7.0**			**3.7**			**61.7**			**2.6**
GRADE: US No. 4																
1	Region 06	0.0	0.0	0.0	8.8	8.8	8.8	0.7	0.7	0.7	58.6	58.6	58.6	0.0	0.0	0.0
1	Region 08	0.0	0.0	0.0	2.6	2.6	2.6	0.4	0.4	0.4	51.9	51.9	51.9	0.0	0.0	0.0
3	Region 15	0.0	0.0	0.0	8.7	7.1	9.9	0.9	0.7	1.2	60.8	60.7	60.9	0.3	0.0	0.6
1	Region 25	0.0	0.0	0.0	0.3	0.3	0.3	4.3	4.3	4.3	55.8	55.8	55.8	0.0	0.0	0.0
1	Region 28	0.0	0.0	0.0	7.7	7.7	7.7	0.1	0.1	0.1	57.4	57.4	57.4	0.1	0.1	0.1
6	Region 30	0.0	0.0	0.0	6.9	1.3	9.5	1.2	0.4	2.5	57.7	51.9	60.6	0.8	0.0	2.6
1	Region 31	0.0	0.0	0.0	7.4	7.4	7.4	0.7	0.7	0.7	59.6	59.6	59.6	0.0	0.0	0.0
1	Region 32	0.0	0.0	0.0	7.3	7.3	7.3	0.8	0.8	0.8	57.8	57.8	57.8	0.0	0.0	0.0
1	Region 33	0.0	0.0	0.0	9.5	9.5	9.5	0.7	0.7	0.7	58.4	58.4	58.4	0.2	0.2	0.2
1	Region 36	0.0	0.0	0.0	8.0	8.0	8.0	0.1	0.1	0.1	62.5	62.5	62.5	0.0	0.0	0.0
17	**Ave. US No.4**	**0.0**			**7.0**			**1.0**			**58.3**			**0.3**		
	Min. US No.4		**0.0**			**0.3**			**0.1**			**51.9**			**0.0**	
	Max. US No.4			**0.0**			**9.9**			**4.3**			**62.5**			**2.6**
GRADE: US No. 5																
1	Region 14	0.0	-	-	0.2	-	-	5.3	-	-	56.6	-	-	0.0	-	-
1	Region 17	0.0	-	-	13.6	-	-	0.2	-	-	60.3	-	-	1.9	-	-
1	Region 30	0.0	-	-	11.8	-	-	2.2	-	-	58.2	-	-	0.0	-	-
1	Region 34	0.0	-	-	1.4	-	-	5.2	-	-	53.4	-	-	0.0	-	-
1	Region 35	0.0	-	-	5.7	-	-	5.6	-	-	58.6	-	-	0.0	-	-
5	**Ave. US No.5**	**0.0**			**6.6**			**3.7**			**57.4**			**0.4**		
	Min. US No.5		**0.0**			**0.2**			**0.2**			**53.4**			**0.0**	
	Max. US No.5			**0.0**			**13.6**			**5.6**			**60.3**			**1.9**

TABLE 11: USA GRADING OF YELLOW MAIZE (2023/24) (continue)

Number of samples	Region	Damaged kernels						% Broken corn and foreign material			Bushel weight (lbs)			% Other colour		
		% Heat damaged			% Total damaged											
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: Sample Grade																
1	Region 18	0.0	-	-	5.7	-	-	2.5	-	-	59.0	-	-	0.0	-	-
1	Region 19	0.0	-	-	2.0	-	-	8.1	-	-	54.9	-	-	0.2	-	-
1	Region 21	0.0	-	-	5.7	-	-	9.8	-	-	58.0	-	-	0.8	-	-
1	Region 26	0.0	-	-	21.1	-	-	0.1	-	-	55.8	-	-	0.0	-	-
2	Region 28	0.0	0.0	0.0	0.8	0.6	1.0	1.1	1.0	1.1	54.5	53.2	55.7	0.0	0.0	0.0
1	Region 29	0.0	-	-	1.7	-	-	0.7	-	-	59.6	-	-	0.0	-	-
4	Region 30	0.2	0.0	0.6	10.0	1.3	20.2	0.8	0.3	1.3	57.9	57.0	58.6	0.0	0.0	0.0
7	Region 31	0.0	0.0	0.0	3.4	0.6	6.9	0.7	0.1	1.3	59.0	57.4	60.6	0.1	0.0	0.4
2	Region 32	0.0	0.0	0.0	3.8	1.6	5.9	1.7	1.0	2.5	59.1	58.4	59.8	0.0	0.0	0.0
2	Region 34	0.0	0.0	0.0	1.3	1.1	1.6	1.8	0.2	3.5	55.9	55.5	56.2	0.0	0.0	0.0
1	Region 36	0.0	-	-	3.2	-	-	0.2	-	-	59.1	-	-	0.0	-	-
23	**Ave.Sample Grade**	**0.0**			**5.0**			**1.7**			**57.8**			**0.1**		
	Min.Sample Grade		**0.0**			**0.6**			**0.1**			**53.2**			**0.0**	
	Max.Sample Grade			**0.6**			**21.1**			**9.8**			**60.6**			**0.8**
482	**Ave. YM**	**0.0**			**2.4**			**0.8**			**58.8**			**0.1**		
	Min. YM		**0.0**			**0.0**			**0.0**			**51.9**			**0.0**	
	Max. YM			**0.6**			**21.1**			**9.8**			**63.2**			**3.9**
1000	**Ave. Maize**	**0.0**			**2.6**			**0.9**			**59.0**			**0.2**		
	Min. Maize		**0.0**			**0.0**			**0.0**			**51.9**			**0.0**	
	Max. Maize			**14.1**			**24.0**			**17.2**			**63.3**			**12.1**

TABLE 11: USA GRADING OF YELLOW MAIZE (2023/24) (continue)

***The following yellow maize samples were downgraded to Sample Grade due to the number of poisonous seeds exceeding the maximum allowance**

Region	Cockleburs (*Xanthuim* spp.) exceeding 8 seeds
18	12 *Xanthium Strumarium*
28	12 *Xanthium Strumarium*
28	11 *Xanthium Strumarium*
29	12 *Xanthium Strumarium*
30	12 *Xanthium Strumarium*
30	57 *Xanthium Strumarium*
30	12 *Xanthium Strumarium*
31	12 *Xanthium Strumarium*
31	12 *Xanthium Strumarium*
31	12 *Xanthium Strumarium*
31	12 *Xanthium Strumarium*
31	11 *Xanthium Strumarium*
31	12 *Xanthium Strumarium*
31	12 *Xanthium Strumarium*
32	12 *Xanthium Strumarium*
32	12 *Xanthium Strumarium*
34	13 *Xanthium Strumarium*
34	12 *Xanthium Strumarium*
36	11 *Xanthium Strumarium*

TABLE 12: STANDARDS FOR GRADES OF CLASS WHITE MAIZE AND CLASS YELLOW MAIZE							
Deviation		Maximum permissible deviation					
		White maize			Yellow maize		
		WM1	WM2	WM3	YM1	YM2	YM3
1	Foreign matter [regulation 15]	0.3%	0.5%	0.75%	0.3%	0.5%	0.75%
2	Other colour maize kernels [regulation 16]	3%	6%	10%	2%	5%	5%
3	Defective maize kernels, above and below the 6.35 mm round-hole sieve [regulation 17]	7%	13%	30%	*	*	*
4	Defective maize kernels that can pass through the 6.35 mm round-hole sieve [regulation 17(c)]	*	*	*	4%	10%	30%
5	Defective maize kernels that can not pass through the 6.35 mm round-hole sieve [regulation 17(e)]	*	*	*	9%	20%	30%
6	Deviations referred to in items 1, 2, 3, 4 and 5 collectively: Provided that the deviations are individually within the specified limits	8%	16%	30%	9%	20%	30%

*No spesifications

A consignment of maize shall be classified as Class Other Maize if the consignment does not comply with the standards for Class White Maize or Class Yellow Maize.

Regulations relating to the Grading, Packing and Marking of Maize intended for sale in the Republic of South Africa as published in Government Notices No. R. 4368 of 16 February 2024 and No. R. 4433 of 1 March 2024.

TABLE 13: GRADES AND GRADE REQUIREMENTS FOR CLASS WHITE AND YELLOW MAIZE ACCORDING TO USA GRADING REGULATIONS					
			Maximum limits of -		
			Damaged kernels		
Grades	Minimum test weight per bushel (pounds)		Heat damaged kernels (percent)	Total (percent)	Broken corn and foreign material (percent)
U.S. No. 1	56.0	72.1 kg/hl	0.1	3.0	2.0
U.S. No. 2	54.0	69.5 kg/hl	0.2	5.0	3.0
U.S. No. 3	52.0	66.9 kg/hl	0.5	7.0	4.0
U.S. No. 4	49.0	63.1 kg/hl	1.0	10.0	5.0
U.S. No. 5	46.0	59.2 kg/hl	3.0	15.0	7.0
U.S. Sample Grade	< 46.0	< 59.2 kg/hl	>3.0	>15.0	>7.0
U.S. Sample grade is corn that: a) Does not meet the requirements for the grades U.S. Nos. 1, 2, 3, 4 or 5; or b) Contains stones which have an aggregate weight in excess of 0.1 percent of the sample weight, 2 or more pieces of glass, 3 or more crotalaria seeds (*Crotalaria* spp.), 2 or more castor beans (*Ricinus communis* L.), 4 or more particles of an unknown foreign substance(s) or a commonly recognized harmful or toxic substance(s), 8 or more cockleburs (*Xanthium* spp.) or similar seeds singly or in combination, or animal filth in excess of 0.20 percent in 1,000 grams; or c) Has a musty, sour, or commercially objectionable foreign odor; or d) Is heating or otherwise of distinctly low quality.					
Mixed corn class	When % other colour in yellow maize samples > 5% and white maize samples > 2%				

Source: United States Department of Agriculture. Federal Grain Inspection Service. Grain Inspection Handbook - Book II Grain Grading Procedures, Chapter 4, October 2020.

TABLE 14: PHYSICAL QUALITY CHARACTERISTICS OF WHITE MAIZE ACCORDING TO GRADE (2023/24)

Number of samples	Region	Test weight (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)			SAGL Milling index 2024			GYA		
								Above 10 mm sieve			Above 8 mm sieve			Below 8 mm sieve			< 6.35 mm sieve			< 4.75 mm sieve											
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: WM1																															
7	Region 12	77.3	74.8	79.0	33.1	25.6	37.4	18.3	1.1	30.5	60.3	48.3	67.2	21.4	9.8	50.6	0.6	0.3	1.4	0.5	0.2	1.3	5	0	12	86	75	97	66	64	69
5	Region 13	76.0	72.7	78.3	30.1	20.8	38.7	11.0	1.8	27.2	60.9	33.8	73.3	28.1	5.5	64.3	0.7	0.1	1.4	0.5	0.1	1.3	2	0	3	78	55	92	64	59	68
13	Region 14	76.5	72.9	79.0	31.3	20.0	37.6	21.6	3.8	40.1	62.8	49.5	72.0	15.6	4.8	39.9	0.6	0.0	2.0	0.5	0.0	1.7	4	0	12	78	64	92	64	61	68
10	Region 15	77.2	75.1	80.0	36.5	31.5	40.0	35.2	7.7	45.0	58.8	49.9	73.6	6.1	2.3	18.7	0.6	0.2	1.9	0.5	0.2	1.0	3	0	12	72	68	90	63	62	67
9	Region 16	76.7	73.8	78.3	30.9	22.5	37.0	20.6	1.4	32.4	59.1	35.0	68.1	20.3	4.8	63.6	0.7	0.1	2.3	0.5	0.1	1.5	2	1	4	73	63	92	63	61	68
20	Region 17	76.7	72.9	80.4	29.8	21.7	35.1	17.8	1.2	30.8	62.7	51.4	73.9	19.5	7.7	46.7	0.6	0.1	1.7	0.5	0.0	1.7	2	0	8	75	60	88	64	60	67
21	Region 18	76.7	73.2	80.0	31.1	21.4	39.2	16.6	1.4	47.8	62.7	41.6	76.0	20.7	2.2	57.0	0.7	0.2	1.9	0.6	0.2	1.6	4	1	11	73	57	91	63	59	68
15	Region 19	77.8	75.2	80.2	30.7	24.2	42.7	10.3	0.9	60.1	64.7	38.3	77.1	25.0	1.6	58.8	1.0	0.0	2.4	0.7	0.0	1.6	4	1	16	80	62	104	65	60	71
18	Region 20	75.2	72.2	78.3	28.0	24.4	38.8	13.5	2.0	38.2	63.8	54.0	80.3	22.7	7.8	40.5	0.8	0.0	3.6	0.7	0.0	3.6	3	1	7	69	54	80	62	59	65
17	Region 21	76.4	69.6	79.1	31.5	20.1	39.7	19.7	2.1	37.0	62.1	43.1	74.3	18.2	5.5	54.8	0.9	0.1	2.3	0.7	0.1	2.0	4	1	10	74	57	88	63	59	67
23	Region 22	75.9	73.6	78.0	32.5	26.7	40.1	28.5	1.3	53.0	58.3	41.7	70.7	13.2	2.5	54.6	0.9	0.0	3.7	0.7	0.0	2.0	3	0	14	66	42	75	61	56	64
34	Region 23	76.6	73.8	78.3	36.4	32.1	39.6	36.9	19.9	49.7	57.4	46.4	69.1	5.7	1.7	12.1	0.7	0.0	2.1	0.6	0.0	1.6	4	0	17	70	60	76	62	60	64
23	Region 24	75.8	72.7	78.7	31.1	22.3	42.3	19.8	1.4	45.3	58.1	36.8	72.0	22.1	3.0	61.8	1.0	0.1	2.8	0.7	0.1	2.2	4	1	15	71	60	85	63	60	66
1	Region 25	74.7	-	-	24.3	-	-	10.5	-	-	61.1	-	-	28.4	-	-	1.0	-	-	1.0	-	-	7	-	-	68	-	-	62	-	-
7	Region 26	76.2	72.0	79.5	28.4	20.7	36.7	14.5	3.4	30.2	64.9	58.7	68.4	20.6	2.3	36.9	1.0	0.3	1.9	0.7	0.0	1.4	3	0	7	76	61	93	64	60	68
11	Region 28	75.7	73.5	78.3	28.7	24.9	37.8	21.3	5.3	40.0	64.4	54.0	70.4	14.3	6.0	33.6	0.5	0.2	1.2	0.4	0.0	0.9	3	0	13	71	64	78	63	61	64
25	Region 29	75.7	71.9	79.8	29.8	23.4	34.6	20.2	1.1	42.3	61.5	50.6	70.8	18.2	4.2	39.6	0.8	0.2	1.7	0.6	0.2	1.1	2	0	7	71	57	85	63	59	66
28	Region 30	76.6	73.8	81.2	32.0	26.0	41.2	11.2	0.3	27.0	68.6	55.2	76.1	20.2	8.3	44.5	1.0	0.4	1.9	0.9	0.3	1.8	5	0	13	73	64	88	63	61	67
9	Region 31	75.9	70.1	77.7	27.2	23.1	29.3	6.3	1.6	12.0	65.7	59.3	69.4	28.0	22.2	38.8	0.6	0.1	2.9	0.4	0.1	1.0	3	0	11	73	55	79	63	58	65
11	Region 32	75.8	73.5	78.3	31.1	26.0	35.5	15.4	4.8	28.8	65.8	58.3	71.0	18.8	8.4	33.1	0.6	0.1	1.7	0.5	0.1	1.7	3	0	5	69	57	78	62	59	64
48	Region 33	77.0	68.9	80.8	32.1	25.8	40.7	12.8	2.6	48.5	68.1	49.3	81.3	19.1	2.2	32.6	0.8	0.0	3.0	0.6	0.0	2.0	5	0	13	74	59	87	63	60	67
31	Region 34	75.8	71.5	77.7	32.5	25.4	37.6	20.1	1.2	37.5	65.3	51.6	73.5	14.5	3.1	34.6	1.3	0.2	3.8	1.0	0.2	3.2	4	1	16	72	52	87	63	58	66
8	Region 35	75.8	73.1	79.3	33.3	30.4	35.2	15.6	3.0	49.4	69.4	46.9	78.2	15.1	3.7	24.8	0.9	0.1	3.6	0.8	0.1	2.8	4	1	11	71	54	86	63	58	66
14	Region 36	76.6	73.3	79.2	33.4	29.4	35.8	13.4	6.5	28.0	70.1	64.0	76.9	16.5	6.6	24.0	1.7	0.2	3.4	1.2	0.2	2.3	7	1	22	77	67	86	64	62	66
408	**Ave. WM1**	**76.4**			**31.7**			**19.0**			**63.4**			**17.6**			**0.9**			**0.7**			**4**			**73**			**63**		
	Min. WM1		**68.9**			**20.0**			**0.3**			**33.8**			**1.6**				**0.0**			**0.0**			**0**			**42**			**56**	
	Max. WM1			**81.2**			**42.7**			**60.1**			**81.3**			**64.3**			**3.8**			**3.6**			**22**			**104**			**71**

TABLE 14: PHYSICAL QUALITY CHARACTERISTICS OF WHITE MAIZE ACCORDING TO GRADE (2023/24) (continue)

Number of samples	Region	Test weight (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)			SAGL Milling index 2024			GYA		
								Above 10 mm sieve			Above 8 mm sieve			Below 8 mm sieve			< 6.35 mm sieve			< 4.75 mm sieve											
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: WM2																															
4	Region 12	76.1	73.6	78.1	32.2	24.5	38.3	19.8	2.0	34.5	69.2	55.8	95.5	11.0	2.5	23.6	1.1	0.1	1.8	0.9	0.1	1.4	4	0	9	79	68	86	65	62	66
3	Region 13	75.6	72.7	78.0	24.2	20.9	28.1	3.8	1.8	7.2	53.1	36.3	67.3	43.2	25.5	61.9	0.9	0.1	1.6	0.4	0.1	0.9	3	2	4	83	68	91	66	62	67
2	Region 14	76.7	76.0	77.4	23.9	15.1	32.7	24.3	12.1	36.5	58.0	53.4	62.5	17.8	10.1	25.4	0.5	0.4	0.5	0.5	0.4	0.5	1	1	1	73	73	73	63	63	63
1	Region 15	76.9	-	-	34.3	-	-	39.7	-	-	52.9	-	-	7.4	-	-	1.2	-	-	1.0	-	-	2	-	-	77	-	-	64	-	-
3	Region 17	77.3	76.3	78.4	28.2	26.5	30.4	6.4	2.6	9.9	64.3	56.0	75.8	29.3	14.3	37.2	0.8	0.3	1.6	0.7	0.3	1.3	2	1	2	86	80	91	66	65	68
1	Region 18	72.9	-	-	30.4	-	-	3.6	-	-	76.1	-	-	20.3	-	-	0.7	-	-	0.6	-	-	3	-	-	61	-	-	60	-	-
7	Region 19	76.6	72.9	81.5	23.7	21.9	26.1	3.8	0.4	11.4	50.6	22.3	70.4	45.6	24.9	77.3	0.7	0.4	1.1	0.5	0.2	0.8	3	1	4	87	65	103	66	61	70
4	Region 21	75.4	73.5	76.8	30.3	22.9	34.9	24.6	0.8	41.8	54.0	42.2	67.5	21.4	5.4	57.0	1.5	0.1	4.5	1.1	0.1	2.6	4	1	6	68	58	77	62	60	64
1	Region 22	73.6	-	-	27.8	-	-	19.1	-	-	71.5	-	-	9.4	-	-	0.6	-	-	0.6	-	-	1	-	-	68	-	-	62	-	-
2	Region 24	77.1	76.9	77.3	28.6	19.2	37.9	13.4	0.9	25.9	43.2	19.2	67.2	43.4	6.9	79.9	1.9	1.7	2.1	1.1	0.9	1.2	10	6	14	80	70	89	65	62	67
6	Region 29	74.9	71.9	78.0	31.6	28.1	34.5	22.4	7.2	28.7	64.1	60.0	68.4	13.5	5.3	30.8	0.9	0.3	1.4	0.7	0.3	0.9	2	1	4	62	58	67	60	59	62
3	Region 30	74.8	72.5	76.8	29.7	27.8	31.0	7.4	2.2	12.1	69.3	63.5	73.5	23.3	14.4	34.3	1.1	0.7	1.5	0.7	0.2	1.5	2	0	3	71	64	75	62	61	64
1	Region 31	74.5	-	-	23.6	-	-	2.8	-	-	47.4	-	-	49.8	-	-	1.8	-	-	1.2	-	-	12	-	-	75	-	-	64	-	-
4	Region 32	73.0	70.8	75.2	25.4	18.0	35.1	5.9	0.5	20.7	48.7	32.8	64.0	45.4	20.6	66.0	2.6	2.0	3.2	1.2	0.9	1.7	5	3	6	77	75	81	64	64	65
1	Region 34	76.0	-	-	27.0	-	-	4.1	-	-	62.3	-	-	33.6	-	-	0.9	-	-	0.9	-	-	4	-	-	76	-	-	64	-	-
1	Region 35	73.1	-	-	32.1	-	-	19.4	-	-	68.0	-	-	12.6	-	-	0.8	-	-	0.1	-	-	9	-	-	78	-	-	64	-	-
44	**Ave. WM2**	**75.5**			**28.1**			**13.2**			**58.3**			**28.5**			**1.1**			**0.7**			**4**			**76**			**64**		
	Min. WM2		**70.8**			**15.1**			**0.4**			**19.2**			**2.5**			**0.1**			**0.1**			**0**			**58**			**59**	
	Max. WM2			**81.5**			**38.3**			**41.8**			**95.5**			**79.9**			**4.5**			**2.6**			**14**			**103**			**70**

TABLE 14: PHYSICAL QUALITY CHARACTERISTICS OF WHITE MAIZE ACCORDING TO GRADE (2023/24) (continue)

Number of samples	Region	Test weight (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)			SAGL Milling index 2024			GYA		
								Above 10 mm sieve			Above 8 mm sieve			Below 8 mm sieve			< 6.35 mm sieve			< 4.75 mm sieve											
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: WM3																															
2	Region 12	77.2	77.1	77.2	37.6	37.6	37.6	25.8	23.8	27.8	61.2	60.5	61.9	13.0	11.7	14.3	0.5	0.4	0.5	0.3	0.2	0.3	2	1	2	86	81	91	66	65	67
1	Region 14	75.4	-	-	37.1	-	-	37.3	-	-	55.8	-	-	6.9	-	-	0.4	-	-	0.4	-	-	7	-	-	79	-	-	65	-	-
1	Region 17	78.9	-	-	27.5	-	-	57.0	-	-	0.6	-	-	42.4	-	-	0.2	-	-	0.2	-	-	6	-	-	80	-	-	65	-	-
1	Region 19	79.5	-	-	23.2	-	-	1.1	-	-	42.9	-	-	56.0	-	-	1.4	-	-	0.4	-	-	2	-	-	91	-	-	68	-	-
2	Region 20	75.4	73.9	76.8	27.7	21.6	33.7	9.3	2.3	16.2	57.8	44.7	70.8	33.0	13.0	53.0	2.2	1.0	3.4	2.0	0.8	3.2	2	1	3	76	73	78	64	63	64
2	Region 21	75.3	74.9	75.7	28.7	25.4	32.0	21.1	14.1	28.1	69.4	65.3	73.5	9.5	6.6	12.4	2.1	1.9	2.2	1.0	0.5	1.4	10	7	13	76	73	79	64	63	65
2	Region 22	75.5	74.9	76.1	32.9	31.8	34.0	34.6	28.9	40.2	58.8	56.1	61.4	6.7	3.7	9.7	1.6	0.7	2.5	1.3	0.7	1.9	4	2	6	62	54	70	60	58	62
1	Region 23	73.5	-	-	33.7	-	-	10.0	-	-	70.1	-	-	19.9	-	-	2.9	-	-	1.9	-	-	18	-	-	74	-	-	63	-	-
1	Region 28	76.1	-	-	26.8	-	-	4.5	-	-	44.9	-	-	50.6	-	-	2.2	-	-	1.2	-	-	12	-	-	72	-	-	63	-	-
2	Region 30	76.3	75.6	76.9	33.9	30.9	36.9	7.2	5.0	9.4	73.2	72.8	73.5	19.7	17.8	21.5	0.5	0.5	0.6	0.3	0.1	0.6	6	5	7	72	71	72	63	63	63
2	Region 31	73.7	73.3	74.1	26.7	24.7	28.7	7.0	5.9	8.1	68.7	63.4	74.0	24.3	17.9	30.7	0.5	0.4	0.6	0.5	0.4	0.6	1	1	1	73	71	74	63	63	63
1	Region 36	77.5	-	-	34.3	-	-	8.5	-	-	70.9	-	-	20.6	-	-	2.9	-	-	1.9	-	-	13	-	-	81	-	-	65	-	-
18	**Ave. WM3**	**76.0**			**31.0**			**18.2**			**59.1**			**22.7**			**1.4**			**0.9**			**6**			**76**			**64**		
	Min. WM3		**73.3**			**21.6**			**1.1**			**0.6**			**3.7**				**0.2**			**0.1**			**1**			**54**			**58**	
	Max. WM3			**79.5**			**37.6**			**57.0**			**74.0**			**56.0**			**3.4**			**3.2**			**18**			**91**			**68**

TABLE 14: PHYSICAL QUALITY CHARACTERISTICS OF WHITE MAIZE ACCORDING TO GRADE (2023/24) (continue)

Number of samples	Region	Test weight (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)			SAGL Milling index 2024			GYA		
								Above 10 mm sieve			Above 8 mm sieve			Below 8 mm sieve			< 6.35 mm sieve			< 4.75 mm sieve											
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: COM																															
4	Region 12	75.5	74.7	77.3	35.4	30.3	39.8	32.4	24.3	40.0	59.0	55.5	62.9	8.7	4.0	12.8	0.8	0.0	2.3	0.8	0.0	2.3	7	1	12	78	71	86	64	63	66
4	Region 14	73.0	70.5	75.5	23.7	20.1	32.0	8.2	0.0	31.1	38.2	28.8	58.2	53.7	10.7	71.2	0.9	0.3	1.3	0.5	0.3	0.7	2	1	3	80	76	84	65	64	66
2	Region 15	76.0	75.5	76.5	37.3	37.2	37.3	30.9	28.3	33.4	59.0	56.8	61.1	10.2	5.5	14.9	1.4	0.4	2.4	0.9	0.4	1.4	5	4	6	71	68	73	62	62	63
2	Region 17	73.9	71.9	75.9	29.4	20.1	38.6	32.3	2.5	62.0	37.3	36.3	38.2	30.5	1.7	59.3	1.1	0.3	1.9	0.4	0.3	0.5	3	2	3	77	59	95	64	60	68
2	Region 18	73.2	72.4	73.9	28.7	21.8	35.6	25.7	11.7	39.6	56.1	54.4	57.7	18.3	6.0	30.6	3.2	1.6	4.7	2.0	0.6	3.3	5	4	6	68	67	69	62	62	62
2	Region 20	75.4	75.0	75.8	27.8	27.2	28.3	15.4	11.1	19.6	61.8	57.2	66.4	22.9	22.5	23.2	0.4	0.1	0.7	0.2	0.1	0.3	5	3	6	70	68	73	62	62	63
4	Region 21	73.1	66.9	77.3	27.2	22.6	33.4	13.0	1.0	26.9	61.5	49.3	68.2	25.6	10.8	49.7	1.5	0.6	1.9	0.8	0.6	1.3	8	3	12	73	71	76	63	62	64
6	Region 22	75.1	73.6	76.4	36.6	30.7	40.7	43.4	26.9	62.7	51.6	34.3	65.1	4.9	3.0	8.0	1.8	0.8	3.9	1.5	0.8	3.5	2	0	3	68	65	73	62	61	63
2	Region 23	76.9	76.3	77.5	39.8	38.1	41.4	46.9	38.1	55.6	50.1	42.7	57.4	3.1	1.7	4.5	1.8	0.6	2.9	1.5	0.6	2.3	3	2	4	70	65	74	62	61	63
3	Region 24	76.6	75.9	78.0	30.5	22.7	35.1	18.9	5.8	39.4	56.2	43.6	67.7	24.9	3.3	50.6	1.4	0.8	2.3	1.0	0.2	1.8	7	3	14	76	68	89	64	62	67
1	Region 28	78.7	-	-	31.8	-	-	16.7	-	-	65.6	-	-	17.7	-	-	0.2	-	-	0.2	-	-	1	-	-	85	-	-	66	-	-
2	Region 29	75.2	72.0	78.3	31.0	28.4	33.6	28.6	27.8	29.4	63.2	63.1	63.3	8.2	7.5	8.9	0.8	0.7	0.8	0.5	0.2	0.7	2	1	2	59	53	65	60	58	61
5	Region 30	76.3	72.0	79.8	30.0	25.5	36.0	10.9	2.7	16.4	69.6	61.8	73.1	19.5	12.0	35.5	1.5	0.3	3.0	1.2	0.3	2.0	7	1	29	67	49	74	62	57	63
2	Region 31	78.2	76.8	79.6	29.2	28.9	29.5	6.3	5.8	6.8	70.3	70.2	70.4	23.4	22.8	24.0	0.2	0.0	0.4	0.2	0.0	0.4	4	2	5	77	76	79	64	64	65
1	Region 32	74.8	-	-	33.7	-	-	24.3	-	-	66.4	-	-	9.3	-	-	0.4	-	-	0.4	-	-	2	-	-	58	-	-	60	-	-
3	Region 33	76.7	75.7	77.9	35.9	35.8	36.0	24.3	10.1	38.3	66.0	57.3	74.5	9.7	4.4	15.4	1.0	0.5	1.9	0.9	0.5	1.6	5	3	9	76	70	81	64	62	65
1	Region 34	80.9	-	-	35.4	-	-	3.1	-	-	73.5	-	-	23.4	-	-	3.1	-	-	1.9	-	-	3	-	-	96	-	-	69	-	-
1	Region 35	74.4	-	-	24.7	-	-	1.6	-	-	56.0	-	-	42.4	-	-	0.8	-	-	0.4	-	-	4	-	-	81	-	-	65	-	-
1	Region 36	78.9	-	-	30.3	-	-	9.9	-	-	74.3	-	-	15.8	-	-	2.4	-	-	1.2	-	-	35	-	-	86	-	-	66	-	-
48	**Ave. COM**	**75.5**			**31.6**			**22.6**			**58.1**			**19.3**			**1.3**			**0.9**			**5**			**73**			**63**		
	Min. COM		**66.9**			**20.1**			**0.0**			**28.8**			**1.7**			**0.0**			**0.0**			**0**			**49**			**57**	
	Max. COM			**80.9**			**41.4**			**62.7**			**74.5**			**71.2**			**4.7**			**3.5**			**35**			**96**			**69**
518	**Ave. WM**	**76.2**			**31.4**			**18.8**			**62.3**			**18.9**			**0.9**			**0.7**			**4**			**73**			**63**		
	Min. WM		**66.9**			**15.1**			**0.0**			**0.6**			**1.6**			**0.0**			**0.0**			**0**			**42**			**56**	
	Max. WM			**81.5**			**42.7**			**62.7**			**95.5**			**79.9**			**4.7**			**3.6**			**35**			**104**			**71**
1000	**Ave. Maize**	**75.9**			**30.1**			**12.5**			**59.7**			**27.7**			**1.0**			**0.8**			**4**			**75**			**64**		
	Min. Maize		**66.8**			**15.1**			**0.0**			**0.6**			**1.6**			**0.0**			**0.0**			**0**			**42**			**56**	
	Max. Maize			**81.5**			**42.7**			**62.7**			**95.5**			**94.0**			**5.2**			**4.6**			**42**			**104**			**71**

TABLE 15: PHYSICAL QUALITY CHARACTERISTICS OF WHITE MAIZE (2023/24)

Number of samples	Region	Test weight (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)			SAGL Milling index 2024			GYA		
								Above 10 mm sieve			Above 8 mm sieve			Below 8 mm sieve			< 6.35 mm sieve			< 4.75 mm sieve											
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: WHITE																															
17	Region 12	76.5	73.6	79.0	34.0	24.5	39.8	22.8	1.1	40.0	62.2	48.3	95.5	14.9	2.5	50.6	0.7	0.0	2.3	0.6	0.0	2.3	5	0	12	83	68	97	65	62	69
8	Region 13	75.8	72.7	78.3	27.9	20.8	38.7	8.3	1.8	27.2	58.0	33.8	73.3	33.8	5.5	64.3	0.8	0.1	1.6	0.5	0.1	1.3	2	0	4	80	55	92	65	59	68
20	Region 14	75.7	70.5	79.0	29.4	15.1	37.6	20.0	0.0	40.1	57.1	28.8	72.0	23.0	4.8	71.2	0.6	0.0	2.0	0.5	0.0	1.7	3	0	12	78	64	92	64	61	68
13	Region 15	77.0	75.1	80.0	36.4	31.5	40.0	34.8	7.7	45.0	58.3	49.9	73.6	6.8	2.3	18.7	0.8	0.2	2.4	0.6	0.2	1.4	3	0	12	72	68	90	63	62	67
9	Region 16	76.7	73.8	78.3	30.9	22.5	37.0	20.6	1.4	32.4	59.1	35.0	68.1	20.3	4.8	63.6	0.7	0.1	2.3	0.5	0.1	1.5	2	1	4	73	63	92	63	61	68
26	Region 17	76.6	71.9	80.4	29.5	20.1	38.6	19.1	1.2	62.0	58.6	0.6	75.8	22.4	1.7	59.3	0.6	0.1	1.9	0.5	0.0	1.7	3	0	8	77	59	95	64	60	68
24	Region 18	76.3	72.4	80.0	30.8	21.4	39.2	16.8	1.4	47.8	62.7	41.6	76.1	20.5	2.2	57.0	0.9	0.2	4.7	0.7	0.2	3.3	4	1	11	72	57	91	63	59	68
23	Region 19	77.5	72.9	81.5	28.3	21.9	42.7	7.9	0.4	60.1	59.5	22.3	77.1	32.6	1.6	77.3	0.9	0.0	2.4	0.6	0.0	1.6	3	1	16	83	62	104	65	60	71
22	Region 20	75.3	72.2	78.3	27.9	21.6	38.8	13.3	2.0	38.2	63.0	44.7	80.3	23.7	7.8	53.0	0.9	0.0	3.6	0.8	0.0	3.6	3	1	7	70	54	80	62	59	65
27	Region 21	75.7	66.9	79.1	30.5	20.1	39.7	19.6	0.8	41.8	61.4	42.2	74.3	19.1	5.4	57.0	1.1	0.1	4.5	0.8	0.1	2.6	5	1	13	73	57	88	63	59	67
32	Region 22	75.6	73.6	78.0	33.2	26.7	40.7	31.4	1.3	62.7	57.5	34.3	71.5	11.1	2.5	54.6	1.1	0.0	3.9	0.9	0.0	3.5	3	0	14	66	42	75	61	56	64
37	Region 23	76.5	73.5	78.3	36.5	32.1	41.4	36.8	10.0	55.6	57.3	42.7	70.1	5.9	1.7	19.9	0.8	0.0	2.9	0.7	0.0	2.3	4	0	18	70	60	76	62	60	64
28	Region 24	76.0	72.7	78.7	30.9	19.2	42.3	19.3	0.9	45.3	56.8	19.2	72.0	23.9	3.0	79.9	1.1	0.1	2.8	0.8	0.1	2.2	5	1	15	72	60	89	63	60	67
1	Region 25	74.7	-	-	24.3	-	-	10.5	-	-	61.1	-	-	28.4	-	-	1.0	-	-	1.0	-	-	7	-	-	68	-	-	62	-	-
7	Region 26	76.2	72.0	79.5	28.4	20.7	36.7	14.5	3.4	30.2	64.9	58.7	68.4	20.6	2.3	36.9	1.0	0.3	1.9	0.7	0.0	1.4	3	0	7	76	61	93	64	60	68
13	Region 28	76.0	73.5	78.7	28.8	24.9	37.8	19.6	4.5	40.0	63.0	44.9	70.4	17.4	6.0	50.6	0.6	0.2	2.2	0.4	0.0	1.2	3	0	13	73	64	85	63	61	66
33	Region 29	75.5	71.9	79.8	30.2	23.4	34.6	21.1	1.1	42.3	62.1	50.6	70.8	16.8	4.2	39.6	0.8	0.2	1.7	0.6	0.2	1.1	2	0	7	69	53	85	62	58	66
38	Region 30	76.4	72.0	81.2	31.6	25.5	41.2	10.7	0.3	27.0	69.0	55.2	76.1	20.3	8.3	44.5	1.1	0.3	3.0	0.9	0.1	2.0	5	0	29	72	49	88	63	57	67
14	Region 31	75.8	70.1	79.6	27.1	23.1	29.5	6.1	1.6	12.0	65.5	47.4	74.0	28.4	17.9	49.8	0.6	0.0	2.9	0.4	0.0	1.2	4	0	12	74	55	79	63	58	65
16	Region 32	75.0	70.8	78.3	29.8	18.0	35.5	13.6	0.5	28.8	61.6	32.8	71.0	24.9	8.4	66.0	1.1	0.1	3.2	0.7	0.1	1.7	3	0	6	70	57	81	62	59	65
51	Region 33	77.0	68.9	80.8	32.4	25.8	40.7	13.5	2.6	48.5	67.9	49.3	81.3	18.6	2.2	32.6	0.8	0.0	3.0	0.6	0.0	2.0	5	0	13	74	59	87	63	60	67
33	Region 34	76.0	71.5	80.9	32.4	25.4	37.6	19.1	1.2	37.5	65.5	51.6	73.5	15.4	3.1	34.6	1.4	0.2	3.8	1.1	0.2	3.2	4	1	16	73	52	96	63	58	69
10	Region 35	75.4	73.1	79.3	32.3	24.7	35.2	14.6	1.6	49.4	67.9	46.9	78.2	17.5	3.7	42.4	0.9	0.1	3.6	0.7	0.1	2.8	5	1	11	73	54	86	63	58	66
16	Region 36	76.8	73.3	79.2	33.2	29.4	35.8	12.9	6.5	28.0	70.4	64.0	76.9	16.7	6.6	24.0	1.8	0.2	3.4	1.3	0.2	2.3	9	1	35	78	67	86	64	62	66
518	**Ave. White**	**76.2**			**31.4**			**18.8**			**62.3**			**18.9**			**0.9**			**0.7**			**4**			**73**			**63**		
	Min. White		**66.9**			**15.1**			**0.0**			**0.6**			**1.6**			**0.0**			**0.0**			**0**			**42**			**56**	
	Max. White			**81.5**			**42.7**			**62.7**			**95.5**			**79.9**			**4.7**			**3.6**			**35**			**104**			**71**

TABLE 16: PHYSICAL QUALITY CHARACTERISTICS OF YELLOW MAIZE ACCORDING TO GRADE (2023/24)

Number of samples	Region	Test weight (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)			SAGL Milling index 2024			GYA		
								Above 10 mm sieve			Above 8 mm sieve			Below 8 mm sieve			< 6.35 mm sieve			< 4.75 mm sieve											
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: YM1																															
3	Region 06	76.0	75.7	76.4	37.0	32.5	39.4	3.8	1.7	5.2	73.5	73.0	74.4	22.7	21.8	23.9	1.8	0.6	2.9	1.4	0.6	2.1	20	0	42	62	56	68	60	59	62
8	Region 08	76.8	73.5	79.5	26.0	21.6	34.3	5.2	0.0	22.3	58.5	27.7	71.8	36.4	6.6	72.3	0.7	0.1	2.0	0.5	0.1	1.1	2	1	3	89	79	100	67	65	70
16	Region 10	79.0	76.3	81.0	34.9	30.9	39.7	1.9	0.8	3.7	57.4	38.7	69.8	40.7	28.2	60.5	0.7	0.0	1.9	0.6	0.0	1.5	10	2	34	72	59	82	63	60	65
8	Region 11	78.2	75.9	79.6	33.4	27.4	37.8	1.8	0.0	3.7	56.7	44.0	70.9	41.5	25.9	55.0	1.0	0.3	2.0	0.9	0.3	1.7	6	2	11	72	65	78	63	61	64
1	Region 12	78.6	-	-	32.5	-	-	0.5	-	-	35.0	-	-	64.5	-	-	2.6	-	-	1.6	-	-	15	-	-	91	-	-	67	-	-
1	Region 13	74.9	-	-	25.4	-	-	6.0	-	-	62.6	-	-	31.4	-	-	2.6	-	-	0.8	-	-	2	-	-	79	-	-	64	-	-
4	Region 14	78.2	77.1	79.9	32.6	31.3	34.4	10.8	0.8	35.1	52.5	43.1	64.0	36.7	7.8	56.1	0.7	0.0	1.2	0.6	0.0	1.0	4	1	8	84	76	88	66	64	67
5	Region 15	77.7	75.8	79.3	36.0	34.4	40.5	3.2	1.3	5.9	64.7	56.4	69.5	32.0	26.8	39.9	1.1	0.7	2.0	1.0	0.7	1.4	4	2	7	77	60	85	64	60	66
3	Region 17	76.3	73.7	79.4	33.6	29.1	37.5	12.3	2.2	20.7	67.0	62.1	71.7	20.7	12.0	26.1	1.6	0.7	2.9	1.5	0.7	2.7	9	6	15	81	79	84	65	64	66
1	Region 18	76.7	-	-	27.2	-	-	2.0	-	-	32.4	-	-	65.6	-	-	2.7	-	-	1.7	-	-	2	-	-	74	-	-	63	-	-
6	Region 19	75.6	73.1	79.6	31.9	25.9	35.4	8.2	2.5	14.8	65.3	55.5	74.0	26.5	13.2	40.6	1.0	0.8	1.3	0.9	0.8	1.2	6	1	11	81	68	88	65	62	67
6	Region 20	76.0	73.9	79.6	28.4	25.1	33.8	4.2	1.2	8.3	59.7	54.2	64.5	36.1	31.4	42.2	1.0	0.4	1.8	0.8	0.2	1.8	3	0	8	74	68	84	63	62	66
1	Region 22	77.3	-	-	33.8	-	-	2.5	-	-	58.6	-	-	38.9	-	-	1.8	-	-	1.4	-	-	11	-	-	79	-	-	64	-	-
5	Region 24	77.0	75.5	78.6	30.7	21.9	38.6	3.4	0.1	7.0	58.8	38.0	70.0	37.7	25.9	61.9	1.0	0.1	2.4	1.0	0.1	2.4	4	2	7	78	75	84	64	64	66
6	Region 25	73.9	70.5	75.3	26.2	20.0	28.3	4.2	1.0	9.8	57.1	44.7	73.1	38.7	17.1	53.5	1.2	0.5	1.6	0.8	0.5	0.9	2	0	4	74	61	81	63	60	65
5	Region 26	74.7	72.2	77.2	23.0	20.7	24.8	2.1	1.5	2.4	48.5	25.8	64.1	49.4	34.4	71.9	1.6	0.7	2.5	1.0	0.7	1.5	2	1	6	76	63	86	64	61	66
2	Region 27	76.6	76.5	76.6	26.6	23.2	30.0	10.5	2.3	18.7	55.1	41.1	69.1	34.4	12.2	56.6	0.8	0.8	0.8	0.8	0.8	0.8	3	2	3	85	82	87	66	65	67
34	Region 28	75.6	68.4	80.7	29.1	22.0	39.0	7.5	0.1	36.1	60.0	39.9	76.7	32.5	3.9	60.0	1.0	0.0	3.0	0.7	0.0	1.8	4	1	9	76	45	101	64	56	70
23	Region 29	76.2	70.6	79.4	29.8	20.8	39.0	10.1	1.1	26.4	65.0	49.4	78.4	24.9	4.5	49.4	1.0	0.3	1.7	0.8	0.3	1.6	4	1	10	81	69	91	65	62	67
27	Region 30	75.4	69.0	81.4	30.0	24.4	37.4	7.7	0.0	35.4	66.1	48.7	79.3	26.2	4.2	51.3	1.2	0.2	3.2	1.0	0.2	2.9	4	0	13	79	68	88	64	62	67
45	Region 31	76.0	70.9	78.4	28.8	20.4	36.0	6.8	0.1	22.3	61.6	47.4	76.3	31.6	9.2	51.3	0.5	0.0	1.7	0.4	0.0	1.4	3	0	11	78	71	86	64	63	66
35	Region 32	75.9	70.7	78.9	29.6	19.1	37.1	10.3	0.0	29.8	57.4	10.1	74.7	32.3	7.5	89.9	0.9	0.0	2.3	0.7	0.0	1.5	5	0	17	78	68	89	64	62	67
22	Region 33	76.7	71.8	78.2	31.7	26.7	36.9	10.1	1.2	24.2	60.8	40.5	70.7	29.1	6.2	57.6	1.2	0.1	2.7	1.0	0.1	2.0	4	0	10	73	45	85	63	56	66
12	Region 34	76.3	73.2	77.9	27.8	24.3	34.3	4.7	1.3	11.2	61.2	52.1	71.9	34.0	21.5	45.7	1.0	0.5	2.0	0.8	0.5	1.4	4	1	8	81	77	85	65	64	66
6	Region 35	76.0	74.5	77.6	32.2	27.0	38.4	6.8	1.2	15.7	62.7	54.4	73.4	30.5	14.9	41.9	1.5	0.2	4.5	1.3	0.2	3.8	5	2	12	76	57	88	64	59	67
14	Region 36	76.3	72.3	80.4	32.0	28.3	39.1	3.5	0.6	8.5	57.1	33.8	73.1	39.5	21.0	65.0	1.5	0.5	3.3	1.2	0.5	2.1	7	0	20	68	54	79	62	58	64
299	**Ave. YM1**	**76.2**			**30.1**			**7.0**			**60.4**			**32.6**			**1.0**			**0.8**			**5**			**77**			**64**		
	Min. YM1		**68.4**			**19.1**			**0.0**			**10.1**			**3.9**				**0.0**			**0.0**			**0**			**45**			**56**	
	Max. YM1			**81.4**			**40.5**			**36.1**			**79.3**			**89.9**			**4.5**			**3.8**			**42**			**101**			**70**

TABLE 16: PHYSICAL QUALITY CHARACTERISTICS OF YELLOW MAIZE ACCORDING TO GRADE (2023/24) (continue)

Number of samples	Region	Test weight (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)			SAGL Milling index 2024			GYA		
								Above 10 mm sieve			Above 8 mm sieve			Below 8 mm sieve			< 6.35 mm sieve			< 4.75 mm sieve											
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: YM2																														
2	Region 6	75.7	75.4	75.9	37.7	35.7	39.7	1.8	1.1	2.5	71.9	69.6	74.2	26.3	24.7	27.9	1.3	0.9	1.6	1.0	0.9	1.1	7	6	8	62	54	71	61	58	63
3	Region 8	68.3	66.9	70.0	18.9	17.6	20.3	0.4	0.0	0.8	40.2	34.5	45.5	59.3	53.7	65.5	1.4	1.2	1.6	0.5	0.2	0.8	3	2	3	66	62	71	61	60	63
3	Region 11	78.3	77.5	78.9	30.4	28.7	33.3	0.3	0.0	0.8	51.0	44.5	55.6	48.8	43.6	55.5	1.5	0.7	2.1	0.8	0.6	1.0	11	8	14	71	63	76	63	61	64
1	Region 12	76.4	-	-	22.2	-	-	0.4	-	-	32.7	-	-	66.9	-	-	1.2	-	-	1.2	-	-	4	-	-	85	-	-	66	-	-
1	Region 13	76.4	-	-	25.0	-	-	2.8	-	-	51.1	-	-	46.1	-	-	0.5	-	-	0.5	-	-	3	-	-	88	-	-	67	-	-
2	Region 15	78.4	78.3	78.4	36.9	36.5	37.2	2.2	0.5	3.9	64.6	64.4	64.8	33.2	31.7	34.7	0.6	0.4	0.8	0.6	0.3	0.8	5	4	6	82	81	82	65	65	65
3	Region 17	76.5	73.9	77.9	24.4	21.7	29.2	2.5	2.1	3.0	52.8	44.1	65.8	44.7	31.8	52.9	0.7	0.5	0.9	0.7	0.5	0.9	2	0	6	81	75	87	65	63	66
5	Region 18	73.7	71.8	77.1	27.6	24.3	30.0	2.8	1.2	4.5	58.9	45.2	71.6	38.3	24.9	53.6	1.7	0.9	3.0	1.4	0.9	2.2	6	0	13	70	56	78	62	59	64
4	Region 19	75.2	73.2	76.9	23.8	22.0	27.4	2.2	0.0	7.0	34.0	19.0	43.1	63.8	49.9	80.8	1.5	1.2	1.7	0.8	0.3	1.2	3	1	5	82	67	91	65	62	67
1	Region 21	75.9	-	-	26.9	-	-	2.3	-	-	59.9	-	-	37.8	-	-	0.5	-	-	0.5	-	-	1	-	-	82	-	-	65	-	-
1	Region 22	73.9	-	-	26.3	-	-	1.6	-	-	50.3	-	-	48.1	-	-	0.7	-	-	0.7	-	-	4	-	-	64	-	-	61	-	-
7	Region 24	75.6	73.3	76.9	28.0	21.6	37.2	1.3	0.0	3.4	53.4	26.9	73.2	45.3	25.8	72.1	2.0	0.7	5.2	1.5	0.6	3.9	8	2	28	69	58	80	62	60	65
5	Region 25	73.1	71.9	74.8	24.6	21.0	27.9	3.3	1.5	6.8	52.2	31.6	72.2	44.5	21.0	65.7	1.7	1.0	2.7	1.2	0.4	2.1	3	0	9	70	64	73	62	61	63
6	Region 26	73.3	70.9	75.3	23.9	20.8	28.6	3.5	1.7	7.9	57.3	49.4	70.8	39.2	21.3	47.9	1.6	0.9	2.4	1.0	0.5	1.4	4	1	8	76	69	82	64	62	65
3	Region 27	75.7	74.9	76.7	24.9	23.7	27.4	3.9	1.4	6.3	52.4	40.8	60.4	43.7	33.3	55.1	1.2	1.0	1.5	0.8	0.6	1.1	3	1	6	77	69	83	64	62	65
5	Region 28	74.5	71.4	76.5	24.9	19.9	28.6	3.7	1.0	7.0	44.9	24.4	57.4	51.4	40.1	74.6	1.4	0.5	3.0	1.0	0.5	2.3	5	1	12	72	63	78	63	61	64
14	Region 29	75.5	71.5	81.2	23.9	19.7	32.3	1.9	0.0	10.3	39.5	18.4	79.9	58.6	9.8	81.6	1.3	0.3	2.6	0.8	0.3	1.4	2	0	5	83	74	89	65	63	67
5	Region 30	72.7	66.8	78.0	23.2	16.6	30.3	2.8	0.0	4.4	43.0	27.5	67.3	54.2	28.3	72.5	1.8	1.2	2.5	1.0	0.4	2.1	4	1	6	75	66	84	63	61	66
7	Region 31	76.8	74.6	78.9	27.9	24.1	37.7	3.0	0.0	10.5	50.4	34.9	73.1	46.6	16.4	65.1	1.1	0.1	2.7	0.8	0.1	1.7	3	0	12	78	72	92	64	63	68
7	Region 32	74.2	69.3	77.2	27.3	19.9	31.0	8.4	0.0	20.0	56.6	24.3	68.8	35.0	12.7	75.7	0.9	0.2	1.7	0.7	0.2	1.3	4	1	10	77	67	89	64	62	67
5	Region 33	74.7	69.0	77.3	30.4	28.5	31.4	11.0	4.2	17.8	65.3	60.9	69.3	23.7	21.1	31.1	1.0	0.3	1.4	0.7	0.3	1.1	4	2	5	76	70	80	64	62	65
6	Region 34	75.0	69.3	78.1	26.5	20.5	31.3	1.9	0.2	5.7	47.3	32.1	58.5	50.8	38.2	65.9	1.4	0.3	3.8	0.9	0.3	2.1	4	2	8	78	74	85	64	63	66
4	Region 36	76.3	74.4	77.3	30.6	28.9	32.2	1.8	0.7	2.8	46.6	41.8	52.2	51.6	45.0	56.4	2.2	0.7	3.9	1.6	0.4	2.8	12	9	15	67	57	73	62	59	63
100	**Ave. YM2**	**74.9**			**26.3**			**3.2**			**50.0**			**46.8**			**1.4**			**0.9**			**4**			**75**			**64**		
	Min. YM2		**66.8**			**16.6**			**0.0**			**18.4**			**9.8**				**0.1**			**0.1**			**0**			**54**			**58**	
	Max. YM2			**81.2**			**39.7**			**20.0**			**79.9**			**81.6**			**5.2**			**3.9**			**28**			**92**			**68**

TABLE 16: PHYSICAL QUALITY CHARACTERISTICS OF YELLOW MAIZE ACCORDING TO GRADE (2023/24) (continue)

Number of samples	Region	Test weight (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)			SAGL Milling index 2024			GYA		
								Above 10 mm sieve			Above 8 mm sieve			Below 8 mm sieve			< 6.35 mm sieve			< 4.75 mm sieve											
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: YM3																															
2	Region 08	74.2	73.0	75.3	23.5	21.4	25.5	0.2	0.0	0.4	14.5	9.9	19.0	85.4	80.6	90.1	1.5	1.2	1.7	0.5	0.1	0.9	0	0	0	61	55	68	60	59	62
3	Region 14	75.5	74.2	77.8	18.3	16.3	21.9	0.4	0.0	0.8	26.4	20.2	37.4	73.2	61.8	79.8	0.7	0.1	1.7	0.5	0.1	1.3	2	2	3	82	79	83	65	65	66
1	Region 18	71.4	71.4	71.4	19.9	19.9	19.9	0.1	0.1	0.1	30.8	30.8	30.8	69.1	69.1	69.1	2.0	2.0	2.0	2.0	2.0	2.0	2	2	2	76	76	76	64	64	64
1	Region 19	76.0	76.0	76.0	26.6	26.6	26.6	1.4	1.4	1.4	60.9	60.9	60.9	37.7	37.7	37.7	1.4	1.4	1.4	1.4	1.4	1.4	0	0	0	83	83	83	66	66	66
2	Region 21	76.0	75.0	76.9	19.4	18.4	20.3	2.0	1.4	2.6	26.8	23.3	30.3	71.2	67.1	75.3	0.6	0.3	0.9	0.6	0.3	0.9	1	1	1	82	82	82	65	65	65
1	Region 22	71.9	71.9	71.9	27.3	27.3	27.3	9.0	9.0	9.0	65.8	65.8	65.8	25.2	25.2	25.2	1.0	1.0	1.0	0.8	0.8	0.8	3	3	3	71	71	71	63	63	63
1	Region 24	75.7	75.7	75.7	20.5	20.5	20.5	0.0	0.0	0.0	36.3	36.3	36.3	63.7	63.7	63.7	1.4	1.4	1.4	0.6	0.6	0.6	0	0	0	77	77	77	64	64	64
1	Region 25	71.3	71.3	71.3	25.7	25.7	25.7	2.6	2.6	2.6	46.6	46.6	46.6	50.8	50.8	50.8	3.2	3.2	3.2	2.3	2.3	2.3	7	7	7	65	65	65	61	61	61
2	Region 26	72.4	71.9	72.8	20.8	20.7	20.9	0.5	0.0	1.0	29.2	28.5	29.8	70.4	70.2	70.5	2.6	1.3	3.9	1.5	1.3	1.6	4	4	4	72	69	74	63	62	63
1	Region 28	74.1	74.1	74.1	19.2	19.2	19.2	0.7	0.7	0.7	21.6	21.6	21.6	77.7	77.7	77.7	1.9	1.9	1.9	0.5	0.5	0.5	5	5	5	73	73	73	63	63	63
1	Region 29	74.9	74.9	74.9	21.8	21.8	21.8	1.3	1.3	1.3	44.2	44.2	44.2	54.5	54.5	54.5	0.8	0.8	0.8	0.5	0.5	0.5	2	2	2	86	86	86	66	66	66
2	Region 30	74.6	73.2	75.9	20.8	19.9	21.7	1.0	0.3	1.7	32.4	20.5	44.3	66.6	54.0	79.2	1.6	1.3	1.9	0.7	0.4	0.9	6	2	9	79	75	84	65	63	66
2	Region 31	72.6	70.5	74.7	23.5	23.4	23.6	4.1	3.9	4.2	60.5	57.2	63.8	35.4	32.3	38.6	0.6	0.3	0.9	0.5	0.0	0.9	2	1	2	77	77	77	64	64	64
2	Region 32	75.0	74.4	75.6	30.2	28.5	31.8	12.7	8.1	17.3	63.3	54.3	72.3	24.0	10.4	37.6	0.6	0.3	0.9	0.3	0.2	0.3	3	1	5	73	73	73	63	63	63
2	Region 34	77.6	76.3	78.8	29.6	28.1	31.1	4.7	0.5	8.8	49.2	45.1	53.3	46.2	37.9	54.4	0.6	0.5	0.8	0.4	0.4	0.5	4	1	6	73	73	73	63	63	63
1	Region 35	75.4	75.4	75.4	33.5	33.5	33.5	5.6	5.6	5.6	69.8	69.8	69.8	24.6	24.6	24.6	2.7	2.7	2.7	2.7	2.7	2.7	13	13	13	68	68	68	62	62	62
2	Region 36	74.6	74.3	74.9	32.8	32.4	33.2	4.2	3.8	4.5	71.5	67.8	75.2	24.4	20.3	28.4	2.8	2.1	3.4	2.1	1.6	2.6	4	1	7	61	60	62	60	60	60
27	**Ave. YM3**	**74.5**			**24.1**			**3.0**			**42.6**			**54.4**			**1.4**			**0.9**			**3**			**74**			**63**		
	Min. YM3		**70.5**			**16.3**			**0.0**			**9.9**			**10.4**			**0.1**			**0.0**			**0**			**55**			**59**	
	Max. YM3			**78.8**			**33.5**			**17.3**			**75.2**			**90.1**			**3.9**			**2.7**			**13**			**86**			**66**

TABLE 16: PHYSICAL QUALITY CHARACTERISTICS OF YELLOW MAIZE ACCORDING TO GRADE (2023/24) (continue)

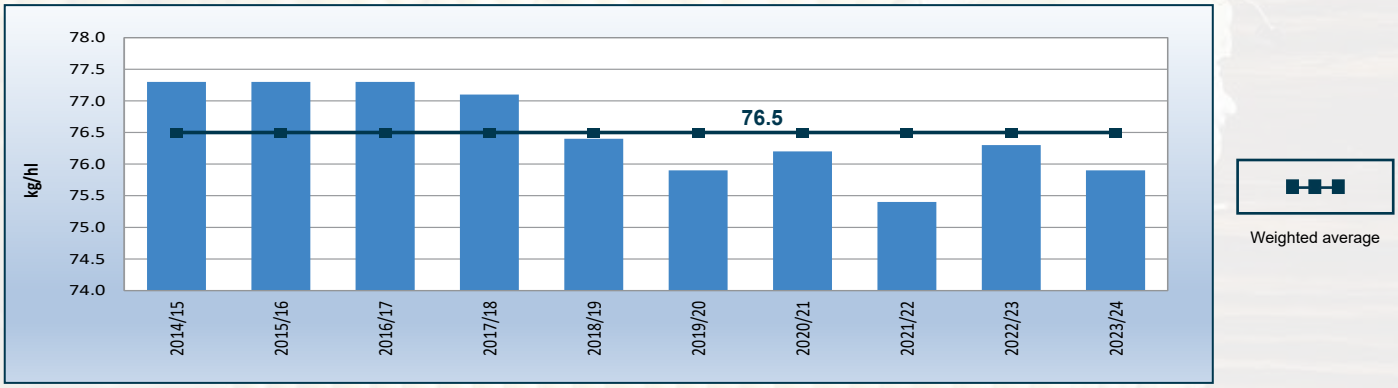
Number of samples	Region	Test weight (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)			SAGL Milling index 2024			GYA		
								Above 10 mm sieve			Above 8 mm sieve			Below 8 mm sieve			< 6.35 mm sieve			< 4.75 mm sieve											
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: COM																														
1	Region 08	68.1	-	-	18.8	-	-	0.6	-	-	54.7	-	-	44.7	-	-	3.1	-	-	0.5	-	-	1	-	-	69	-	-	62	-	-
1	Region 11	76.5	-	-	30.5	-	-	2.1	-	-	40.5	-	-	57.4	-	-	0.6	-	-	0.6	-	-	7	-	-	68	-	-	62	-	-
1	Region 14	72.9	-	-	16.5	-	-	0.0	-	-	6.0	-	-	94.0	-	-	0.7	-	-	0.7	-	-	7	-	-	77	-	-	64	-	-
1	Region 18	75.9	-	-	26.3	-	-	3.7	-	-	61.0	-	-	35.3	-	-	0.9	-	-	0.7	-	-	5	-	-	68	-	-	62	-	-
3	Region 19	73.1	70.7	74.9	23.8	21.5	27.4	3.8	0.8	7.9	57.5	44.0	76.7	38.8	15.4	53.4	1.5	0.7	3.0	0.8	0.7	0.9	4	1	7	84	81	89	66	65	67
3	Region 21	73.6	71.7	74.7	26.8	22.0	34.9	3.7	0.2	7.4	54.5	20.3	72.5	41.8	21.8	79.5	1.6	0.4	2.5	0.9	0.4	1.2	11	2	27	82	69	91	65	62	68
1	Region 24	71.7	-	-	24.6	-	-	3.0	-	-	66.3	-	-	30.7	-	-	1.4	-	-	1.4	-	-	5	-	-	79	-	-	64	-	-
2	Region 26	75.5	74.9	76.1	27.2	23.8	30.5	9.0	5.7	12.2	57.2	50.3	64.0	33.9	23.8	44.0	0.9	0.5	1.3	0.9	0.5	1.3	4	3	4	83	69	97	66	62	69
4	Region 28	72.4	68.5	75.2	27.8	24.1	30.7	7.1	1.9	14.4	66.9	65.0	70.1	25.9	20.6	29.3	1.9	1.0	2.5	0.9	0.4	1.3	12	6	16	83	78	90	66	64	67
3	Region 29	77.2	75.4	79.4	27.0	22.7	31.0	6.6	1.4	16.0	58.5	48.4	72.6	34.9	11.4	50.2	0.6	0.1	1.0	0.5	0.1	0.8	7	0	17	87	85	90	66	66	67
9	Region 30	74.1	67.2	77.1	30.6	25.6	39.6	6.7	1.2	15.9	61.7	45.1	80.4	31.6	3.7	52.1	1.7	0.8	3.5	1.2	0.1	2.0	6	2	15	72	64	87	63	61	66
11	Region 31	75.6	73.8	78.0	27.6	21.9	32.7	5.6	1.9	22.3	58.1	43.6	73.5	36.3	13.9	53.0	0.4	0.1	0.9	0.4	0.1	0.9	3	1	6	76	69	83	64	62	65
5	Region 32	76.2	73.5	79.0	29.0	25.4	33.3	8.6	0.0	24.4	57.8	42.1	65.6	33.6	10.0	57.9	0.9	0.4	1.6	0.6	0.1	1.1	4	2	7	77	74	83	64	63	65
2	Region 33	76.5	74.9	78.1	29.3	26.4	32.1	5.0	3.8	6.1	55.6	46.8	64.3	39.5	29.6	49.4	1.5	0.9	2.1	0.9	0.9	0.9	7	4	10	72	67	77	63	62	64
6	Region 34	72.3	68.7	77.1	26.8	22.2	29.6	5.9	1.1	19.1	58.4	43.1	71.3	35.7	9.6	53.8	1.5	0.0	4.6	1.3	0.0	4.6	3	0	12	73	57	78	63	59	64
3	Region 36	76.6	76.1	77.6	32.0	31.1	33.4	2.8	1.5	3.7	57.9	51.1	62.0	39.3	34.9	45.2	1.1	0.9	1.4	1.0	0.9	1.2	7	3	12	70	67	73	62	62	63
56	**Ave. COM**	**74.5**			**27.8**			**5.7**			**57.9**			**36.5**			**1.2**			**0.8**			**6**			**76**			**64**		
	Min. COM		**67.2**			**16.5**			**0.0**			**6.0**			**3.7**			**0.0**			**0.0**			**0**			**57**			**59**	
	Max. COM			**79.4**			**39.6**			**24.4**			**80.4**			**94.0**			**4.6**			**4.6**			**27**			**97**			**69**
482	**Ave. YM**	**75.7**			**28.7**			**5.8**			**57.0**			**37.2**			**1.1**			**0.8**			**5**			**76**			**64**		
	Min. YM		**66.8**			**16.3**			**0.0**			**6.0**			**3.7**			**0.0**			**0.0**			**0**			**45**			**56**	
	Max. YM			**81.4**			**40.5**			**36.1**			**80.4**			**94.0**			**5.2**			**4.6**			**42**			**101**			**70**
1000	**Ave. Maize**	**75.9**			**30.1**			**12.5**			**59.7**			**27.7**			**1.0**			**0.8**			**4**			**75**			**64**		
	Min. Maize		**66.8**			**15.1**			**0.0**			**0.6**			**1.6**			**0.0**			**0.0**			**0**			**42**			**56**	
	Max. Maize			**81.5**			**42.7**			**62.7**			**95.5**			**94.0**			**5.2**			**4.6**			**42**			**104**			**71**

TABLE 17: PHYSICAL QUALITY CHARACTERISTICS OF YELLOW MAIZE (2023/24)

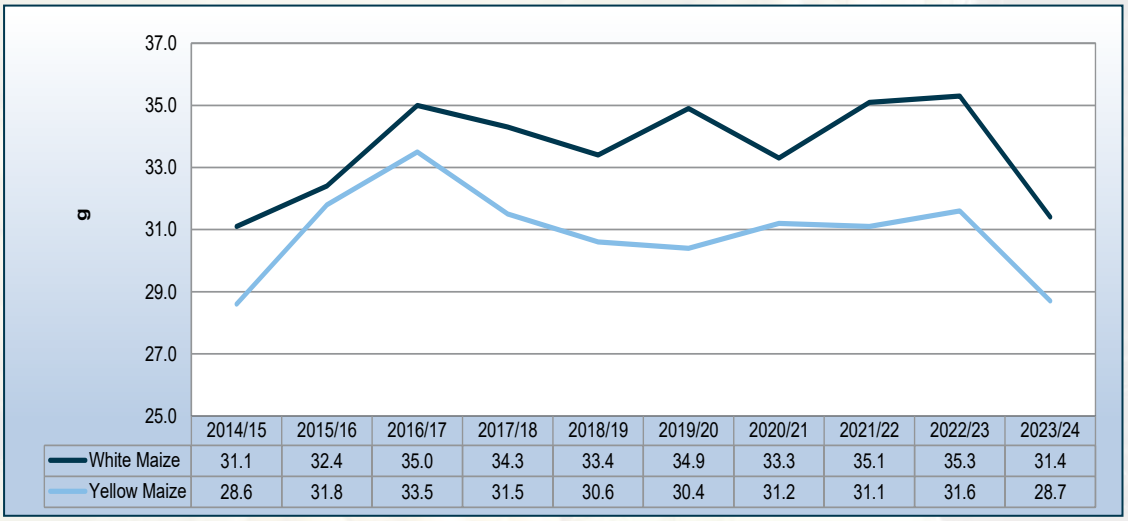
Number of samples	Region	Test weight (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)			SAGL Milling index 2024			GYA		
								Above 10 mm sieve			Above 8 mm sieve			Below 8 mm sieve			< 6.35 mm sieve			< 4.75 mm sieve											
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: YELLOW																															
5	Region 06	75.9	75.4	76.4	37.3	32.5	39.7	3.0	1.1	5.2	72.8	69.6	74.4	24.2	21.8	27.9	1.6	0.6	2.9	1.3	0.6	2.1	15	0	42	62	54	71	60	58	63
14	Region 08	74.0	66.9	79.5	23.6	17.6	34.3	3.1	0.0	22.3	48.0	9.9	71.8	48.9	6.6	90.1	1.1	0.1	3.1	0.5	0.1	1.1	2	0	3	79	55	100	65	59	70
16	Region 10	79.0	76.3	81.0	34.9	30.9	39.7	1.9	0.8	3.7	57.4	38.7	69.8	40.7	28.2	60.5	0.7	0.0	1.9	0.6	0.0	1.5	10	2	34	72	59	82	63	60	65
12	Region 11	78.1	75.9	79.6	32.4	27.4	37.8	1.4	0.0	3.7	53.9	40.5	70.9	44.7	25.9	57.4	1.1	0.3	2.1	0.8	0.3	1.7	7	2	14	71	63	78	63	61	64
2	Region 12	77.5	76.4	78.6	27.4	22.2	32.5	0.5	0.4	0.5	33.9	32.7	35.0	65.7	64.5	66.9	1.9	1.2	2.6	1.4	1.2	1.6	10	4	15	88	85	91	67	66	67
2	Region 13	75.7	74.9	76.4	25.2	25.0	25.4	4.4	2.8	6.0	56.9	51.1	62.6	38.8	31.4	46.1	1.6	0.5	2.6	0.6	0.5	0.8	3	2	3	83	79	88	66	64	67
8	Region 14	76.6	72.9	79.9	25.2	16.3	34.4	5.6	0.0	35.1	36.9	6.0	64.0	57.6	7.8	94.0	0.7	0.0	1.7	0.6	0.0	1.3	4	1	8	82	76	88	65	64	67
7	Region 15	77.9	75.8	79.3	36.3	34.4	40.5	2.9	0.5	5.9	64.7	56.4	69.5	32.4	26.8	39.9	1.0	0.4	2.0	0.9	0.3	1.4	4	2	7	79	60	85	64	60	66
6	Region 17	76.4	73.7	79.4	29.0	21.7	37.5	7.4	2.1	20.7	59.9	44.1	71.7	32.7	12.0	52.9	1.1	0.5	2.9	1.1	0.5	2.7	6	0	15	81	75	87	65	63	66
8	Region 18	74.1	71.4	77.1	26.4	19.9	30.0	2.5	0.1	4.5	52.4	30.8	71.6	45.2	24.9	69.1	1.8	0.9	3.0	1.4	0.7	2.2	5	0	13	71	56	78	63	59	64
14	Region 19	75.0	70.7	79.6	27.5	21.5	35.4	5.0	0.0	14.8	54.4	19.0	76.7	40.6	13.2	80.8	1.3	0.7	3.0	0.9	0.3	1.4	4	0	11	82	67	91	65	62	67
6	Region 20	76.0	73.9	79.6	28.4	25.1	33.8	4.2	1.2	8.3	59.7	54.2	64.5	36.1	31.4	42.2	1.0	0.4	1.8	0.8	0.2	1.8	3	0	8	74	68	84	63	62	66
6	Region 21	74.8	71.7	76.9	24.3	18.4	34.9	2.9	0.2	7.4	46.2	20.3	72.5	50.9	21.8	79.5	1.1	0.3	2.5	0.7	0.3	1.2	6	1	27	82	69	91	65	62	68
3	Region 22	74.4	71.9	77.3	29.1	26.3	33.8	4.4	1.6	9.0	58.2	50.3	65.8	37.4	25.2	48.1	1.2	0.7	1.8	1.0	0.7	1.4	6	3	11	71	64	79	63	61	64
14	Region 24	75.8	71.7	78.6	28.2	20.5	38.6	2.1	0.0	7.0	55.1	26.9	73.2	42.9	25.8	72.1	1.6	0.1	5.2	1.2	0.1	3.9	6	0	28	73	58	84	63	60	66
12	Region 25	73.3	70.5	75.3	25.5	20.0	28.3	3.7	1.0	9.8	54.2	31.6	73.1	42.1	17.1	65.7	1.6	0.5	3.2	1.1	0.4	2.3	3	0	9	72	61	81	63	60	65
15	Region 26	73.9	70.9	77.2	23.6	20.7	30.5	3.4	0.0	12.2	50.6	25.8	70.8	46.0	21.3	71.9	1.6	0.5	3.9	1.0	0.5	1.6	3	1	8	76	63	97	64	61	69
5	Region 27	76.0	74.9	76.7	25.6	23.2	30.0	6.6	1.4	18.7	53.5	40.8	69.1	40.0	12.2	56.6	1.1	0.8	1.5	0.8	0.6	1.1	3	1	6	80	69	87	65	62	67
44	Region 28	75.1	68.4	80.7	28.3	19.2	39.0	6.9	0.1	36.1	58.0	21.6	76.7	35.1	3.9	77.7	1.1	0.0	3.0	0.8	0.0	2.3	5	1	16	76	45	101	64	56	70
41	Region 29	76.0	70.6	81.2	27.4	19.7	39.0	6.8	0.0	26.4	55.3	18.4	79.9	37.9	4.5	81.6	1.1	0.1	2.6	0.8	0.1	1.6	4	0	17	82	69	91	65	62	67
43	Region 30	74.8	66.8	81.4	28.9	16.6	39.6	6.6	0.0	35.4	60.9	20.5	80.4	32.5	3.7	79.2	1.4	0.2	3.5	1.1	0.1	2.9	4	0	15	77	64	88	64	61	67
65	Region 31	75.9	70.5	78.9	28.3	20.4	37.7	6.1	0.0	22.3	59.8	34.9	76.3	34.1	9.2	65.1	0.6	0.0	2.7	0.5	0.0	1.7	3	0	12	77	69	92	64	62	68
49	Region 32	75.7	69.3	79.0	29.3	19.1	37.1	10.0	0.0	29.8	57.6	10.1	74.7	32.5	7.5	89.9	0.9	0.0	2.3	0.7	0.0	1.5	5	0	17	77	67	89	64	62	67
29	Region 33	76.3	69.0	78.2	31.3	26.4	36.9	9.9	1.2	24.2	61.2	40.5	70.7	28.9	6.2	57.6	1.2	0.1	2.7	0.9	0.1	2.0	5	0	10	73	45	85	63	56	66
26	Region 34	75.2	68.7	78.8	27.4	20.5	34.3	4.3	0.2	19.1	56.4	32.1	71.9	39.2	9.6	65.9	1.2	0.0	4.6	0.9	0.0	4.6	4	0	12	78	57	85	64	59	66
7	Region 35	75.9	74.5	77.6	32.4	27.0	38.4	6.6	1.2	15.7	63.7	54.4	73.4	29.6	14.9	41.9	1.7	0.2	4.5	1.5	0.2	3.8	6	2	13	75	57	88	63	59	67
23	Region 36	76.2	72.3	80.4	31.8	28.3	39.1	3.1	0.6	8.5	56.6	33.8	75.2	40.2	20.3	65.0	1.7	0.5	3.9	1.3	0.4	2.8	8	0	20	68	54	79	62	58	64
482	**Ave. Yellow**	**75.7**			**28.7**			**5.8**			**57.0**			**37.2**			**1.1**			**0.8**			**5**			**76**			**64**		
	Min. Yellow		**66.8**			**16.3**			**0.0**			**6.0**			**3.7**			**0.0**			**0.0**			**0**			**45**			**56**	
	Max. Yellow			**81.4**			**40.5**			**36.1**			**80.4**			**94.0**			**5.2**			**4.6**			**42**			**101**			**70**

TABLE 18: PHYSICAL QUALITY CHARACTERISTICS OF WHITE AND YELLOW MAIZE 2014/15 - 2023/24

Season	Number of samples	Test weight (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)		
								Above 10 mm sieve			Above 8 mm sieve			Below 8 mm sieve			< 6.35 mm sieve			< 4.75 mm sieve					
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
White Maize																									
2014/15	485	78.3	70.2	83.1	31.1	20.3	48.3	15.4	0.3	86.7	66.1	13.1	81.8	18.4	0.0	51.5	1.1	0.0	12.1	0.8	0.0	5.6	6	0	61
2015/16	415	78.1	68.5	83.9	32.4	20.8	40.8	15.2	0.3	99.4	66.7	0.1	89.5	18.2	0.0	63.8	0.9	0.0	7.2	0.4	0.0	4.3	5	0	30
2016/17	549	77.7	70.0	81.8	35.0	22.8	43.8	22.1	1.8	64.2	64.1	13.6	82.4	13.7	0.7	62.6	1.2	0.0	9.9	0.8	0.0	9.0	8	0	42
2017/18	451	77.0	63.4	81.7	34.3	18.3	45.8	26.2	1.5	58.7	62.8	39.8	83.7	11.0	1.5	32.1	1.0	0.0	3.8	0.7	0.0	2.7	11	1	30
2018/19	404	75.9	61.0	83.6	33.4	18.7	51.1	24.6	0.0	93.8	63.4	5.8	79.9	12.0	0.4	46.8	1.6	0.0	7.9	1.2	0.0	5.6	17	1	58
2019/20	516	75.6	63.4	82.0	34.9	19.3	44.7	27.8	1.0	63.7	62.0	34.8	83.8	10.2	1.2	49.4	1.1	0.0	6.3	0.8	0.0	4.1	16	2	58
2020/21	560	75.9	68.5	81.1	33.3	18.9	42.6	21.6	0.0	55.1	65.1	41.8	83.6	13.3	1.3	55.7	0.8	0.0	4.3	0.6	0.0	3.3	12	1	41
2021/22	524	75.5	66.1	81.0	35.1	14.6	45.9	28.2	0.0	68.6	61.8	29.2	81.6	10.0	0.2	41.2	1.2	0.0	20.2	0.9	0.0	9.2	11	0	50
2022/23	520	76.3	69.1	81.0	35.3	23.8	53.8	24.5	1.5	62.2	62.9	36.7	80.4	12.5	0.4	39.6	1.1	0.0	10.6	0.9	0.0	6.1	8	0	63
2023/24	518	76.2	66.9	81.5	31.4	15.1	42.7	18.8	0.0	62.7	62.3	0.6	95.5	18.9	1.6	79.9	0.9	0.0	4.7	0.7	0.0	3.6	4	0	35
Weighted Average		**76.6**			**33.7**			**22.5**			**63.7**			**13.8**			**1.1**			**0.8**			**10**		
Minimum			**61.0**			**14.6**			**0.0**			**0.1**			**0.0**			**0.0**			**0.0**			**0**	
Maximum				**83.9**			**53.8**			**99.4**			**95.5**			**79.9**			**20.2**			**9.2**			**63**
Yellow Maize																									
2014/15	515	76.3	67.3	83.1	28.6	17.8	38.2	8.8	0.0	30.2	63.4	9.2	78.9	27.8	4.2	90.4	1.3	0.1	6.8	0.9	0.0	4.8	5	0	56
2015/16	505	76.7	59.8	81.7	31.8	17.1	43.1	11.8	0.3	34.1	66.6	15.6	93.6	21.6	0.2	77.9	1.0	0.0	4.5	0.5	0.0	4.1	5	0	31
2016/17	451	76.9	67.6	82.4	33.5	18.4	43.3	11.4	0.0	71.9	65.6	13.0	90.9	23.0	1.6	69.7	1.1	0.1	8.6	0.8	0.0	5.3	8	0	50
2017/18	449	77.2	59.6	82.5	31.5	15.6	40.7	11.1	0.0	72.4	66.7	24.2	82.2	22.2	2.5	62.0	0.9	0.0	4.7	0.7	0.0	3.3	9	1	38
2018/19	404	76.9	69.0	83.3	30.6	19.5	41.4	8.3	0.0	33.2	66.4	24.2	85.2	25.3	4.7	74.5	1.0	0.0	6.5	0.7	0.0	3.9	13	2	39
2019/20	374	76.3	63.9	82.4	30.4	15.0	39.3	8.4	0.0	30.1	65.1	30.2	82.1	26.5	6.1	68.5	1.0	0.0	6.0	0.7	0.0	3.7	13	2	48
2020/21	440	76.5	70.7	82.6	31.2	19.9	43.8	7.4	0.0	32.5	65.9	5.6	81.8	26.7	6.1	88.1	0.8	0.0	3.5	0.6	0.0	2.5	12	1	49
2021/22	476	75.4	61.5	80.8	31.1	19.0	42.1	9.4	0.0	54.0	65.7	14.1	82.1	24.9	2.9	85.9	1.1	0.0	4.4	0.9	0.0	3.4	11	0	46
2022/23	480	76.4	69.1	82.2	31.6	22.2	39.6	7.0	0.0	37.0	62.1	17.4	81.1	30.9	2.8	82.2	1.4	0.0	69.0	1.0	0.0	67.3	8	0	57
2023/24	482	75.7	66.8	81.4	28.7	16.3	40.5	5.8	0.0	36.1	57.0	6.0	80.4	37.2	3.7	94.0	1.1	0.0	5.2	0.8	0.0	4.6	5	0	42
Weighted Average		**76.4**			**30.9**			**9.0**			**64.4**			**26.7**			**1.1**			**0.8**			**8**		
Minimum			**59.6**			**15.0**			**0.0**			**5.6**			**0.2**			**0.0**			**0.0**			**0**	
Maximum				**83.3**			**43.8**			**72.4**			**93.6**			**94.0**			**69.0**			**67.3**			**57**
White & Yellow Maize																									
2014/15	1000	77.3	67.3	83.1	29.8	17.8	48.3	12.0	0.0	86.7	64.7	9.2	81.8	23.2	0.0	90.4	1.2	0.0	12.1	0.8	0.0	5.6	6	0	61
2015/16	920	77.3	59.8	83.9	32.1	17.1	43.1	13.3	0.3	99.4	66.7	0.1	93.6	20.0	0.0	77.9	1.0	0.0	7.2	0.5	0.0	4.3	5	0	31
2016/17	1000	77.3	67.6	82.4	34.3	18.4	43.8	17.3	0.0	71.9	64.8	13.0	90.9	17.9	0.7	69.7	1.2	0.0	9.9	0.8	0.0	9.0	11	0	40
2017/18	900	77.1	59.6	82.5	32.9	15.6	45.8	18.7	0.0	72.4	64.7	24.2	83.7	16.6	1.5	62.0	1.0	0.0	4.7	0.7	0.0	3.3	10	1	38
2018/19	808	76.4	61.0	83.6	32.0	18.7	51.1	16.4	0.0	93.8	64.9	5.8	85.2	18.7	0.4	74.5	1.3	0.0	7.9	0.9	0.0	5.6	15	1	58
2019/20	890	75.9	63.4	82.4	33.0	15.0	44.7	19.7	0.0	63.7	63.3	30.2	83.8	17.1	1.2	68.5	1.1	0.0	6.3	0.8	0.0	4.1	15	2	58
2020/21	1000	76.2	68.5	82.6	32.4	18.9	43.8	15.4	0.0	55.1	65.5	5.6	83.6	19.2	1.3	88.1	0.8	0.0	4.3	0.6	0.0	3.3	12	1	49
2021/22	1000	75.4	61.5	81.0	33.2	14.6	45.9	19.3	0.0	68.6	63.7	14.1	82.1	17.1	0.2	85.9	1.2	0.0	20.2	0.9	0.0	9.2	11	0	50
2022/23	1000	76.3	69.1	82.2	33.5	22.2	53.8	16.1	0.0	62.2	62.6	17.4	81.1	21.3	0.4	82.2	1.2	0.0	69.0	1.0	0.0	67.3	8	0	63
2023/24	1000	75.9	66.8	81.5	30.1	15.1	42.7	12.5	0.0	62.7	59.7	0.6	95.5	27.7	1.6	94.0	1.0	0.0	5.2	0.8	0.0	4.6	4	0	42
Weighted Average		**76.5**			**32.3**			**16.0**			**64.0**			**20.0**			**1.1**			**0.8**			**10**		
Minimum			**59.6**			**14.6**			**0.0**			**0.1**			**0.0**			**0.0**			**0.0**			**0**	
Maximum				**83.9**			**53.8**			**99.4**			**95.5**			**94.0**			**69.0**			**67.3**			**63**

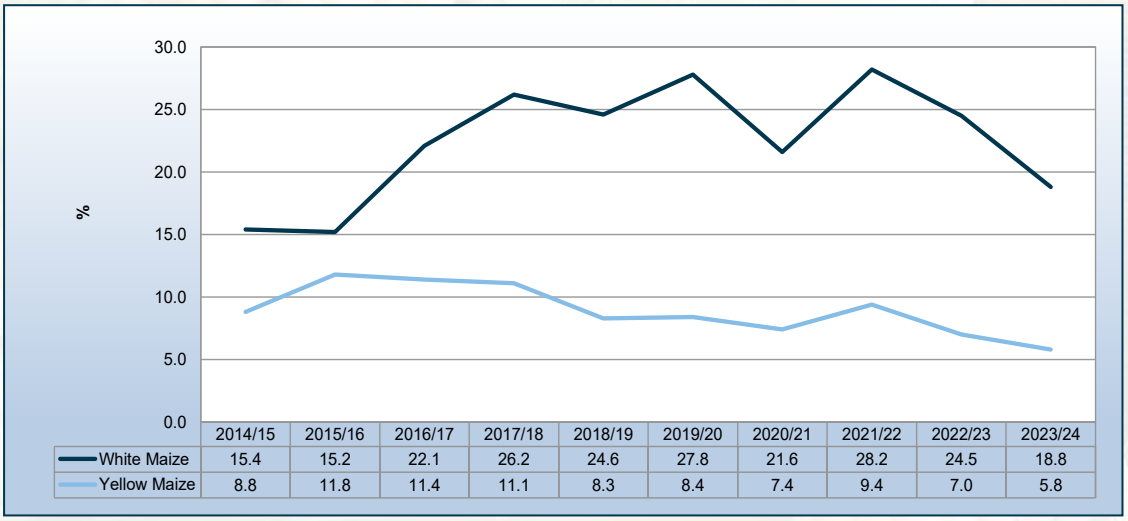


Graph 39: Test weight of white and yellow maize over 10 seasons



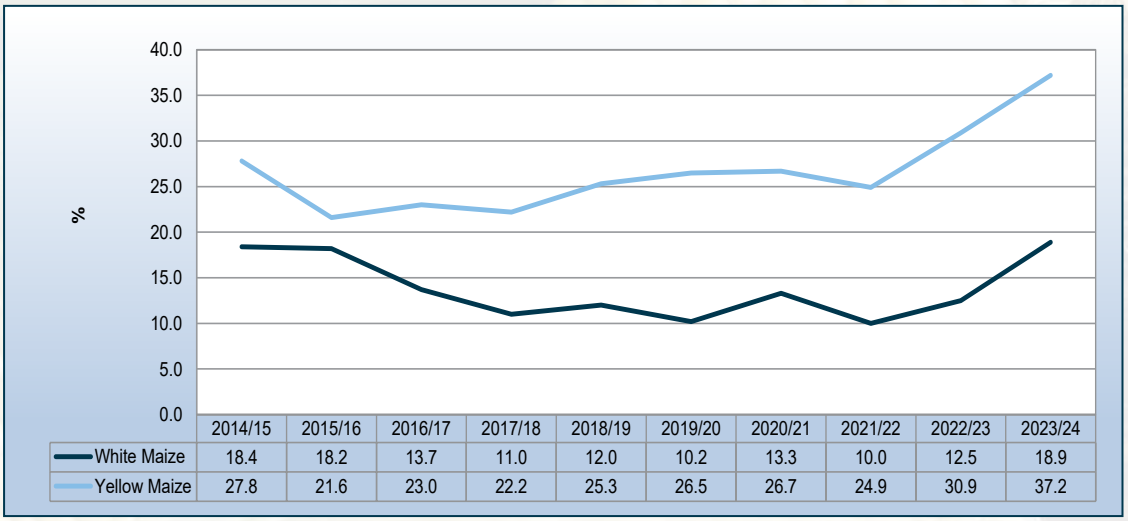
	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
White Maize	31.1	32.4	35.0	34.3	33.4	34.9	33.3	35.1	35.3	31.4
Yellow Maize	28.6	31.8	33.5	31.5	30.6	30.4	31.2	31.1	31.6	28.7

Graph 40: 100 Kernel mass over 10 seasons



	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
White Maize	15.4	15.2	22.1	26.2	24.6	27.8	21.6	28.2	24.5	18.8
Yellow Maize	8.8	11.8	11.4	11.1	8.3	8.4	7.4	9.4	7.0	5.8

Graph 41: Kernel size above 10 mm sieve over 10 seasons



	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
White Maize	18.4	18.2	13.7	11.0	12.0	10.2	13.3	10.0	12.5	18.9
Yellow Maize	27.8	21.6	23.0	22.2	25.3	26.5	26.7	24.9	30.9	37.2

Graph 42: Kernel size below 8 mm sieve over 10 seasons

TABLE 19: ROFF MILLING AND WHITENESS INDEX OF WHITE MAIZE ACCORDING TO GRADE (2023/24)

Number of samples	Region	Roff Milling																		Whiteness index					
		Break 1, %			Break 2, %			Break 3, %			Grits, %			Chop, %			Extraction, % (Total meal)			Whiteness index unsifted			Whiteness index sifted 87:13		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: WM1																									
7	Region 12	12.1	10.1	13.8	7.0	5.9	8.0	9.5	7.6	11.7	48.0	45.2	53.3	23.3	22.4	25.4	76.7	74.6	77.6	37.1	32.7	41.8	34.3	30.5	38.6
5	Region 13	13.1	9.9	16.5	7.4	6.5	8.2	10.0	8.8	11.5	43.9	35.7	51.0	25.7	23.6	31.4	74.3	68.6	76.4	40.2	37.1	45.3	39.0	35.5	45.8
9	Region 14	13.4	10.5	15.0	7.4	6.3	8.6	9.0	6.0	12.1	46.1	42.6	52.8	24.0	22.6	27.1	76.0	72.9	77.4	42.6	36.7	45.5	40.8	36.5	44.0
1	Region 15	13.9	-	-	8.0	-	-	9.8	-	-	45.2	-	-	23.1	-	-	76.9	-	-	40.8	-	-	35.9	-	-
1	Region 16	11.3	-	-	6.9	-	-	11.1	-	-	45.8	-	-	24.9	-	-	75.1	-	-	37.5	-	-	32.7	-	-
10	Region 17	13.8	10.8	16.0	7.7	6.8	8.1	11.2	8.4	12.2	43.3	39.9	47.2	24.0	21.8	26.9	76.0	73.1	78.2	40.8	33.3	45.6	38.2	31.3	44.7
6	Region 18	13.8	11.3	15.2	8.3	6.9	9.5	9.6	8.9	10.3	45.0	40.4	48.3	23.4	21.0	25.9	76.6	74.1	79.0	41.8	40.2	43.5	41.2	40.1	42.1
4	Region 19	11.3	7.8	13.9	6.3	5.5	7.5	7.9	7.1	8.5	50.0	45.7	54.7	24.5	24.0	25.2	75.5	74.8	76.0	38.3	33.0	41.9	36.1	31.3	38.9
14	Region 20	13.8	12.8	14.4	7.1	6.3	7.8	8.8	6.5	10.7	45.2	43.0	47.0	25.1	23.7	27.2	74.9	72.8	76.3	44.0	41.0	47.1	42.0	37.7	47.3
2	Region 22	15.6	15.1	16.0	8.1	7.8	8.4	8.4	7.1	9.6	42.9	42.7	43.1	25.1	22.9	27.3	74.9	72.7	77.1	44.5	42.7	46.3	43.3	40.5	46.2
7	Region 23	15.6	15.1	16.1	7.5	7.3	7.7	11.3	10.7	12.0	44.1	42.7	44.8	21.6	21.1	22.2	78.4	77.8	78.9	38.9	38.2	39.5	36.3	34.4	37.5
10	Region 24	14.6	13.5	15.8	7.1	6.2	7.9	10.1	9.0	10.7	44.1	42.8	47.2	24.1	21.4	26.5	75.9	73.5	78.6	40.7	36.6	44.3	38.5	34.6	41.4
1	Region 25	15.3	-	-	7.5	-	-	11.4	-	-	43.6	-	-	22.3	-	-	77.7	-	-	38.7	-	-	37.5	-	-
7	Region 26	14.7	11.3	17.3	7.8	7.0	8.7	12.1	11.2	13.4	41.0	36.2	46.1	24.5	23.1	25.8	75.5	74.2	76.9	39.9	36.2	45.2	37.4	32.0	42.6
4	Region 28	13.8	13.1	15.0	7.3	6.9	7.7	12.6	12.0	13.4	44.3	42.1	45.7	22.0	21.0	23.0	78.0	77.0	79.0	39.6	36.8	41.3	38.4	35.8	40.5
13	Region 29	14.4	11.7	16.6	7.8	7.1	8.5	10.1	9.2	11.2	42.9	38.4	47.4	24.8	22.9	26.6	75.2	73.4	77.1	41.8	37.8	45.0	40.1	37.2	43.6
20	Region 30	14.2	12.7	17.4	7.7	7.1	8.6	10.1	7.7	12.7	43.6	39.4	47.8	24.4	19.5	27.0	75.6	73.0	80.5	39.3	34.2	44.1	37.1	30.4	43.9
1	Region 31	14.1	-	-	7.5	-	-	10.1	-	-	41.2	-	-	27.1	-	-	72.9	-	-	42.8	-	-	41.9	-	-
1	Region 32	16.5	-	-	7.9	-	-	11.8	-	-	39.3	-	-	24.6	-	-	75.4	-	-	37.2	-	-	35.7	-	-
38	Region 33	14.0	11.5	17.0	7.6	6.5	8.8	8.9	7.2	12.2	44.9	40.3	48.0	24.6	21.8	26.8	75.4	73.2	78.2	40.6	35.0	45.3	38.6	29.5	43.6
17	Region 34	14.6	10.5	19.4	7.7	6.8	8.6	10.0	8.0	11.7	43.2	37.9	47.2	24.6	22.3	26.8	75.4	73.2	77.7	41.3	38.0	46.8	38.9	33.4	46.8
5	Region 35	15.1	12.0	18.4	7.8	7.0	8.9	9.1	7.2	11.3	43.7	38.8	49.3	24.4	23.6	25.4	75.6	74.6	76.4	36.3	31.4	40.1	34.5	31.0	37.5
13	Region 36	13.9	10.9	15.7	7.1	6.5	7.9	9.8	8.4	11.0	44.9	40.5	48.1	24.3	22.8	26.1	75.7	73.9	77.2	38.6	34.6	41.4	37.1	32.8	40.5
196	**Ave. WM1**	**14.1**			**7.5**			**9.8**			**44.4**			**24.3**			**75.7**			**40.5**			**38.4**		
	Min. WM1		**7.8**			**5.5**			**6.0**			**35.7**			**19.5**			**68.6**			**31.4**			**29.5**	
	Max. WM1			**19.4**			**9.5**			**13.4**			**54.7**			**31.4**			**80.5**			**47.1**			**47.3**

TABLE 19: ROFF MILLING AND WHITENESS INDEX OF WHITE MAIZE ACCORDING TO GRADE (2023/24) (continue)

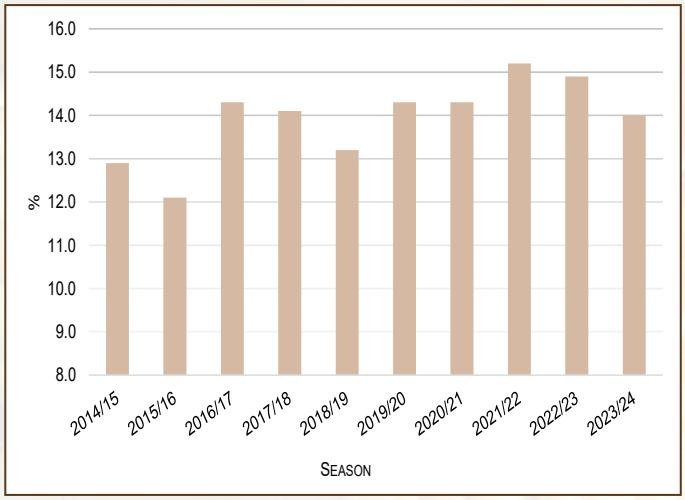
Number of samples	Region	Roff Milling																		Whiteness index					
		Break 1, %			Break 2, %			Break 3, %			Grits, %			Chop, %			Extraction, % (Total meal)			Whiteness index unsifted			Whiteness index sifted 87:13		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: WM2																									
4	Region 12	13.4	11.3	16.1	7.7	7.4	8.0	9.5	8.2	11.4	45.8	42.2	48.7	23.5	22.0	25.7	76.5	74.3	78.0	39.3	34.3	44.9	36.4	30.8	44.5
3	Region 13	12.5	8.4	14.8	6.6	5.2	7.5	9.5	7.5	11.8	40.7	33.9	49.4	30.7	26.0	38.6	69.3	61.4	74.0	41.0	38.0	42.8	39.5	36.3	41.4
1	Region 14	13.6	-	-	8.2	-	-	9.2	-	-	44.2	-	-	24.7	-	-	75.3	-	-	44.5	-	-	41.1	-	-
1	Region 17	9.6	-	-	6.9	-	-	7.8	-	-	50.7	-	-	25.0	-	-	75.0	-	-	34.5	-	-	31.3	-	-
1	Region 18	16.8	-	-	7.4	-	-	9.3	-	-	39.9	-	-	26.6	-	-	73.4	-	-	41.8	-	-	41.0	-	-
2	Region 19	8.1	8.0	8.2	6.4	6.4	6.5	7.6	7.5	7.7	55.2	54.6	55.8	22.6	21.8	23.5	77.4	76.5	78.2	30.9	30.0	31.8	28.8	27.8	29.9
1	Region 21	13.4	-	-	7.2	-	-	11.6	-	-	43.0	-	-	24.9	-	-	75.1	-	-	41.7	-	-	40.1	-	-
1	Region 24	10.0	-	-	6.0	-	-	9.8	-	-	50.6	-	-	23.6	-	-	76.4	-	-	35.7	-	-	34.9	-	-
4	Region 29	16.2	15.2	17.4	8.2	8.0	8.5	9.4	8.2	11.8	41.9	37.5	45.2	24.2	22.7	26.6	75.8	73.4	77.3	44.0	42.2	47.1	42.5	40.9	45.0
3	Region 30	14.4	12.3	16.6	7.7	7.5	8.0	10.6	9.5	11.3	41.9	38.7	45.6	25.4	24.9	25.8	74.6	74.2	75.1	39.3	37.7	42.5	38.0	34.0	42.7
1	Region 31	11.3	-	-	7.1	-	-	9.7	-	-	46.6	-	-	25.3	-	-	74.7	-	-	37.0	-	-	35.0	-	-
2	Region 32	13.5	13.2	13.9	7.7	7.4	8.0	11.9	11.7	12.1	41.5	41.3	41.8	25.4	25.0	25.8	74.6	74.2	75.0	38.8	36.9	40.8	35.8	34.3	37.2
1	Region 34	13.9	-	-	7.6	-	-	9.6	-	-	44.5	-	-	24.4	-	-	75.6	-	-	42.5	-	-	39.5	-	-
25	**Ave. WM2**	**13.2**			**7.4**			**9.7**			**44.5**			**25.2**			**74.8**			**39.7**			**37.6**		
	Min. WM2		**8.0**			**5.2**			**7.5**			**33.9**			**21.8**			**61.4**			**30.0**			**27.8**	
	Max. WM2			**17.4**			**8.5**			**12.1**			**55.8**			**38.6**			**78.2**			**47.1**			**45.0**
GRADE: WM3																									
2	Region 12	11.0	9.8	12.2	8.3	7.7	9.0	11.3	11.1	11.4	46.2	45.2	47.2	23.2	22.9	23.5	76.8	76.5	77.1	36.8	35.4	38.1	35.5	32.0	39.0
1	Region 14	15.0	-	-	7.5	-	-	10.2	-	-	44.2	-	-	23.1	-	-	76.9	-	-	41.2	-	-	41.3	-	-
1	Region 20	14.6	-	-	7.6	-	-	8.1	-	-	41.6	-	-	28.1	-	-	71.9	-	-	37.1	-	-	36.1	-	-
2	Region 22	17.1	16.3	18.0	7.9	7.2	8.6	9.1	8.8	9.3	40.8	39.7	42.0	25.1	24.0	26.1	74.9	73.9	76.0	45.2	42.9	47.5	42.4	39.8	44.9
2	Region 30	14.5	13.7	15.2	7.4	7.1	7.7	9.1	7.1	11.1	43.1	43.0	43.2	25.9	24.9	27.0	74.1	73.0	75.1	41.6	39.2	43.9	39.9	36.2	43.5
1	Region 36	13.4	-	-	7.0	-	-	11.0	-	-	45.2	-	-	23.4	-	-	76.6	-	-	36.0	-	-	34.2	-	-
9	**Ave. WM3**	**14.2**			**7.7**			**9.8**			**43.5**			**24.8**			**75.2**			**40.2**			**38.6**		
	Min. WM3		**9.8**			**7.0**			**7.1**			**39.7**			**22.9**			**71.9**			**35.4**			**32.0**	
	Max. WM3			**18.0**			**9.0**			**11.4**			**47.2**			**28.1**			**77.1**			**47.5**			**44.9**

TABLE 19: ROFF MILLING AND WHITENESS INDEX OF WHITE MAIZE ACCORDING TO GRADE (2023/24) (continue)

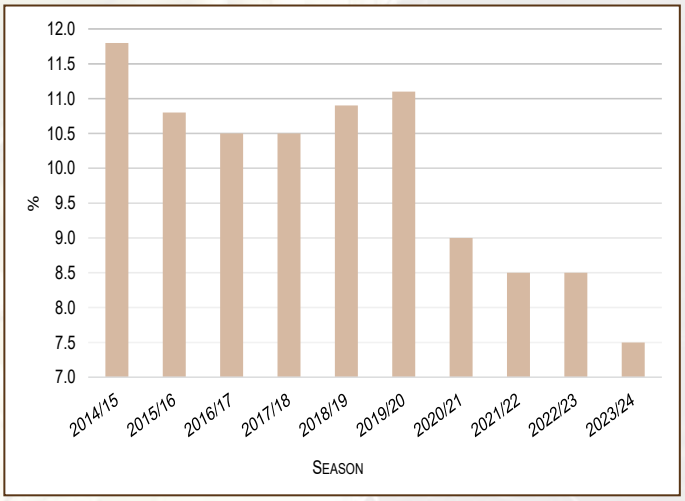
Number of samples	Region	Roff Milling																		Whiteness index					
		Break 1, %			Break 2, %			Break 3, %			Grits, %			Chop, %			Extraction, % (Total meal)			Whiteness index unsifted			Whiteness index sifted 87:13		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: COM																									
3	Region 12	13.7	12.0	16.1	7.3	6.8	7.7	8.9	8.0	9.5	44.7	43.1	46.4	25.4	24.5	26.2	74.6	73.8	75.5	41.6	41.1	42.3	40.6	40.2	40.9
4	Region 14	11.8	10.5	14.3	7.4	7.0	8.5	10.2	8.5	12.0	45.8	42.7	49.5	24.8	22.7	27.8	75.2	72.2	77.3	41.6	38.2	44.2	39.6	36.7	43.3
2	Region 17	13.6	10.8	16.4	8.1	7.4	8.8	10.3	8.6	12.1	44.9	42.3	47.5	23.0	22.2	23.8	77.0	76.2	77.8	41.2	41.1	41.3	38.6	38.4	38.9
2	Region 18	14.9	13.2	16.6	7.1	6.8	7.3	9.7	9.2	10.2	41.3	39.9	42.8	27.0	26.1	28.0	73.0	72.0	73.9	39.6	34.9	44.4	39.4	34.7	44.0
2	Region 20	14.0	13.9	14.1	7.9	6.4	9.4	9.1	8.4	9.9	45.3	43.9	46.7	23.7	22.9	24.5	76.3	75.5	77.1	36.0	28.5	43.5	35.1	28.3	41.8
1	Region 21	13.7	-	-	7.2	-	-	11.1	-	-	43.4	-	-	24.6	-	-	75.4	-	-	41.3	-	-	41.0	-	-
2	Region 22	15.7	15.4	15.9	7.9	7.7	8.2	8.0	7.4	8.5	42.2	41.5	42.9	26.2	26.0	26.4	73.8	73.6	74.0	45.3	44.9	45.8	43.3	41.2	45.4
3	Region 24	13.9	11.3	15.4	6.6	6.3	7.1	8.7	7.7	9.8	45.6	42.4	49.6	25.3	23.7	28.1	74.7	71.9	76.3	40.7	38.3	42.8	39.1	35.6	41.5
1	Region 29	15.4	-	-	7.9	-	-	8.9	-	-	45.0	-	-	22.7	-	-	77.3	-	-	42.7	-	-	39.4	-	-
5	Region 30	14.5	12.4	17.8	7.6	7.3	7.9	9.9	9.5	10.5	42.4	37.9	45.2	25.6	24.6	26.6	74.4	73.4	75.4	37.6	25.6	41.3	35.3	20.7	39.2
3	Region 33	13.9	11.7	15.9	7.7	7.1	8.2	9.3	8.5	10.4	44.2	41.3	47.0	24.9	23.2	25.8	75.1	74.2	76.8	40.5	38.6	42.9	38.8	34.1	42.0
1	Region 34	11.1	-	-	7.5	-	-	10.4	-	-	47.9	-	-	23.1	-	-	76.9	-	-	38.1	-	-	34.6	-	-
1	Region 36	13.3	-	-	7.1	-	-	8.8	-	-	47.7	-	-	23.1	-	-	76.9	-	-	37.4	-	-	35.6	-	-
30	**Ave. COM**	**13.8**			**7.5**			**9.5**			**44.3**			**24.9**			**75.1**			**40.2**			**38.4**		
	Min.COM		**10.5**			**6.3**			**7.4**			**37.9**			**22.2**			**71.9**			**25.6**			**20.7**	
	Max. COM			**17.8**			**9.4**			**12.1**			**49.6**			**28.1**			**77.8**			**45.8**			**45.4**
260	**Ave. WM**	**14.0**			**7.5**			**9.8**			**44.3**			**24.5**			**75.5**			**40.4**			**38.4**		
	Min. WM		**7.8**			**5.2**			**6.0**			**33.9**			**19.5**			**61.4**			**25.6**			**20.7**	
	Max. WM			**19.4**			**9.5**			**13.4**			**55.8**			**38.6**			**80.5**			**47.5**			**47.3**

TABLE 20: ROFF MILLING AND WHITENESS INDEX OF WHITE MAIZE ACCORDING TO GRADE (2023/24)

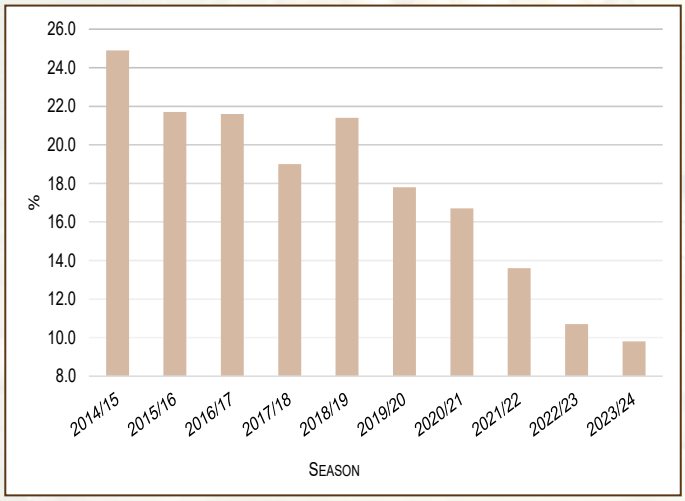
Number of samples	Region	Roff Milling																		Whiteness index					
		Break 1, %			Break 2, %			Break 3, %			Grits, %			Chop, %			Extraction, % (Total meal)			Whiteness index unsifted			Whiteness index sifted 87:13		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
WHITE																									
16	Region 12	12.6	9.8	16.1	7.4	5.9	9.0	9.6	7.6	11.7	46.6	42.2	53.3	23.7	22.0	26.2	76.3	73.8	78.0	38.4	32.7	44.9	36.1	30.5	44.5
8	Region 13	12.9	8.4	16.5	7.1	5.2	8.2	9.8	7.5	11.8	42.7	33.9	51.0	27.6	23.6	38.6	72.4	61.4	76.4	40.5	37.1	45.3	39.2	35.5	45.8
15	Region 14	13.1	10.5	15.0	7.5	6.3	8.6	9.4	6.0	12.1	45.8	42.6	52.8	24.2	22.6	27.8	75.8	72.2	77.4	42.3	36.7	45.5	40.5	36.5	44.0
1	Region 15	13.9	-	-	8.0	-	-	9.8	-	-	45.2	-	-	23.1	-	-	76.9	-	-	40.8	-	-	35.9	-	-
1	Region 16	11.3	-	-	6.9	-	-	11.1	-	-	45.8	-	-	24.9	-	-	75.1	-	-	37.5	-	-	32.7	-	-
13	Region 17	13.5	9.6	16.4	7.7	6.8	8.8	10.8	7.8	12.2	44.1	39.9	50.7	23.9	21.8	26.9	76.1	73.1	78.2	40.4	33.3	45.6	37.7	31.3	44.7
9	Region 18	14.4	11.3	16.8	7.9	6.8	9.5	9.6	8.9	10.3	43.6	39.9	48.3	24.6	21.0	28.0	75.4	72.0	79.0	41.3	34.9	44.4	40.8	34.7	44.0
6	Region 19	10.3	7.8	13.9	6.3	5.5	7.5	7.8	7.1	8.5	51.8	45.7	55.8	23.9	21.8	25.2	76.1	74.8	78.2	35.8	30.0	41.9	33.7	27.8	38.9
17	Region 20	13.9	12.8	14.6	7.2	6.3	9.4	8.8	6.5	10.7	45.0	41.6	47.0	25.1	22.9	28.1	74.9	71.9	77.1	42.7	28.5	47.1	40.8	28.3	47.3
2	Region 21	13.5	13.4	13.7	7.2	7.2	7.2	11.4	11.1	11.6	43.2	43.0	43.4	24.7	24.6	24.9	75.3	75.1	75.4	41.5	41.3	41.7	40.5	40.1	41.0
6	Region 22	16.1	15.1	18.0	8.0	7.2	8.6	8.5	7.1	9.6	42.0	39.7	43.1	25.5	22.9	27.3	74.5	72.7	77.1	45.0	42.7	47.5	43.0	39.8	46.2
7	Region 23	15.6	15.1	16.1	7.5	7.3	7.7	11.3	10.7	12.0	44.1	42.7	44.8	21.6	21.1	22.2	78.4	77.8	78.9	38.9	38.2	39.5	36.3	34.4	37.5
14	Region 24	14.1	10.0	15.8	6.9	6.0	7.9	9.8	7.7	10.7	44.9	42.4	50.6	24.3	21.4	28.1	75.7	71.9	78.6	40.4	35.7	44.3	38.4	34.6	41.5
1	Region 25	15.3	-	-	7.5	-	-	11.4	-	-	43.6	-	-	22.3	-	-	77.7	-	-	38.7	-	-	37.5	-	-
7	Region 26	14.7	11.3	17.3	7.8	7.0	8.7	12.1	11.2	13.4	41.0	36.2	46.1	24.5	23.1	25.8	75.5	74.2	76.9	39.9	36.2	45.2	37.4	32.0	42.6
4	Region 28	13.8	13.1	15.0	7.3	6.9	7.7	12.6	12.0	13.4	44.3	42.1	45.7	22.0	21.0	23.0	78.0	77.0	79.0	39.6	36.8	41.3	38.4	35.8	40.5
18	Region 29	14.8	11.7	17.4	7.9	7.1	8.5	9.9	8.2	11.8	42.8	37.5	47.4	24.6	22.7	26.6	75.4	73.4	77.3	42.4	37.8	47.1	40.6	37.2	45.0
30	Region 30	14.3	12.3	17.8	7.6	7.1	8.6	10.0	7.1	12.7	43.2	37.9	47.8	24.8	19.5	27.0	75.2	73.0	80.5	39.1	25.6	44.1	37.0	20.7	43.9
2	Region 31	12.7	11.3	14.1	7.3	7.1	7.5	9.9	9.7	10.1	43.9	41.2	46.6	26.2	25.3	27.1	73.8	72.9	74.7	39.9	37.0	42.8	38.4	35.0	41.9
3	Region 32	14.5	13.2	16.5	7.7	7.4	8.0	11.8	11.7	12.1	40.8	39.3	41.8	25.1	24.6	25.8	74.9	74.2	75.4	38.3	36.9	40.8	35.7	34.3	37.2
41	Region 33	14.0	11.5	17.0	7.6	6.5	8.8	8.9	7.2	12.2	44.8	40.3	48.0	24.6	21.8	26.8	75.4	73.2	78.2	40.6	35.0	45.3	38.6	29.5	43.6
19	Region 34	14.4	10.5	19.4	7.7	6.8	8.6	10.0	8.0	11.7	43.5	37.9	47.9	24.5	22.3	26.8	75.5	73.2	77.7	41.2	38.0	46.8	38.7	33.4	46.8
5	Region 35	15.1	12.0	18.4	7.8	7.0	8.9	9.1	7.2	11.3	43.7	38.8	49.3	24.4	23.6	25.4	75.6	74.6	76.4	36.3	31.4	40.1	34.5	31.0	37.5
15	Region 36	13.8	10.9	15.7	7.1	6.5	7.9	9.8	8.4	11.0	45.1	40.5	48.1	24.1	22.8	26.1	75.9	73.9	77.2	38.3	34.6	41.4	36.8	32.8	40.5
260	**Ave. White**	**14.0**			**7.5**			**9.8**			**44.3**			**24.5**			**75.5**			**40.4**			**38.4**		
	Min. White		**7.8**			**5.2**			**6.0**			**33.9**			**19.5**			**61.4**			**25.6**			**20.7**	
	Max. White			**19.4**			**9.5**			**13.4**			**55.8**			**38.6**			**80.5**			**47.5**			**47.3**



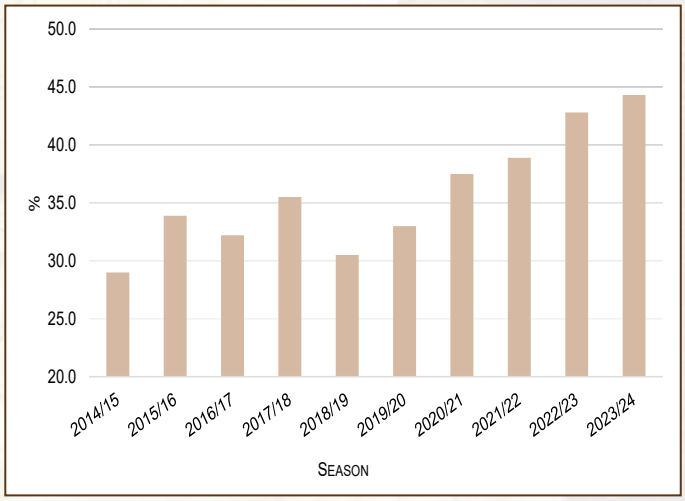
Graph 43: Average Roff Mill Break 1 meal fraction % since 2014/15



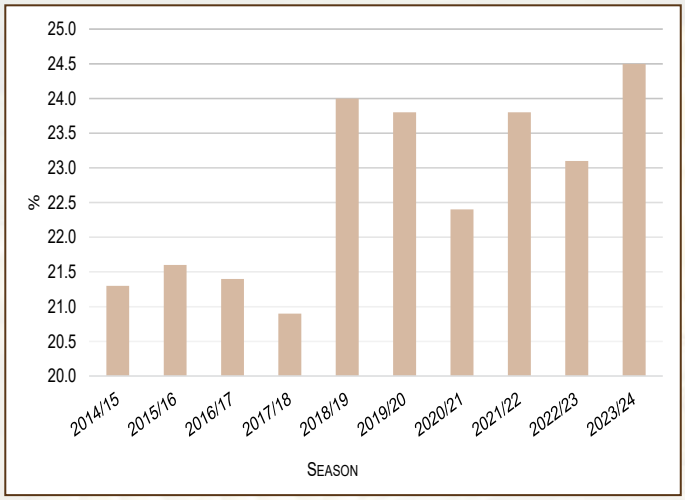
Graph 44: Average Roff Mill Break 2 meal fraction % since 2014/15



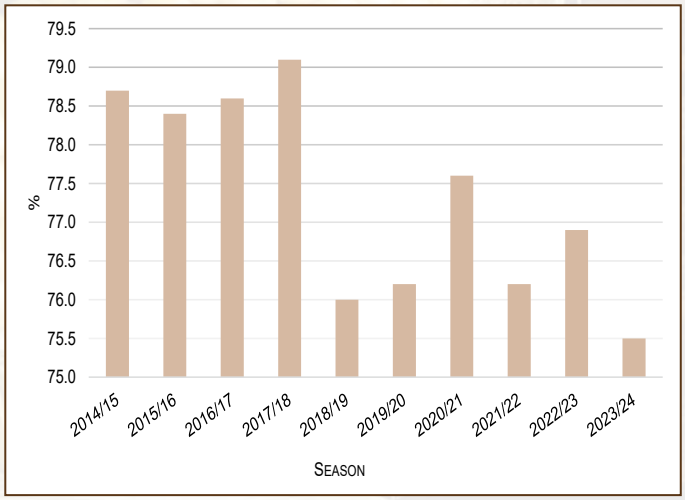
Graph 45: Average Roff Mill Break 3 meal fraction % since 2014/15



Graph 46: Average Roff Mill Grits fraction % since 2014/15



Graph 47: Average Roff Mill Chop fraction % since 2014/15



Graph 48: Average Roff Mill Total meal extraction % since 2014/15

Figures provided by the CEC.

TABLE 21: BÜHLER MCKA MILLING AND WHITENESS INDEX

Number of samples	Region	MCKA																					
		DEGERMER OVERS, %			DEGERMER THRUS, %			B1,%			B2,%			B3,%			C1,%			C2,%			C3,%		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: WM1																									
7	Region 12	13.8	7.6	17.0	88.8	83.1	97.6	13.2	11.8	14.7	8.5	7.1	9.3	2.3	2.1	2.6	43.7	39.8	51.2	1.2	0.7	1.7	0.5	0.3	0.6
5	Region 13	17.4	10.4	25.6	85.2	79.4	89.8	13.1	11.5	14.4	8.5	7.5	9.9	2.5	1.9	3.2	41.6	36.1	44.1	1.0	0.6	1.2	0.4	0.3	0.5
13	Region 14	16.5	13.6	20.7	86.6	81.5	90.9	13.3	11.9	14.4	8.7	8.1	9.2	2.0	1.8	2.3	41.1	39.2	43.8	1.1	0.6	2.0	0.4	0.2	0.8
10	Region 15	18.3	16.0	19.8	84.9	81.7	88.2	14.9	13.0	16.6	9.9	7.7	13.8	2.2	1.7	3.1	37.5	34.0	40.8	0.8	0.5	1.2	0.3	0.2	0.5
9	Region 16	18.2	14.0	23.8	85.6	80.4	93.3	13.8	11.4	15.7	9.5	7.8	13.8	2.0	1.7	2.8	39.0	32.2	44.7	0.8	0.5	1.2	0.3	0.1	0.5
20	Region 17	18.0	12.3	25.3	84.8	78.0	89.2	13.4	11.8	14.9	8.3	7.5	8.9	2.0	1.6	3.4	41.0	35.1	47.5	0.9	0.1	2.0	0.4	0.1	0.5
21	Region 18	18.9	13.2	25.4	84.3	78.1	88.8	13.7	11.9	15.4	8.5	7.3	12.4	1.9	1.5	2.6	38.8	35.0	41.2	0.9	0.6	1.3	0.4	0.2	0.6
15	Region 19	16.4	6.1	21.0	86.0	78.9	99.6	13.5	11.7	16.1	9.5	7.7	11.9	2.3	1.7	3.5	39.7	36.6	47.8	0.9	0.5	1.4	0.4	0.2	0.6
17	Region 20	18.3	14.1	22.7	85.4	81.8	90.3	13.6	12.4	14.7	8.8	7.9	10.8	2.1	1.8	3.0	39.6	35.5	41.8	0.9	0.4	1.3	0.4	0.2	0.6
17	Region 21	18.9	13.6	23.5	84.9	81.5	90.4	14.8	12.5	16.9	9.8	7.2	14.6	2.1	1.5	5.2	37.1	33.4	40.3	0.8	0.5	1.1	0.3	0.1	0.5
23	Region 22	20.3	16.3	26.3	83.1	77.2	87.5	14.8	11.8	17.4	9.5	7.2	12.6	2.1	1.5	2.7	37.3	31.4	40.7	0.8	0.4	1.4	0.3	0.1	0.6
34	Region 23	20.1	16.7	23.8	83.1	78.5	87.3	14.1	11.9	17.1	8.4	7.4	12.3	1.9	1.6	2.6	38.3	33.3	40.3	0.9	0.5	1.5	0.4	0.1	0.8
23	Region 24	19.0	10.5	24.2	83.3	78.4	92.2	13.6	12.1	15.4	8.9	6.9	12.7	2.0	1.4	2.7	38.6	33.8	42.1	0.9	0.6	1.4	0.5	0.2	0.8
1	Region 25	22.2	-	-	79.2	-	-	12.6	-	-	8.4	-	-	1.8	-	-	37.3	-	-	1.0	-	-	0.6	-	-
7	Region 26	17.6	10.9	25.2	85.2	80.7	89.9	13.0	12.1	13.9	8.3	7.1	9.1	2.3	1.7	3.0	40.7	36.3	45.6	1.1	0.5	1.7	0.5	0.3	0.7
11	Region 28	15.9	11.4	21.3	87.5	81.9	93.4	14.5	12.4	16.9	10.8	7.1	14.4	2.4	1.6	3.1	38.8	35.1	42.4	0.8	0.5	1.2	0.3	0.1	0.6
25	Region 29	18.6	11.4	25.2	84.5	76.8	92.8	13.8	10.9	17.2	8.9	6.9	14.4	2.1	1.4	3.3	38.6	35.0	43.7	1.0	0.4	2.2	0.4	0.1	0.9
28	Region 30	22.3	18.9	26.3	80.2	74.8	85.3	12.2	10.0	14.5	7.8	6.9	8.6	2.0	1.6	3.0	38.0	35.1	41.6	0.9	0.4	1.6	0.4	0.1	0.8
9	Region 31	17.3	14.6	21.0	85.1	80.2	88.7	13.0	11.3	14.3	8.2	7.1	8.8	2.0	1.8	2.2	39.1	37.0	40.7	0.9	0.8	1.2	0.4	0.3	0.5
12	Region 32	20.6	16.8	24.2	83.1	79.4	86.0	13.0	11.2	14.7	8.2	6.7	9.6	1.9	1.5	3.0	38.4	35.5	41.4	0.8	0.6	1.0	0.4	0.2	0.5
48	Region 33	21.8	13.9	26.5	81.2	76.6	100.8	12.2	10.2	13.7	7.9	6.8	9.1	1.9	1.4	2.5	38.4	35.2	43.0	1.0	0.3	2.0	0.4	0.2	1.0
31	Region 34	20.5	13.5	26.6	82.5	73.6	88.7	13.4	10.4	16.2	7.9	6.7	10.2	1.9	1.4	2.8	38.3	34.5	42.8	1.0	0.6	2.1	0.4	0.2	0.8
8	Region 35	22.2	18.8	28.6	81.6	73.8	85.5	13.7	11.4	19.2	8.9	7.2	12.6	2.0	1.5	2.7	36.3	32.1	40.6	0.8	0.4	1.2	0.3	0.1	0.5
14	Region 36	22.8	17.6	25.8	79.6	75.3	86.8	11.8	9.8	18.6	8.4	7.4	11.7	1.9	1.5	2.4	38.5	35.3	41.7	0.9	0.6	1.5	0.4	0.2	0.8
408	**Ave. WM1**	**19.5**			**83.5**			**13.4**			**8.6**			**2.0**			**38.8**			**0.9**			**0.4**		
	Min. WM1		**6.1**			**73.6**			**9.8**			**6.7**			**1.4**			**31.4**			**0.1**			**0.1**	
	Max. WM1			**28.6**			**100.8**			**19.2**			**14.6**			**5.2**			**51.2**			**2.2**			**1.0**
GRADE: WM2																									
4	Region 12	17.0	11.7	25.2	86.6	79.3	91.0	14.0	12.7	15.1	8.4	8.0	9.2	2.0	1.8	2.1	42.2	37.5	45.5	0.8	0.7	1.2	0.2	0.2	0.3
3	Region 13	14.7	9.9	18.5	90.3	88.9	93.2	12.6	12.2	13.5	8.7	8.3	9.4	2.3	2.0	2.6	43.7	42.0	44.7	0.8	0.5	0.9	0.2	0.1	0.4
2	Region 14	16.5	15.6	17.4	85.1	84.6	85.6	14.0	13.9	14.1	8.9	8.4	9.3	2.1	1.9	2.2	40.5	39.6	41.3	1.3	1.2	1.4	0.4	0.4	0.5
1	Region 15	18.0	-	-	87.2	-	-	15.9	-	-	12.6	-	-	2.4	-	-	35.7	-	-	0.5	-	-	0.1	-	-
3	Region 17	14.8	12.0	17.6	88.4	83.2	91.9	12.2	10.0	14.2	8.5	7.4	9.6	2.1	2.0	2.1	43.1	39.3	45.9	0.8	0.6	1.0	0.4	0.4	0.4
1	Region 18	27.5	-	-	75.7	-	-	13.2	-	-	7.9	-	-	1.7	-	-	33.5	-	-	0.6	-	-	0.3	-	-
7	Region 19	12.8	7.2	20.9	89.1	82.3	95.5	12.9	11.3	14.5	10.3	8.0	11.9	2.7	1.8	3.8	40.9	35.9	46.4	1.2	0.7	1.7	0.4	0.2	0.5
4	Region 21	18.8	15.9	26.7	84.5	78.1	87.7	14.6	12.8	15.7	9.0	8.2	11.1	2.1	1.7	2.5	38.4	31.7	41.4	0.9	0.6	1.2	0.4	0.2	0.6
1	Region 22	19.9	-	-	83.6	-	-	18.1	-	-	11.5	-	-	2.6	-	-	34.0	-	-	0.5	-	-	0.1	-	-
2	Region 24	17.8	10.8	24.8	85.4	79.2	91.5	13.2	12.3	14.2	10.8	9.7	12.0	2.2	1.9	2.4	38.1	31.8	44.5	0.7	0.5	0.8	0.2	0.2	0.3
6	Region 29	21.7	20.2	24.0	81.6	77.1	84.4	14.1	12.9	16.0	7.9	7.1	8.7	1.9	1.5	2.1	37.0	35.2	38.8	1.1	0.8	1.5	0.4	0.2	0.6
3	Region 30	23.2	20.9	26.0	82.7	79.3	84.9	12.2	8.6	17.2	7.7	7.0	8.2	1.9	1.5	2.1	37.6	32.4	41.5	0.8	0.6	0.9	0.5	0.3	1.0
1	Region 31	14.4	-	-	88.7	-	-	11.8	-	-	8.4	-	-	2.3	-	-	40.5	-	-	1.7	-	-	0.6	-	-
3	Region 32	18.4	16.9	20.3	82.7	81.4	83.8	12.3	10.5	14.0	8.3	7.1	10.7	1.9	1.7	2.2	40.5	38.7	41.7	0.6	0.4	0.8	0.2	0.1	0.4
1	Region 34	22.1	-	-	79.9	-	-	12.2	-	-	8.1	-	-	2.0	-	-	37.3	-	-	1.2	-	-	0.5	-	-
1	Region 35	19.8	-	-	82.1	-	-	13.9	-	-	6.8	-	-	1.8	-	-	38.4	-	-	0.8	-	-	0.4	-	-
43	**Ave. WM2**	**17.8**			**85.3**			**13.4**			**8.9**			**2.1**			**39.6**			**0.9**			**0.3**		
	Min. WM2		**7.2**			**75.7**			**8.6**			**6.8**			**1.5**			**31.7**			**0.4**			**0.1**	
	Max. WM2			**27.5**			**95.5**			**18.1**			**12.6**			**3.8**			**46.4**			**1.7**			**1.0**

OF WHITE MAIZE ACCORDING TO GRADE (2023/24)

Milling																					Whiteness Index					
G1, %			G2, %			G3, %			Fraction B1 - B3, %			Fraction C1 - C3, %			Grits (Fraction G3), %			Germ/Bran (Degermer overs + G1 + G2), %			TOTAL of all meal fractions, %			Unsifted			Sifted 87:13		
ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
0.3	0.0	1.4	1.7	1.3	2.5	14.8	12.6	17.0	24.1	21.3	25.9	45.3	41.0	52.4	14.8	12.6	17.0	15.8	9.4	19.2	84.2	80.8	90.6	12.6	4.7	19.8	10.3	2.0	18.5
0.1	0.0	0.2	2.1	1.4	2.9	13.4	11.1	17.0	24.1	21.9	26.2	43.0	37.2	45.8	13.4	11.1	17.0	19.5	12.2	28.7	80.5	71.3	87.8	17.3	10.7	26.5	14.6	9.7	22.0
0.1	0.0	0.1	2.0	1.7	2.5	14.7	12.5	16.7	24.1	22.7	25.4	42.7	40.1	44.9	14.7	12.5	16.7	18.6	15.4	23.2	81.4	76.8	84.6	19.6	12.2	26.9	18.1	11.2	23.3
0.0	0.0	0.1	1.8	0.8	2.5	14.3	13.2	15.6	27.0	24.1	31.9	38.6	34.7	42.4	14.3	13.2	15.6	20.0	16.9	21.7	80.0	78.3	83.1	18.3	7.4	21.9	17.7	4.0	23.0
0.1	0.0	0.1	1.9	0.9	2.4	14.4	12.4	17.2	25.3	21.2	32.2	40.2	32.8	45.4	14.4	12.4	17.2	20.1	16.3	25.8	79.9	74.2	83.7	19.6	12.3	26.8	19.6	11.5	28.0
0.1	0.0	0.1	2.1	1.5	2.7	13.7	10.6	19.0	23.7	22.2	25.8	42.3	36.2	49.7	13.7	10.6	19.0	20.2	14.4	27.9	79.8	72.1	85.6	18.8	11.3	25.9	16.7	9.3	24.3
0.1	0.0	0.2	2.2	0.8	3.1	14.5	12.1	17.2	24.1	21.7	28.5	40.2	35.9	42.9	14.5	12.1	17.2	21.2	15.8	28.6	78.8	71.4	84.2	18.5	9.1	26.1	17.1	7.8	23.5
0.1	0.0	0.3	1.9	1.1	2.8	15.3	12.6	20.5	25.3	22.8	29.0	41.0	37.7	49.0	15.3	12.6	20.5	18.4	7.5	23.8	81.6	76.2	92.5	14.2	-1.9	24.6	12.2	-2.7	21.0
0.1	0.0	0.3	2.5	1.8	3.0	13.7	12.4	15.8	24.5	22.5	27.2	40.9	36.7	43.5	13.7	12.4	15.8	20.9	15.9	24.7	79.1	75.3	84.1	20.5	10.1	24.6	17.8	6.1	21.5
0.1	0.0	0.2	1.8	0.8	2.9	14.4	11.7	17.4	26.7	22.7	33.8	38.2	34.4	41.4	14.4	11.7	17.4	20.8	14.8	26.5	79.2	73.5	85.2	17.9	11.8	24.7	17.1	10.2	24.8
0.1	0.0	0.2	1.9	0.8	3.3	13.0	7.5	16.5	26.3	20.7	32.1	38.4	32.0	42.0	13.0	7.5	16.5	22.2	18.5	29.8	77.8	70.2	81.5	21.8	18.2	29.2	21.3	16.1	27.7
0.1	0.0	0.3	2.2	0.8	2.9	13.7	11.7	15.9	24.4	21.4	31.8	39.5	34.0	41.7	13.7	11.7	15.9	22.4	17.6	26.1	77.6	73.9	82.4	22.5	16.6	27.8	20.7	15.0	24.1
0.1	0.0	0.1	2.3	1.6	2.8	14.1	11.7	19.5	24.6	22.6	29.1	40.0	34.6	43.6	14.1	11.7	19.5	21.4	12.8	26.5	78.6	73.5	87.2	20.2	8.3	26.3	17.8	5.8	23.5
0.1	-	-	2.9	-	-	13.1	-	-	22.8	-	-	38.9	-	-	13.1	-	-	25.2	-	-	74.8	-	-	26.2	-	-	20.9	-	-
0.1	0.1	0.1	2.5	2.0	2.8	14.0	10.8	17.0	23.6	21.1	25.5	42.3	38.1	48.0	14.0	10.8	17.0	20.2	12.9	28.1	79.8	71.9	87.1	19.6	16.2	23.4	17.3	13.2	21.7
0.0	0.0	0.1	2.0	1.1	2.8	14.5	12.8	16.3	27.7	22.7	33.4	39.9	35.7	43.5	14.5	12.8	16.3	17.9	12.8	23.3	82.1	76.7	87.2	20.4	15.5	25.9	18.7	13.9	23.3
0.1	0.0	0.6	2.2	0.8	3.4	14.2	12.4	16.8	24.9	21.4	34.2	40.0	35.8	45.3	14.2	12.4	16.8	21.0	12.4	28.1	79.0	71.9	87.6	20.1	13.9	25.8	19.0	12.3	26.4
0.2	0.0	0.3	2.5	1.8	3.1	13.6	10.9	16.1	22.1	19.6	24.6	39.3	37.1	42.6	13.6	10.9	16.1	25.0	21.6	29.5	75.0	70.5	78.4	20.0	16.0	23.2	18.0	13.0	22.6
0.2	0.1	0.3	2.7	1.7	3.1	16.1	13.9	18.4	23.3	21.5	25.0	40.4	38.4	42.4	16.1	13.9	18.4	20.2	17.6	23.8	79.8	76.2	82.4	19.8	16.9	22.7	19.4	15.5	22.8
0.1	0.1	0.3	2.4	1.8	3.6	14.3	11.9	16.1	23.0	21.6	25.0	39.6	36.8	42.7	14.3	11.9	16.1	23.1	18.7	28.0	76.9	72.0	81.3	18.7	13.2	22.9	19.1	16.1	23.6
0.1	0.0	0.3	2.5	1.3	3.5	13.6	11.6	16.9	22.0	19.2	24.5	39.9	36.1	44.3	13.6	11.6	16.9	24.5	16.8	29.1	75.5	70.9	83.2	20.4	13.6	25.8	17.8	10.7	22.5
0.1	0.0	0.3	2.5	1.6	3.3	14.0	11.7	17.1	23.2	20.6	26.3	39.7	36.2	43.7	14.0	11.7	17.1	23.0	15.9	29.5	77.0	70.5	84.1	19.7	9.9	27.8	18.1	9.5	30.1
0.1	0.0	0.2	2.3	0.9	3.7	13.3	11.0	16.0	24.7	21.1	32.6	37.4	33.0	41.5	13.3	11.0	16.0	24.5	20.5	32.5	75.5	67.5	79.5	17.0	9.8	23.4	15.2	7.5	21.6
0.1	0.0	0.1	2.2	1.0	2.5	13.1	12.2	14.6	22.1	18.7	32.5	39.7	36.2	43.1	13.1	12.2	14.6	25.1	18.5	28.1	74.9	71.9	81.5	20.5	14.4	24.4	17.1	9.8	21.4
0.1			**2.2**			**14.0**			**24.1**			**40.1**			**14.0**			**21.8**			**78.2**			**19.7**			**17.9**		
	0.0			**0.8**			**7.5**			**18.7**			**32.0**			**7.5**			**7.5**			**67.5**			**-1.9**			**-2.7**	
		1.4			**3.7**			**20.5**			**34.2**			**52.4**			**20.5**			**32.5**			**92.5**			**29.2**			**30.1**
0.1	0.0	0.1	1.8	1.5	2.6	13.5	11.2	15.0	24.3	22.5	25.5	43.2	38.4	46.3	13.5	11.2	15.0	18.9	13.2	27.9	81.1	72.1	86.8	17.4	7.8	25.7	15.1	6.7	21.7
0.1	0.0	0.1	1.9	1.4	2.6	15.0	12.4	18.6	23.6	23.0	24.1	44.7	42.5	45.8	15.0	12.4	18.6	16.7	11.6	21.2	83.3	78.8	88.4	12.0	7.3	19.5	9.8	4.3	18.8
0.1	0.1	0.1	1.9	1.8	2.0	14.4	13.8	15.1	25.0	24.5	25.4	42.2	41.2	43.1	14.4	13.8	15.1	18.5	17.7	19.2	81.5	80.8	82.3	19.4	16.7	22.2	17.6	17.3	18.0
0.0	-	-	0.9	-	-	14.0	-	-	30.9	-	-	36.3	-	-	14.0	-	-	18.9	-	-	81.1	-	-	16.8	-	-	14.1	-	-
0.2	0.0	0.3	2.1	1.8	2.6	15.8	14.5	17.8	22.8	21.7	23.7	44.3	40.7	46.9	15.8	14.5	17.8	17.0	13.8	20.4	83.0	79.6	86.2	8.1	5.3	11.5	7.2	4.2	8.9
0.1	-	-	3.2	-	-	12.0	-	-	22.8	-	-	34.4	-	-	12.0	-	-	30.8	-	-	69.2	-	-	23.8	-	-	17.6	-	-
0.0	0.0	0.1	1.7	1.0	2.7	17.1	14.2	20.0	25.8	23.5	29.9	42.5	37.2	48.4	17.1	14.2	20.0	14.5	8.4	23.7	85.5	76.3	91.6	10.8	2.2	19.8	8.5	-1.6	18.1
0.1	0.0	0.1	1.9	0.7	2.7	13.9	11.1	15.4	25.7	23.3	29.0	39.7	32.5	43.2	13.9	11.1	15.4	20.8	17.9	27.4	79.2	72.6	82.1	21.0	18.9	24.3	20.0	17.7	23.2
0.0	-	-	0.9	-	-	12.3	-	-	32.2	-	-	34.6	-	-	12.3	-	-	20.8	-	-	79.2	-	-	21.3	-	-	21.0	-	-
0.0	0.0	0.0	2.1	2.0	2.1	14.9	12.5	17.2	26.2	24.4	28.1	39.0	32.5	45.6	14.9	12.5	17.2	19.9	12.8	26.9	80.1	73.1	87.2	14.8	10.3	19.3	13.7	9.0	18.4
0.1	0.0	0.1	2.7	2.0	3.1	13.3	11.8	14.8	23.8	22.8	24.6	38.4	37.0	39.9	13.3	11.8	14.8	24.5	22.5	27.3	75.5	72.7	77.5	22.8	20.8	26.2	21.9	16.6	26.6
0.2	0.2	0.3	2.9	2.4	3.3	12.9	10.4	15.1	21.8	18.9	25.8	39.0	34.3	42.5	12.9	10.4	15.1	26.3	24.0	29.6	73.7	70.4	76.0	19.0	17.4	20.5	17.5	15.1	20.4
0.0	-	-	2.9	-	-	17.3	-	-	22.5	-	-	42.8	-	-	17.3	-	-	17.3	-	-	82.7	-	-	9.7	-	-	8.7	-	-
0.1	0.0	0.1	1.8	1.6	2.0	15.8	13.5	19.2	22.5	19.4	25.3	41.3	39.9	42.5	15.8	13.5	19.2	20.3	18.7	22.5	79.7	77.5	81.3	16.7	16.2	17.4	14.7	13.4	17.0
0.1	-	-	2.7	-	-	13.9	-	-	22.2	-	-	39.0	-	-	13.9	-	-	24.9	-	-	75.1	-	-	21.8	-	-	19.2	-	-
0.1	-	-	2.4	-	-	15.6	-	-	22.5	-	-	39.5	-	-	15.6	-	-	22.4	-	-	77.6	-	-	13.3	-	-	12.2	-	-
0.1			**2.1**			**14.7**			**24.5**			**40.9**			**14.7**			**20.0**			**80.0**			**16.5**			**14.7**		
	0.0			**0.7**			**10.4**			**18.9**			**32.5**			**10.4**			**8.4**			**69.2**			**2.2**			**-1.6**	
		0.3			**3.3**			**20.0**			**32.2**			**48.4**			**20.0**			**30.8**			**91.6**			**26.2**			**26.6**

TABLE 21: BÜHLER MCKA MILLING AND WHITENESS INDEX

Number of samples	Region	MCKA																					
		DEGERMER OVERS, %			DEGERMER THRUS, %			B1,%			B2,%			B3,%			C1,%			C2,%			C3,%		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: WM3																									
2	Region 12	14.2	13.3	15.2	89.9	89.6	90.1	13.1	13.1	13.1	8.0	7.8	8.3	2.1	1.8	2.3	45.6	45.6	45.6	0.9	0.9	0.9	0.2	0.2	0.2
1	Region 14	21.2	-	-	82.7	-	-	13.2	-	-	8.3	-	-	2.0	-	-	39.4	-	-	0.6	-	-	0.4	-	-
1	Region 17	17.1	-	-	86.0	-	-	12.2	-	-	9.1	-	-	2.1	-	-	41.0	-	-	1.2	-	-	0.4	-	-
1	Region 19	10.5	-	-	93.1	-	-	11.8	-	-	11.1	-	-	3.2	-	-	41.0	-	-	1.1	-	-	0.2	-	-
2	Region 20	19.0	13.3	24.8	82.9	77.3	88.6	12.8	11.7	13.9	9.8	7.6	12.0	2.4	2.0	2.9	37.4	36.6	38.1	1.0	0.9	1.2	0.4	0.3	0.5
2	Region 21	18.8	17.3	20.3	84.3	81.7	86.9	15.1	15.1	15.2	12.9	12.5	13.4	2.5	2.5	2.5	35.3	34.8	35.7	0.7	0.5	0.9	0.2	0.1	0.3
2	Region 22	24.2	24.1	24.3	79.8	78.8	80.9	12.9	12.4	13.3	7.9	7.7	8.1	1.7	1.6	1.8	37.6	37.5	37.8	1.0	0.9	1.1	0.4	0.4	0.5
1	Region 23	24.3	-	-	76.9	-	-	13.2	-	-	7.6	-	-	1.7	-	-	35.2	-	-	1.4	-	-	0.7	-	-
1	Region 28	18.2	-	-	85.2	-	-	12.5	-	-	8.3	-	-	1.9	-	-	38.1	-	-	1.1	-	-	0.4	-	-
2	Region 30	23.0	22.4	23.6	77.5	76.4	78.5	12.7	11.5	13.8	7.8	7.2	8.3	2.1	1.8	2.4	37.0	36.0	38.0	1.3	1.3	1.4	0.5	0.4	0.6
2	Region 31	18.8	18.7	18.9	84.0	83.8	84.3	13.0	12.5	13.6	8.3	7.7	8.9	2.0	2.0	2.1	38.2	38.0	38.3	0.9	0.8	1.1	0.5	0.4	0.6
1	Region 36	22.5	-	-	80.7	-	-	10.7	-	-	8.0	-	-	2.0	-	-	39.9	-	-	0.9	-	-	0.4	-	-
18	**Ave. WM3**	**19.4**			**83.4**			**12.9**			**9.0**			**2.1**			**38.7**			**1.0**			**0.4**		
	Min. WM3		**10.5**			**76.4**			**10.7**			**7.2**			**1.6**			**34.8**			**0.5**			**0.1**	
	Max. WM3			**24.8**			**93.1**			**15.2**			**13.4**			**3.2**			**45.6**			**1.4**			**0.7**
GRADE: COM																									
4	Region 12	18.8	15.6	21.0	83.8	81.7	84.9	13.2	12.8	13.6	8.0	7.2	8.8	1.9	1.7	2.5	39.7	38.3	40.9	1.2	0.8	1.5	0.5	0.3	0.7
4	Region 14	14.4	11.8	18.9	88.2	83.9	91.3	12.7	12.0	13.7	9.1	8.5	9.3	2.3	1.9	2.8	43.5	40.5	45.3	1.1	0.5	1.7	0.5	0.3	0.7
2	Region 15	18.2	17.7	18.7	85.1	84.5	85.6	15.1	13.9	16.2	10.6	8.7	12.5	2.4	2.0	2.7	37.2	34.2	40.3	0.7	0.5	0.9	0.2	0.2	0.3
2	Region 17	15.5	10.5	20.5	86.6	83.5	89.7	13.4	12.5	14.3	8.7	8.1	9.4	2.3	1.8	2.9	43.2	38.6	47.8	1.3	1.0	1.7	0.4	0.4	0.5
2	Region 18	21.5	16.3	26.6	82.0	75.5	88.5	12.7	12.4	13.0	8.2	7.7	8.7	1.8	1.8	1.9	38.4	35.5	41.4	0.9	0.7	1.1	0.4	0.3	0.5
2	Region 20	18.7	18.4	19.0	81.5	80.8	82.2	13.3	13.1	13.5	8.3	8.1	8.6	1.9	1.9	2.0	39.2	39.2	39.3	1.5	1.0	2.0	0.6	0.5	0.7
4	Region 21	17.5	14.1	19.3	84.5	81.2	87.8	14.9	13.2	15.8	10.6	8.3	12.7	2.3	1.9	2.7	37.7	33.6	41.6	1.0	0.6	1.5	0.4	0.2	0.8
6	Region 22	20.0	17.1	22.7	82.9	78.1	87.9	14.9	13.4	16.0	9.5	7.9	12.4	2.3	1.7	2.8	36.7	33.8	40.6	0.8	0.5	1.3	0.3	0.2	0.5
2	Region 23	20.1	19.7	20.5	84.0	82.7	85.2	15.2	13.8	16.6	9.5	7.4	11.5	1.9	1.6	2.2	37.3	35.9	38.7	0.7	0.6	0.9	0.2	0.1	0.3
3	Region 24	20.8	17.5	26.4	81.0	77.1	84.1	12.6	11.2	14.2	8.5	7.9	8.8	2.0	1.6	2.3	39.1	36.1	41.6	1.0	0.7	1.4	0.4	0.3	0.5
1	Region 28	11.6	-	-	89.5	-	-	14.3	-	-	7.7	-	-	2.1	-	-	42.5	-	-	1.3	-	-	0.5	-	-
2	Region 29	22.5	21.5	23.4	83.0	81.7	84.3	13.6	12.3	14.9	7.7	7.7	7.7	1.7	1.6	1.9	38.0	36.3	39.6	0.8	0.7	0.9	0.3	0.2	0.4
5	Region 30	22.8	18.3	26.2	79.5	77.1	84.3	11.7	10.9	13.0	7.9	7.4	8.3	2.0	1.7	2.3	37.4	35.3	40.4	1.2	1.0	1.9	0.5	0.4	0.7
2	Region 31	18.0	16.9	19.0	85.0	83.6	86.3	12.3	12.3	12.4	8.5	8.5	8.6	2.0	1.9	2.1	39.4	39.1	39.6	0.8	0.7	0.9	0.4	0.4	0.4
1	Region 32	23.8	-	-	80.9	-	-	12.7	-	-	8.6	-	-	1.8	-	-	36.0	-	-	1.1	-	-	0.5	-	-
3	Region 33	21.5	19.9	24.1	80.7	79.5	82.4	11.7	10.5	12.5	7.8	7.7	7.9	2.2	1.9	2.4	37.8	36.0	38.7	1.6	0.9	2.0	0.5	0.4	0.6
1	Region 34	17.5	-	-	81.4	-	-	10.9	-	-	9.9	-	-	2.3	-	-	40.3	-	-	1.9	-	-	0.5	-	-
1	Region 35	16.3	-	-	88.0	-	-	14.0	-	-	8.1	-	-	1.9	-	-	40.4	-	-	0.9	-	-	0.4	-	-
1	Region 36	20.4	-	-	82.7	-	-	11.7	-	-	8.4	-	-	2.0	-	-	41.3	-	-	0.8	-	-	0.3	-	-
48	**Ave. COM**	**19.2**			**83.4**			**13.3**			**8.8**			**2.1**			**38.9**			**1.1**			**0.4**		
	Min. COM		**10.5**			**75.5**			**10.5**			**7.2**			**1.6**			**33.6**			**0.5**			**0.1**	
	Max. COM			**26.6**			**91.3**			**16.6**			**12.7**			**2.9**			**47.8**			**2.0**			**0.8**
517	**Ave. White**	**19.3**			**83.7**			**13.4**			**8.7**			**2.1**			**38.8**			**0.9**			**0.4**		
	Min. White		**6.1**			**73.6**			**8.6**			**6.7**			**1.4**			**31.4**			**0.1**			**0.1**	
	Max. White			**28.6**			**100.8**			**19.2**			**14.6**			**5.2**			**51.2**			**2.2**			**1.0**

OF WHITE MAIZE ACCORDING TO GRADE (2023/24) (continue)

Milling																					Whiteness Index					
G1, %			G2, %			G3, %			Fraction B1 - B3, %			Fraction C1 - C3, %			Grits (Fraction G3), %			Germ/Bran (Degermer overs + G1 + G2), %			TOTAL of all meal fractions, %			Unsifted			Sifted 87:13		
ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
0.1	0.0	0.2	1.4	1.4	1.5	14.3	13.8	14.9	23.2	22.7	23.6	46.7	46.7	46.7	14.3	13.8	14.9	15.8	14.7	16.8	84.2	83.2	85.3	8.7	5.9	11.6	8.6	7.1	10.1
0.0	-	-	2.2	-	-	12.7	-	-	23.5	-	-	40.4	-	-	12.7	-	-	23.5	-	-	76.5	-	-	20.5	-	-	19.4	-	-
0.0	-	-	1.5	-	-	15.3	-	-	23.4	-	-	42.6	-	-	15.3	-	-	18.7	-	-	81.3	-	-	7.5	-	-	7.4	-	-
0.0	-	-	1.7	-	-	19.3	-	-	26.1	-	-	42.3	-	-	19.3	-	-	12.3	-	-	87.7	-	-	4.3	-	-	4.5	-	-
0.1	0.0	0.1	2.2	1.9	2.6	14.8	12.9	16.7	25.0	21.3	28.7	38.8	38.3	39.4	14.8	12.9	16.7	21.3	15.2	27.5	78.7	72.5	84.8	11.7	11.6	11.8	7.1	6.0	8.3
0.0	0.0	0.0	0.8	0.8	0.8	13.6	12.6	14.7	30.6	30.2	31.0	36.2	36.0	36.3	13.6	12.6	14.7	19.6	18.1	21.1	80.4	78.9	81.9	20.7	19.5	21.9	20.2	18.9	21.5
0.1	0.1	0.1	2.9	2.7	3.0	11.3	10.8	11.8	22.4	21.6	23.2	39.0	38.8	39.3	11.3	10.8	11.8	27.2	27.2	27.2	72.8	72.8	72.8	25.7	24.9	26.4	23.2	22.0	24.3
0.1	-	-	2.6	-	-	13.3	-	-	22.5	-	-	37.2	-	-	13.3	-	-	27.0	-	-	73.0	-	-	19.2	-	-	23.7	-	-
0.2	-	-	2.4	-	-	16.9	-	-	22.7	-	-	39.6	-	-	16.9	-	-	20.8	-	-	79.2	-	-	13.0	-	-	12.6	-	-
0.2	0.2	0.2	3.0	2.8	3.1	12.4	12.2	12.6	22.5	20.5	24.5	38.9	37.8	40.0	12.4	12.2	12.6	26.2	25.5	26.9	73.8	73.1	74.5	23.3	23.0	23.5	20.0	18.5	21.6
0.2	-	-	2.5	-	-	15.5	-	-	23.3	-	-	39.6	-	-	15.5	-	-	21.6	-	-	78.4	-	-	20.9	-	-	20.9	-	-
0.0	-	-	2.3	-	-	13.5	-	-	20.7	-	-	41.1	-	-	13.5	-	-	24.7	-	-	75.3	-	-	18.1	-	-	14.7	-	-
0.1			**2.1**			**14.2**			**24.1**			**40.1**			**14.2**			**21.7**			**78.3**			**16.9**			**15.7**		
	0.0			**0.8**			**10.8**			**20.5**			**36.0**			**10.8**			**12.3**			**72.5**			**4.3**			**4.5**	
		0.2			**3.1**			**19.3**			**31.0**			**46.7**			**19.3**			**27.5**			**87.7**			**26.4**			**24.3**
0.1	0.0	0.1	1.9	1.6	2.5	14.7	12.7	17.3	23.2	21.7	24.8	41.4	40.3	42.8	14.7	12.7	17.3	20.8	17.5	23.5	79.2	76.5	82.5	17.9	13.7	20.6	17.8	15.8	20.1
0.1	0.1	0.1	2.3	2.2	2.4	14.1	12.6	15.9	24.1	22.5	24.9	45.0	41.3	47.6	14.1	12.6	15.9	16.7	14.2	21.1	83.3	78.9	85.8	18.5	16.3	20.2	16.5	13.0	19.9
0.0	0.0	0.1	1.4	1.1	1.7	14.2	13.9	14.5	28.1	24.7	31.5	38.2	34.9	41.4	14.2	13.9	14.5	19.6	19.4	19.7	80.4	80.3	80.6	16.0	15.3	16.7	15.4	15.2	15.6
0.1	0.0	0.1	2.3	1.8	2.7	12.6	12.4	12.9	24.5	24.3	24.8	44.9	40.0	49.9	12.6	12.4	12.9	17.9	12.4	23.3	82.1	76.7	87.6	20.5	18.6	22.4	18.6	18.2	19.1
0.1	0.1	0.1	2.7	2.5	2.9	13.3	11.4	15.1	22.7	21.9	23.6	39.8	37.1	42.4	13.3	11.4	15.1	24.3	18.9	29.6	75.7	70.4	81.1	14.7	9.0	20.5	10.8	5.3	16.3
0.2	0.2	0.2	2.8	2.7	2.9	13.5	13.2	13.9	23.6	23.5	23.7	41.3	40.7	41.9	13.5	13.2	13.9	21.6	21.4	21.8	78.4	78.2	78.6	10.5	-2.0	22.9	9.4	-2.5	21.2
0.0	0.0	0.1	1.5	0.7	2.2	13.9	12.7	15.2	27.8	24.4	31.0	39.2	34.3	43.4	13.9	12.7	15.2	19.0	16.3	20.2	81.0	79.8	83.7	19.5	16.0	23.5	19.7	14.4	23.0
0.0	0.0	0.1	1.8	0.8	2.7	13.6	12.3	14.3	26.7	23.8	30.8	37.8	34.7	41.7	13.6	12.3	14.3	21.9	19.1	25.3	78.1	74.7	80.9	19.6	16.9	21.4	17.2	14.0	19.2
0.0	0.0	0.1	1.6	0.8	2.3	13.5	12.5	14.4	26.5	22.8	30.3	38.3	36.6	39.9	13.5	12.5	14.4	21.7	20.6	22.9	78.3	77.1	79.4	19.6	14.5	24.7	19.2	15.3	23.2
0.1	0.0	0.1	2.3	1.9	2.5	13.4	12.0	15.0	23.1	22.0	25.2	40.5	37.2	43.5	13.4	12.0	15.0	23.1	19.4	28.8	76.9	71.2	80.6	21.3	17.8	24.0	18.4	14.0	22.0
0.1	-	-	1.9	-	-	18.0	-	-	24.1	-	-	44.3	-	-	18.0	-	-	13.6	-	-	86.4	-	-	13.3	-	-	8.1	-	-
0.1	0.0	0.2	2.4	2.2	2.6	13.0	12.2	13.8	23.0	21.8	24.2	39.1	37.4	40.8	13.0	12.2	13.8	24.9	23.7	26.2	75.1	73.8	76.3	23.3	20.2	26.5	22.2	19.3	25.2
0.3	0.2	0.4	3.0	2.7	3.3	13.3	11.4	14.5	21.6	20.5	23.0	39.1	36.9	41.9	13.3	11.4	14.5	26.0	21.8	29.7	74.0	70.3	78.2	17.8	3.9	23.7	15.9	1.6	22.4
0.2	0.2	0.2	2.5	2.2	2.8	15.9	15.4	16.4	22.9	22.7	23.0	40.5	40.2	40.9	15.9	15.4	16.4	20.7	19.9	21.4	79.3	78.6	80.1	20.5	20.1	21.0	19.0	18.7	19.3
0.2	-	-	3.1	-	-	12.1	-	-	23.2	-	-	37.6	-	-	12.1	-	-	27.2	-	-	72.8	-	-	15.3	-	-	14.6	-	-
0.1	0.1	0.2	2.8	2.4	3.0	13.9	13.0	15.3	21.8	20.6	22.4	39.9	37.3	41.3	13.9	13.0	15.3	24.4	22.9	27.3	75.6	72.7	77.1	20.1	15.8	22.7	17.6	15.1	19.5
0.1	-	-	1.6	-	-	14.9	-	-	23.1	-	-	42.7	-	-	14.9	-	-	19.2	-	-	80.8	-	-	11.9	-	-	14.6	-	-
0.1	-	-	1.9	-	-	16.2	-	-	24.0	-	-	41.6	-	-	16.2	-	-	18.2	-	-	81.8	-	-	14.4	-	-	12.8	-	-
0.0	-	-	2.3	-	-	12.7	-	-	22.2	-	-	42.4	-	-	12.7	-	-	22.7	-	-	77.3	-	-	18.6	-	-	13.7	-	-
0.1			**2.2**			**13.9**			**24.2**			**40.4**			**13.9**			**21.5**			**78.5**			**18.3**			**16.7**		
	0.0			**0.7**			**11.4**			**20.5**			**34.3**			**11.4**			**12.4**			**70.3**			**-2.0**			**-2.5**	
		0.4			**3.3**			**18.0**			**31.5**			**49.9**			**18.0**			**29.7**			**87.6**			**26.5**			**25.2**
0.1			**2.2**			**14.1**			**24.1**			**40.2**			**14.1**			**21.7**			**78.3**			**19.2**			**17.5**		
	0.0			**0.7**			**7.5**			**18.7**			**32.0**			**7.5**			**7.5**			**67.5**			**-2.0**			**-2.7**	
		1.4			**3.7**			**20.5**			**34.2**			**52.4**			**20.5**			**32.5**			**92.5**			**29.2**			**30.1**

TABLE 22: BÜHLER MCKA MILLING AND WHITENESS INDEX

Number of samples	Region	MCKA																					
		DEGERMER OVERS, %			DEGERMER THRUS, %			B1,%			B2,%			B3,%			C1,%			C2,%			C3,%		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
WHITE																									
17	Region 12	15.8	7.6	25.2	87.2	79.3	97.6	13.4	11.8	15.1	8.3	7.1	9.3	2.1	1.7	2.6	42.6	37.5	51.2	1.1	0.7	1.7	0.4	0.2	0.7
8	Region 13	16.4	9.9	25.6	87.1	79.4	93.2	12.9	11.5	14.4	8.6	7.5	9.9	2.4	1.9	3.2	42.4	36.1	44.7	0.9	0.5	1.2	0.3	0.1	0.5
20	Region 14	16.3	11.8	21.2	86.6	81.5	91.3	13.3	11.9	14.4	8.8	8.1	9.3	2.1	1.8	2.8	41.5	39.2	45.3	1.1	0.5	2.0	0.4	0.2	0.8
13	Region 15	18.2	16.0	19.8	85.1	81.7	88.2	15.0	13.0	16.6	10.2	7.7	13.8	2.2	1.7	3.1	37.3	34.0	40.8	0.8	0.5	1.2	0.3	0.1	0.5
9	Region 16	18.2	14.0	23.8	85.6	80.4	93.3	13.8	11.4	15.7	9.5	7.8	13.8	2.0	1.7	2.8	39.0	32.2	44.7	0.8	0.5	1.2	0.3	0.1	0.5
26	Region 17	17.4	10.5	25.3	85.4	78.0	91.9	13.2	10.0	14.9	8.4	7.4	9.6	2.0	1.6	3.4	41.4	35.1	47.8	1.0	0.1	2.0	0.4	0.1	0.5
24	Region 18	19.5	13.2	27.5	83.8	75.5	88.8	13.6	11.9	15.4	8.5	7.3	12.4	1.9	1.5	2.6	38.6	33.5	41.4	0.9	0.6	1.3	0.4	0.2	0.6
23	Region 19	15.0	6.1	21.0	87.3	78.9	99.6	13.2	11.3	16.1	9.8	7.7	11.9	2.5	1.7	3.8	40.1	35.9	47.8	1.0	0.5	1.7	0.4	0.2	0.6
21	Region 20	18.4	13.3	24.8	84.8	77.3	90.3	13.5	11.7	14.7	8.9	7.6	12.0	2.1	1.8	3.0	39.4	35.5	41.8	0.9	0.4	2.0	0.4	0.2	0.7
27	Region 21	18.7	13.6	26.7	84.8	78.1	90.4	14.8	12.5	16.9	10.0	7.2	14.6	2.2	1.5	5.2	37.3	31.7	41.6	0.8	0.5	1.5	0.3	0.1	0.8
32	Region 22	20.5	16.3	26.3	82.9	77.2	87.9	14.8	11.8	18.1	9.4	7.2	12.6	2.1	1.5	2.8	37.1	31.4	40.7	0.8	0.4	1.4	0.3	0.1	0.6
37	Region 23	20.3	16.7	24.3	83.0	76.9	87.3	14.1	11.9	17.1	8.5	7.4	12.3	1.9	1.6	2.6	38.1	33.3	40.3	0.9	0.5	1.5	0.4	0.1	0.8
28	Region 24	19.1	10.5	26.4	83.2	77.1	92.2	13.5	11.2	15.4	9.0	6.9	12.7	2.0	1.4	2.7	38.6	31.8	44.5	0.9	0.5	1.4	0.4	0.2	0.8
1	Region 25	22.2	-	-	79.2	-	-	12.6	-	-	8.4	-	-	1.8	-	-	37.3	-	-	1.0	-	-	0.6	-	-
7	Region 26	17.6	10.9	25.2	85.2	80.7	89.9	13.0	12.1	13.9	8.3	7.1	9.1	2.3	1.7	3.0	40.7	36.3	45.6	1.1	0.5	1.7	0.5	0.3	0.7
13	Region 28	15.7	11.4	21.3	87.5	81.9	93.4	14.3	12.4	16.9	10.4	7.1	14.4	2.3	1.6	3.1	39.0	35.1	42.5	0.8	0.5	1.3	0.3	0.1	0.6
33	Region 29	19.4	11.4	25.2	83.9	76.8	92.8	13.8	10.9	17.2	8.7	6.9	14.4	2.1	1.4	3.3	38.3	35.0	43.7	1.0	0.4	2.2	0.4	0.1	0.9
38	Region 30	22.5	18.3	26.3	80.1	74.8	85.3	12.2	8.6	17.2	7.8	6.9	8.6	2.0	1.5	3.0	37.8	32.4	41.6	1.0	0.4	1.9	0.4	0.1	1.0
14	Region 31	17.4	14.4	21.0	85.2	80.2	88.7	12.8	11.3	14.3	8.3	7.1	8.9	2.0	1.8	2.3	39.1	37.0	40.7	1.0	0.7	1.7	0.4	0.3	0.6
16	Region 32	20.4	16.8	24.2	82.9	79.4	86.0	12.8	10.5	14.7	8.2	6.7	10.7	1.9	1.5	3.0	38.7	35.5	41.7	0.8	0.4	1.1	0.4	0.1	0.5
51	Region 33	21.8	13.9	26.5	81.2	76.6	100.8	12.2	10.2	13.7	7.9	6.8	9.1	1.9	1.4	2.5	38.4	35.2	43.0	1.0	0.3	2.0	0.4	0.2	1.0
33	Region 34	20.4	13.5	26.6	82.4	73.6	88.7	13.3	10.4	16.2	8.0	6.7	10.2	1.9	1.4	2.8	38.4	34.5	42.8	1.0	0.6	2.1	0.4	0.2	0.8
10	Region 35	21.3	16.3	28.6	82.3	73.8	88.0	13.8	11.4	19.2	8.7	6.8	12.6	2.0	1.5	2.7	36.9	32.1	40.6	0.8	0.4	1.2	0.3	0.1	0.5
16	Region 36	22.7	17.6	25.8	79.8	75.3	86.8	11.7	9.8	18.6	8.4	7.4	11.7	1.9	1.5	2.4	38.7	35.3	41.7	0.9	0.6	1.5	0.4	0.2	0.8
517	**Ave. White**	**19.3**			**83.7**			**13.4**			**8.7**			**2.1**			**38.8**			**0.9**			**0.4**		
	Min. White		**6.1**			**73.6**			**8.6**			**6.7**			**1.4**			**31.4**			**0.1**			**0.1**	
	Max. White			**28.6**			**100.8**			**19.2**			**14.6**			**5.2**			**51.2**			**2.2**			**1.0**

OF WHITE MAIZE (2023/24)

Milling																					Whiteness Index					
G1, %			G2, %			G3, %			Fraction B1 - B3, %			Fraction C1 - C3, %			Grits (Fraction G3), %			Germ/Bran (Degermers + G1 + G2), %			TOTAL of all meal fractions, %			Unsifted			Sifted 87:13		
ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
0.2	0.0	1.4	1.7	1.3	2.6	14.4	11.2	17.3	23.8	21.3	25.9	44.0	38.4	52.4	14.4	11.2	17.3	17.7	9.4	27.9	82.3	72.1	90.6	14.5	4.7	25.7	13.0	2.0	21.7
0.1	0.0	0.2	2.0	1.4	2.9	14.0	11.1	18.6	23.9	21.9	26.2	43.6	37.2	45.8	14.0	11.1	18.6	18.5	11.6	28.7	81.5	71.3	88.4	15.3	7.3	26.5	12.8	4.3	22.0
0.1	0.0	0.1	2.1	1.7	2.5	14.4	12.5	16.7	24.1	22.5	25.4	43.0	40.1	47.6	14.4	12.5	16.7	18.4	14.2	23.5	81.6	76.5	85.8	19.4	12.2	26.9	17.8	11.2	23.3
0.0	0.0	0.1	1.6	0.8	2.5	14.3	13.2	15.6	27.4	24.1	31.9	38.4	34.7	42.4	14.3	13.2	15.6	19.9	16.9	21.7	80.1	78.3	83.1	17.8	7.4	21.9	17.1	4.0	23.0
0.1	0.0	0.1	1.9	0.9	2.4	14.4	12.4	17.2	25.3	21.2	32.2	40.2	32.8	45.4	14.4	12.4	17.2	20.1	16.3	25.8	79.9	74.2	83.7	19.6	12.3	26.8	19.6	11.5	28.0
0.1	0.0	0.3	2.1	1.5	2.7	13.9	10.6	19.0	23.7	21.7	25.8	42.8	36.2	49.9	13.9	10.6	19.0	19.6	12.4	27.9	80.4	72.1	87.6	17.3	5.3	25.9	15.4	4.2	24.3
0.1	0.0	0.2	2.3	0.8	3.2	14.3	11.4	17.2	24.0	21.7	28.5	39.9	34.4	42.9	14.3	11.4	17.2	21.9	15.8	30.8	78.1	69.2	84.2	18.4	9.0	26.1	16.6	5.3	23.5
0.1	0.0	0.3	1.9	1.0	2.8	16.0	12.6	20.5	25.5	22.8	29.9	41.6	37.2	49.0	16.0	12.6	20.5	16.9	7.5	23.8	83.1	76.2	92.5	12.7	-1.9	24.6	10.8	-2.7	21.0
0.1	0.0	0.3	2.5	1.8	3.0	13.8	12.4	16.7	24.4	21.3	28.7	40.8	36.7	43.5	13.8	12.4	16.7	21.0	15.2	27.5	79.0	72.5	84.8	18.7	-2.0	24.6	16.0	-2.5	21.5
0.1	0.0	0.2	1.7	0.7	2.9	14.2	11.1	17.4	27.0	22.7	33.8	38.4	32.5	43.4	14.2	11.1	17.4	20.4	14.8	27.4	79.6	72.6	85.2	18.8	11.8	24.7	18.1	10.2	24.8
0.1	0.0	0.2	1.9	0.8	3.3	13.0	7.5	16.5	26.3	20.7	32.2	38.2	32.0	42.0	13.0	7.5	16.5	22.4	18.5	29.8	77.6	70.2	81.5	21.6	16.9	29.2	20.6	14.0	27.7
0.1	0.0	0.3	2.2	0.8	2.9	13.7	11.7	15.9	24.5	21.4	31.8	39.3	34.0	41.7	13.7	11.7	15.9	22.5	17.6	27.0	77.5	73.0	82.4	22.3	14.5	27.8	20.7	15.0	24.1
0.1	0.0	0.1	2.3	1.6	2.8	14.1	11.7	19.5	24.5	22.0	29.1	40.0	32.5	45.6	14.1	11.7	19.5	21.4	12.8	28.8	78.6	71.2	87.2	19.9	8.3	26.3	17.6	5.8	23.5
0.1	-	-	2.9	-	-	13.1	-	-	22.8	-	-	38.9	-	-	13.1	-	-	25.2	-	-	74.8	-	-	26.2	-	-	20.9	-	-
0.1	0.1	0.1	2.5	2.0	2.8	14.0	10.8	17.0	23.6	21.1	25.5	42.3	38.1	48.0	14.0	10.8	17.0	20.2	12.9	28.1	79.8	71.9	87.1	19.6	16.2	23.4	17.3	13.2	21.7
0.1	0.0	0.2	2.0	1.1	2.8	15.0	12.8	18.0	27.0	22.7	33.4	40.2	35.7	44.3	15.0	12.8	18.0	17.8	12.8	23.3	82.2	76.7	87.2	19.3	13.0	25.9	17.4	8.1	23.3
0.1	0.0	0.6	2.3	0.8	3.4	13.9	11.8	16.8	24.6	21.4	34.2	39.6	35.8	45.3	13.9	11.8	16.8	21.9	12.4	28.1	78.1	71.9	87.6	20.8	13.9	26.5	19.7	12.3	26.6
0.2	0.0	0.4	2.6	1.8	3.3	13.5	10.4	16.1	22.0	18.9	25.8	39.2	34.3	42.6	13.5	10.4	16.1	25.3	21.6	29.7	74.7	70.3	78.4	19.8	3.9	23.7	17.8	1.6	22.6
0.2	0.0	0.3	2.6	1.7	3.1	16.1	13.9	18.4	23.2	21.5	25.0	40.5	38.4	42.8	16.1	13.9	18.4	20.3	17.3	23.8	79.7	76.2	82.7	19.4	9.7	22.7	18.8	8.7	23.3
0.1	0.0	0.3	2.3	1.6	3.6	14.4	11.9	19.2	23.0	19.4	25.3	39.8	36.8	42.7	14.4	11.9	19.2	22.8	18.7	28.0	77.2	72.0	81.3	18.1	13.2	22.9	18.0	13.4	23.6
0.1	0.0	0.3	2.6	1.3	3.5	13.7	11.6	16.9	22.0	19.2	24.5	39.9	36.1	44.3	13.7	11.6	16.9	24.5	16.8	29.1	75.5	70.9	83.2	20.4	13.6	25.8	17.8	10.7	22.5
0.1	0.0	0.3	2.4	1.6	3.3	14.1	11.7	17.1	23.2	20.6	26.3	39.8	36.2	43.7	14.1	11.7	17.1	23.0	15.9	29.5	77.0	70.5	84.1	19.5	9.9	27.8	18.1	9.5	30.1
0.1	0.0	0.2	2.3	0.9	3.7	13.8	11.0	16.2	24.4	21.1	32.6	38.0	33.0	41.6	13.8	11.0	16.2	23.7	18.2	32.5	76.3	67.5	81.8	16.4	9.8	23.4	14.6	7.5	21.6
0.1	0.0	0.1	2.2	1.0	2.5	13.1	12.2	14.6	22.0	18.7	32.5	40.0	36.2	43.1	13.1	12.2	14.6	24.9	18.5	28.1	75.1	71.9	81.5	20.2	14.4	24.4	16.7	9.8	21.4
0.1			**2.2**			**14.1**			**24.1**			**40.2**			**14.1**			**21.7**			**78.3**			**19.2**			**17.5**		
	0.0			**0.7**			**7.5**			**18.7**			**32.0**			**7.5**			**7.5**			**67.5**			**-2.0**			**-2.7**	
		1.4			**3.7**			**20.5**			**34.2**			**52.4**			**20.5**			**32.5**			**92.5**			**29.2**			**30.1**

TABLE 23: NUTRITIONAL VALUES OF WHITE MAIZE ACCORDING TO GRADE (2023/24)

Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)			Crude Fibre % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: WM1													
-	Region 06	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 08	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 10	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 11	-	-	-	-	-	-	-	-	-	-	-	-
7	Region 12	4.3	4.1	4.6	9.7	9.3	10.3	73.1	72.0	74.0	2.2	2.1	2.3
5	Region 13	4.2	3.9	4.4	9.4	8.1	10.6	73.5	71.0	74.6	2.3	2.2	2.4
13	Region 14	3.9	3.5	4.3	9.4	8.5	10.2	74.0	72.4	76.2	2.2	2.1	2.4
10	Region 15	3.9	3.7	4.3	9.0	8.2	10.3	74.6	72.0	76.0	2.2	2.0	2.3
9	Region 16	3.8	3.5	4.1	9.3	8.6	10.1	74.2	73.4	75.7	2.2	2.1	2.3
20	Region 17	4.0	3.6	4.4	8.8	7.4	9.8	74.8	72.3	76.8	2.2	1.9	2.4
21	Region 18	4.0	3.5	4.4	8.7	7.0	10.3	74.8	72.2	77.1	2.2	1.9	2.5
15	Region 19	4.1	3.7	4.6	9.0	7.8	10.4	74.1	71.7	76.5	2.2	2.0	2.4
18	Region 20	3.8	3.6	4.4	9.2	8.1	10.4	73.7	71.7	75.3	2.2	2.1	2.3
17	Region 21	4.0	3.8	4.4	9.0	8.0	10.4	74.2	71.5	75.5	2.2	2.1	2.5
23	Region 22	3.9	3.7	4.2	8.7	6.7	9.6	74.8	73.2	77.4	2.2	2.0	2.5
34	Region 23	3.9	3.6	4.2	8.7	7.7	9.2	74.8	73.4	76.5	2.1	2.0	2.3
23	Region 24	4.0	3.4	4.3	9.1	7.6	10.8	74.1	70.5	76.4	2.3	2.0	2.5
1	Region 25	4.2	-	-	8.5	-	-	74.7	-	-	2.3	-	-
7	Region 26	3.9	3.5	4.2	9.4	7.8	10.9	73.8	71.7	75.7	2.2	2.1	2.3
-	Region 27	-	-	-	-	-	-	-	-	-	-	-	-
11	Region 28	3.6	3.4	3.8	9.9	8.2	11.0	73.4	72.0	76.1	2.3	2.1	2.4
25	Region 29	3.8	3.4	4.3	9.3	8.1	11.1	73.9	71.4	76.2	2.2	2.0	2.5
28	Region 30	3.8	3.5	4.3	8.6	7.7	9.5	74.3	73.5	75.5	2.1	1.8	2.3
9	Region 31	3.7	3.5	4.2	9.5	9.0	10.2	72.9	72.0	73.7	2.2	2.1	2.5
11	Region 32	3.8	3.5	4.3	8.8	7.8	9.8	74.1	72.8	75.5	2.2	2.1	2.3
48	Region 33	3.9	3.6	4.2	8.4	7.3	9.2	74.7	73.4	75.8	2.1	1.9	2.3
31	Region 34	3.9	3.5	4.7	8.7	7.4	9.9	74.8	72.3	77.3	2.1	1.8	2.5
8	Region 35	4.2	4.0	4.6	8.3	7.1	9.6	74.3	73.0	75.9	2.2	2.1	2.4
14	Region 36	3.9	3.5	4.5	8.3	7.6	9.2	74.9	73.9	76.6	2.1	2.0	2.2
408	**Ave. WM1**	**3.9**			**8.9**			**74.3**			**2.2**		
	Min. WM1		**3.4**			**6.7**			**70.5**			**1.8**	
	Max. WM1			**4.7**			**11.1**			**77.4**			**2.5**

TABLE 24: NUTRITIONAL VALUES OF YELLOW MAIZE ACCORDING TO GRADE (2023/24)

Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)			Crude Fibre % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: YM1													
3	Region 06	3.6	3.5	3.9	8.2	8.0	8.3	74.9	74.9	75.0	2.2	2.1	2.3
8	Region 08	4.0	3.6	4.4	9.0	7.9	9.8	74.5	73.3	75.6	2.0	1.8	2.2
16	Region 10	3.9	3.5	4.1	8.3	7.7	9.0	75.7	73.1	77.0	2.1	2.0	2.3
8	Region 11	3.8	3.4	4.1	8.6	8.1	9.0	75.1	74.2	76.2	2.2	2.0	2.3
1	Region 12	4.1	-	-	9.1	-	-	74.3	-	-	1.8	-	-
1	Region 13	3.9	-	-	9.2	-	-	73.6	-	-	2.2	-	-
4	Region 14	4.1	3.9	4.2	9.4	8.7	10.4	73.9	71.0	75.3	2.1	2.0	2.3
-	Region 15	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 16	-	-	-	-	-	-	-	-	-	-	-	-
3	Region 17	4.1	3.8	4.4	9.2	9.2	9.3	74.1	73.4	74.9	2.2	2.1	2.3
1	Region 18	3.7	-	-	8.6	-	-	75.1	-	-	2.0	-	-
6	Region 19	4.1	3.9	4.3	9.1	8.5	10.1	73.9	72.3	74.8	2.2	2.1	2.3
6	Region 20	3.8	3.6	3.9	8.8	7.8	9.3	74.1	72.9	75.4	2.1	2.0	2.3
-	Region 21	-	-	-	-	-	-	-	-	-	-	-	-
1	Region 22	4.0	-	-	9.3	-	-	74.0	-	-	2.3	-	-
-	Region 23	-	-	-	-	-	-	-	-	-	-	-	-
5	Region 24	3.9	3.7	4.2	9.3	8.8	9.7	73.8	73.0	74.9	2.1	2.0	2.4
6	Region 25	3.7	3.4	4.0	9.3	8.3	10.2	73.9	73.2	74.8	2.2	2.0	2.3
5	Region 26	3.9	3.6	4.1	9.2	7.9	11.0	73.7	71.3	74.8	2.2	2.2	2.3
2	Region 27	3.9	3.8	4.0	10.2	10.0	10.5	71.9	71.2	72.5	2.1	2.1	2.2
34	Region 28	3.9	3.3	4.7	9.5	8.2	10.8	73.1	71.0	75.0	2.2	2.0	2.4
23	Region 29	3.9	3.3	4.3	9.6	8.7	11.2	72.9	70.9	75.5	2.1	1.9	2.5
27	Region 30	3.9	3.3	4.8	9.1	8.3	10.4	73.4	71.7	75.0	2.1	1.8	2.4
45	Region 31	3.8	3.5	4.5	9.8	8.6	11.0	72.8	70.9	74.4	2.2	2.0	2.5
35	Region 32	3.9	3.3	4.5	9.5	8.0	10.5	73.0	71.7	75.3	2.2	1.9	2.4
22	Region 33	4.0	3.6	4.6	8.8	7.6	9.5	73.9	72.3	75.6	2.1	1.8	2.3
12	Region 34	3.9	3.7	4.1	9.0	8.0	10.1	74.3	73.0	75.6	2.1	1.9	2.3
6	Region 35	4.1	4.0	4.3	9.4	7.8	10.6	73.3	70.7	75.6	2.3	2.1	2.4
14	Region 36	3.9	3.7	4.3	8.4	7.7	9.6	74.5	72.9	75.3	2.1	2.0	2.3
299	**Ave. YM1**	**3.9**			**9.2**			**73.6**			**2.2**		
	Min. YM1		**3.3**			**7.6**			**70.7**			**1.8**	
	Max. YM1			**4.8**			**11.2**			**77.0**			**2.5**

TABLE 23: NUTRITIONAL VALUES OF WHITE MAIZE ACCORDING TO GRADE (2023/24) (continue)

Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)			Crude Fibre % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: WM2													
-	Region 06	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 08	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 10	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 11	-	-	-	-	-	-	-	-	-	-	-	-
4	Region 12	4.1	3.8	4.4	9.4	8.7	10.0	73.9	72.6	75.0	2.2	2.2	2.3
3	Region 13	4.4	3.7	5.2	9.4	8.6	10.5	73.5	71.5	74.6	2.3	2.2	2.4
2	Region 14	3.9	3.8	4.0	9.4	9.0	9.7	74.2	73.7	74.7	2.3	2.3	2.4
1	Region 15	3.7	-	-	8.7	-	-	74.3	-	-	2.0	-	-
-	Region 16	-	-	-	-	-	-	-	-	-	-	-	-
3	Region 17	4.0	3.5	4.4	9.9	9.3	10.6	72.4	70.9	74.2	2.3	2.0	2.4
1	Region 18	4.1	-	-	7.1	-	-	76.7	-	-	2.1	-	-
7	Region 19	4.2	3.8	4.5	9.8	9.0	10.3	72.8	71.9	74.2	2.3	2.2	2.5
-	Region 20	-	-	-	-	-	-	-	-	-	-	-	-
4	Region 21	3.8	3.7	4.0	9.2	7.5	10.2	74.4	73.3	76.8	2.3	2.1	2.4
1	Region 22	3.8	-	-	8.8	-	-	74.4	-	-	2.2	-	-
-	Region 23	-	-	-	-	-	-	-	-	-	-	-	-
2	Region 24	4.1	4.1	4.2	9.3	8.2	10.3	73.4	71.5	75.4	2.3	2.2	2.3
-	Region 25	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 26	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 27	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 28	-	-	-	-	-	-	-	-	-	-	-	-
6	Region 29	3.8	3.7	4.0	8.6	7.8	9.2	74.5	73.5	75.2	2.2	2.1	2.3
3	Region 30	3.8	3.6	4.0	8.6	8.2	9.1	73.9	73.3	74.9	2.1	2.0	2.2
1	Region 31	4.2	-	-	9.8	-	-	72.0	-	-	2.3	-	-
4	Region 32	3.8	3.6	4.1	9.3	8.7	9.9	73.9	73.5	74.2	2.2	2.1	2.3
-	Region 33	-	-	-	-	-	-	-	-	-	-	-	-
1	Region 34	3.9	-	-	8.6	-	-	74.2	-	-	2.0	-	-
1	Region 35	3.9	-	-	10.2	-	-	72.1	-	-	2.2	-	-
-	Region 36	-	-	-	-	-	-	-	-		-	-	-
44	**Ave. WM2**	**4.0**			**9.2**			**73.7**			**2.2**		
	Min. WM2		**3.5**			**7.1**			**70.9**			**2.0**	
	Max. WM2			**5.2**			**10.6**			**76.8**			**2.5**

TABLE 24: NUTRITIONAL VALUES OF YELLOW MAIZE ACCORDING TO GRADE (2023/24)

Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)			Crude Fibre % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: YM2													
2	Region 06	3.8	3.7	3.9	7.9	7.6	8.2	75.2	75.2	75.3	2.2	2.1	2.2
3	Region 08	3.9	3.9	4.0	9.7	9.6	9.8	73.2	72.3	74.0	2.4	2.3	2.4
-	Region 10	-	-	-	-	-	-	-	-	-	-	-	-
3	Region 11	3.8	3.7	4.0	8.3	8.3	8.4	75.0	74.6	75.9	2.1	2.1	2.2
1	Region 12	4.6	-	-	9.0	-	-	73.9	-	-	2.4	-	-
1	Region 13	4.1	-	-	10.0	-	-	72.2	-	-	2.4	-	-
-	Region 14	4.0	4.0	4.1	8.8	8.8	8.9	73.9	73.8	74.0	2.1	2.1	2.2
2	Region 15	4.0	4.0	4.1	8.8	8.8	8.9	72.9	72.8	73.0	2.1	2.1	2.2
-	Region 16	-	-	-	-	-	-	-	-	-	-	-	-
3	Region 17	3.9	3.9	3.9	9.5	8.7	10.7	73.6	71.6	75.0	2.3	2.2	2.3
5	Region 18	3.7	3.4	3.9	9.0	8.5	9.8	74.3	73.1	75.3	2.1	1.9	2.4
4	Region 19	4.2	4.0	4.4	9.5	8.2	10.5	73.4	72.0	75.0	2.3	2.2	2.5
-	Region 20	-	-	-	-	-	-	-	-	-	-	-	-
1	Region 21	3.8	-	-	11.4	-	-	70.0	-	-	2.4	-	-
1	Region 22	4.0	-	-	8.3	-	-	74.4	-	-	2.3	-	-
-	Region 23	-	-	-	-	-	-	-	-	-	-	-	-
7	Region 24	3.8	3.6	4.2	8.6	7.6	9.5	74.9	73.6	76.4	2.2	2.1	2.3
5	Region 25	4.0	3.7	4.3	8.7	8.3	9.1	74.4	73.9	75.1	2.3	2.2	2.4
6	Region 26	3.8	3.5	4.0	9.8	9.0	10.4	73.0	71.9	74.4	2.3	2.2	2.3
3	Region 27	3.8	3.7	3.9	9.3	8.2	9.9	73.4	72.7	74.5	2.1	2.1	2.2
5	Region 28	3.7	3.5	4.0	9.3	8.1	10.6	73.9	72.4	76.2	2.2	2.1	2.5
14	Region 29	3.7	3.2	4.0	10.3	9.5	11.1	72.2	70.3	74.1	2.1	1.9	2.3
5	Region 30	3.8	3.3	4.0	9.5	8.2	11.3	72.6	70.3	74.1	2.2	2.1	2.5
7	Region 31	3.6	3.4	3.7	9.6	8.4	11.3	73.0	70.8	74.5	2.1	1.9	2.3
7	Region 32	3.8	3.4	4.2	9.7	9.0	10.2	73.1	72.0	74.3	2.3	2.0	2.6
5	Region 33	4.1	3.8	4.3	9.1	8.4	9.6	73.2	72.8	73.7	2.2	2.1	2.3
6	Region 34	3.6	3.4	3.8	9.4	8.0	10.9	73.8	71.4	75.5	2.1	2.0	2.2
-	Region 35	3.8	3.7	4.0	7.9	7.5	8.7	75.6	75.1	76.2	2.1	2.0	2.1
4	Region 36	3.8	3.7	4.0	7.9	7.5	8.7	75.6	75.1	76.2	2.1	2.0	2.1
100	**Ave. YM2**	**3.8**			**9.4**			**73.5**			**2.2**		
	Min. YM2		**3.2**			**7.5**			**70.0**			**1.9**	
	Max. YM2			**4.6**			**11.4**			**76.4**			**2.6**

TABLE 23: NUTRITIONAL VALUES OF WHITE MAIZE ACCORDING TO GRADE (2023/24) (continue)

Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)			Crude Fibre % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: WM3													
-	Region 06	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 08	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 10	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 11	-	-	-	-	-	-	-	-	-	-	-	-
2	Region 12	4.2	4.1	4.3	9.7	9.3	10.2	73.1	72.7	73.5	2.2	2.1	2.2
-	Region 13	-	-	-	-	-	-	-	-	-	-	-	-
1	Region 14	3.9	-	-	8.7	-	-	75.2	-	-	2.1	-	-
-	Region 15	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 16	-	-	-	-	-	-	-	-	-	-	-	-
1	Region 17	4.3	-	-	9.2	-	-	73.0	-	-	2.4	-	-
-	Region 18	-	-	-	-	-	-	-	-	-	-	-	-
1	Region 19	4.4	-	-	10.4	-	-	71.4	-	-	2.4	-	-
2	Region 20	4.0	3.9	4.1	8.9	7.8	10.0	73.8	72.1	75.4	2.3	2.1	2.4
2	Region 21	3.9	3.6	4.1	9.6	9.4	9.8	73.2	73.1	73.3	2.2	2.1	2.2
2	Region 22	3.9	3.8	4.0	8.2	8.1	8.3	75.3	75.2	75.3	2.2	2.2	2.2
1	Region 23	4.0	-	-	8.0	-	-	75.5	-	-	2.0	-	-
-	Region 24	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 25	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 26	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 27	-	-	-	-	-	-	-	-	-	-	-	-
1	Region 28	3.9	-	-	8.5	-	-	74.1	-	-	2.0	-	-
-	Region 29	-	-	-	-	-	-	-	-	-	-	-	-
2	Region 30	3.9	3.8	3.9	8.3	8.1	8.5	74.8	74.7	74.9	2.1	2.1	2.1
2	Region 31	3.7	3.7	3.7	9.4	9.4	9.4	72.9	72.8	72.9	2.2	2.2	2.2
-	Region 32	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 33	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 34	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 35	-	-	-	-	-	-	-	-	-	-	-	-
1	Region 36	4.1	-	-	8.3	-	-	74.6	-	-	2.1	-	-
18	**Ave. WM3**	**4.0**			**9.0**			**73.9**			**2.2**		
	Min. WM3		**3.6**			**7.8**			**71.4**			**2.0**	
	Max. WM3			**4.4**			**10.4**			**75.5**			**2.4**

TABLE 24: NUTRITIONAL VALUES OF YELLOW MAIZE ACCORDING TO GRADE (2023/24)

Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)			Crude Fibre % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: YM3													
-	Region 06	-	-	-	-	-	-	-	-	-	-	-	-
2	Region 08	3.8	3.6	3.9	8.1	7.9	8.3	75.6	75.1	76.1	2.2	2.1	2.2
-	Region 10	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 11	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 12	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 13	-	-	-	-	-	-	-	-	-	-	-	-
3	Region 14	3.8	3.7	3.8	10.3	10.0	10.8	72.3	71.0	73.4	2.3	2.3	2.3
-	Region 15	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 16	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 17	-	-	-	-	-	-	-	-	-	-	-	-
1	Region 18	4.2	-	-	11.0	-	-	71.2	-	-	2.6	-	-
1	Region 19	4.0	-	-	10.0	-	-	72.8	-	-	2.4	-	-
-	Region 20	-	-	-	-	-	-	-	-	-	-	-	-
2	Region 21	3.5	3.5	3.6	11.0	11.0	11.0	71.4	71.4	71.4	2.4	2.4	2.4
1	Region 22	3.7	-	-	9.4	-	-	73.9	-	-	2.3	-	-
-	Region 23	-	-	-	-	-	-	-	-	-	-	-	-
1	Region 24	3.4	-	-	9.4	-	-	73.5	-	-	2.0	-	-
1	Region 25	4.1	-	-	9.0	-	-	74.1	-	-	2.4	-	-
2	Region 26	3.9	3.9	4.0	10.1	9.2	11.0	72.3	70.1	74.6	2.5	2.3	2.6
-	Region 27	-	-	-	-	-	-	-	-	-	-	-	-
1	Region 28	3.5	-	-	9.7	-	-	73.5	-	-	2.2	-	-
1	Region 29	3.6	-	-	10.4	-	-	72.1	-	-	2.0	-	-
2	Region 30	3.7	3.7	3.8	9.4	8.3	10.5	72.8	71.7	73.9	2.0	1.9	2.1
2	Region 31	3.6	3.5	3.7	10.7	10.5	10.9	71.7	71.7	71.7	2.4	2.3	2.5
2	Region 32	4.0	3.8	4.2	9.0	8.8	9.3	72.9	72.1	73.7	2.2	2.1	2.3
-	Region 33	-	-	-	-	-	-	-	-	-	-	-	-
2	Region 34	3.9	3.8	4.0	8.6	8.2	9.1	74.3	73.8	74.9	2.2	2.1	2.3
1	Region 35	4.0	-	-	8.4	-	-	75.6	-	-	2.3	-	-
2	Region 36	3.6	3.6	3.6	8.7	8.7	8.8	75.2	74.8	75.6	2.2	2.1	2.2
27	**Ave. YM3**	**3.8**			**9.6**			**73.2**			**2.3**		
	Min. YM3		**3.4**			**7.9**			**70.1**			**1.9**	
	Max. YM3			**4.2**			**11.0**			**76.1**			**2.6**

TABLE 23: NUTRITIONAL VALUES OF WHITE MAIZE ACCORDING TO GRADE (2023/24) (continue)

Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)			Crude Fibre % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: COM													
-	Region 06	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 08	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 10	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 11	-	-	-	-	-	-	-	-	-	-	-	-
4	Region 12	4.1	3.7	4.3	9.6	9.1	10.3	73.4	72.6	74.2	2.2	2.1	2.3
-	Region 13	-	-	-	-	-	-	-	-	-	-	-	
4	Region 14	4.0	3.9	4.1	9.6	8.4	10.2	73.1	71.6	75.5	2.2	2.1	2.3
2	Region 15	3.9	3.9	3.9	9.4	8.9	9.9	73.5	72.3	74.6	2.2	2.1	2.2
-	Region 16	-	-	-	-	-	-	-	-	-	-	-	
2	Region 17	3.7	3.6	3.8	9.1	8.2	10.1	74.2	73.6	74.8	2.0	1.9	2.2
2	Region 18	3.8	3.7	3.9	9.1	7.8	10.4	74.4	72.7	76.2	2.3	2.2	2.4
-	Region 19	-	-	-	-	-	-	-	-	-	-	-	
2	Region 20	3.8	3.8	3.9	9.0	8.9	9.1	73.7	73.6	73.7	2.2	2.1	2.3
4	Region 21	4.0	3.8	4.2	9.4	8.9	9.7	73.7	73.2	74.1	2.3	2.3	2.5
6	Region 22	3.9	3.7	4.0	8.5	7.9	9.0	74.9	73.8	75.9	2.2	2.1	2.3
2	Region 23	3.8	3.6	4.0	8.3	8.2	8.3	75.4	75.0	75.9	2.1	2.1	2.2
3	Region 24	4.0	3.7	4.2	9.0	8.0	10.2	73.9	72.1	75.2	2.2	2.1	2.3
-	Region 25	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 26	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 27	-	-	-	-	-	-	-	-	-	-	-	-
1	Region 28	4.1	-	-	11.0	-	-	72.2	-	-	2.4	-	-
2	Region 29	3.7	3.5	3.9	9.0	8.6	9.3	74.4	73.6	75.2	2.3	2.2	2.3
5	Region 30	3.6	3.4	3.6	8.7	8.3	9.4	74.4	73.7	75.1	2.0	1.9	2.2
2	Region 31	3.7	3.7	3.7	9.0	9.0	9.1	73.9	73.9	73.9	2.1	2.1	2.1
1	Region 32	3.9	-	-	7.5	-	-	75.6	-	-	2.1	-	-
3	Region 33	3.8	3.7	3.8	8.6	8.4	9.0	74.4	73.4	74.9	2.0	1.9	2.1
1	Region 34	3.9	-	-	8.2	-	-	76.0	-	-	1.8	-	-
1	Region 35	4.3	-	-	9.5	-	-	72.9	-	-	2.4	-	-
1	Region 36	4.4	-	-	7.6	-	-	76.1	-	-	2.1	-	-
48	Ave. COM	**3.9**			**9.0**			**74.1**			**2.2**		
	MIN. COM		**3.4**			**7.5**			**71.6**			**1.8**	
	Max. COM			**4.4**			**11.0**			**76.2**			**2.5**

TABLE 24: NUTRITIONAL VALUES OF YELLOW MAIZE ACCORDING TO GRADE (2023/24)

Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)			Crude Fibre % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: COM													
-	Region 06	-	-	-	-	-	-	-	-	-	-	-	-
1	Region 08	4.1	-	-	10.1	-	-	72.0	-	-	2.4	-	-
-	Region 10	-	-	-	-	-	-	-	-	-	-	-	-
1	Region 11	3.7	-	-	9.4	-	-	73.4	-	-	2.3	-	-
-	Region 12	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 13	-	-	-	-	-	-	-	-	-	-	-	-
1	Region 14	3.8	-	-	9.5	-	-	74.5	-	-	2.3	-	-
-	Region 15	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 16	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 17	-	-	-	-	-	-	-	-	-	-	-	-
1	Region 18	3.9	-	-	9.2	-	-	73.3	-	-	2.5	-	-
3	Region 19	3.9	3.8	3.9	10.2	9.5	11.0	72.3	70.9	73.7	2.2	2.0	2.4
-	Region 20	-	-	-	-	-	-	-	-	-	-	-	-
3	Region 21	4.0	3.6	4.7	10.0	9.3	10.3	73.3	72.9	73.9	2.2	2.0	2.4
-	Region 22	-	-	-	-	-	-	-	-	-	-	-	-
-	Region 23	-	-	-	-	-	-	-	-	-	-	-	-
1	Region 24	3.7	-	-	10.7	-	-	71.8	-	-	2.4	-	-
-	Region 25	-	-	-	-	-	-	-	-	-	-	-	-
2	Region 26	4.0	3.8	4.3	9.9	8.2	11.6	73.0	71.0	75.1	2.3	2.3	2.3
-	Region 27	-	-	-	-	-	-	-	-	-	-	-	-
4	Region 28	3.9	3.7	4.1	10.1	9.0	10.7	72.5	71.3	74.2	2.2	2.1	2.3
3	Region 29	3.8	3.5	4.2	9.9	9.7	10.3	72.8	72.3	73.4	2.0	1.9	2.2
9	Region 30	3.9	3.4	4.5	8.9	7.9	11.1	73.5	71.5	75.1	2.2	2.0	2.5
11	Region 31	3.8	3.5	4.3	9.6	8.1	10.6	72.8	71.4	74.5	2.2	2.0	2.4
5	Region 32	4.0	3.5	4.4	9.7	9.3	10.1	72.4	71.5	73.3	2.3	2.2	2.4
2	Region 33	3.6	3.5	3.7	8.4	8.0	8.8	74.5	73.6	75.4	2.0	1.9	2.0
6	Region 34	3.7	3.6	4.2	9.7	8.8	10.4	73.3	72.0	74.4	2.3	2.2	2.5
-	Region 35	-	-	-	-	-	-	-	-	-	-	-	-
3	Region 36	3.7	3.7	3.9	8.6	8.3	9.1	74.9	74.3	75.4	2.2	2.1	2.2
56	Ave. COM	**3.8**			**9.5**			**73.1**			**2.2**		
	MIN. COM		**3.4**			**7.9**			**70.9**			**1.9**	
	Max. COM			**4.7**			**11.6**			**75.4**			**2.5**

TABLE 23: NUTRITIONAL VALUES OF WHITE MAIZE ACCORDING TO GRADE (2023/24) (continue)

Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)			Crude Fibre % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
518	Ave. White	3.9			8.9			74.3			2.2		
	Min. White		3.4			6.7			70.5			1.8	
	Max. White			5.2			11.1			77.4			2.5
1000	Ave. Maize	3.9			9.1			73.9			2.2		
	Min. Maize		3.2			6.7			70.0			1.8	
	Max. Maize			5.2			11.6			77.4			2.6

TABLE 24: NUTRITIONAL VALUES OF YELLOW MAIZE ACCORDING TO GRADE (2023/24)

Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)			Crude Fibre % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
482	Ave. Yellow	3.9			9.3			73.5			2.2		
	Min. Yellow		3.2			7.5			70.0			1.8	
	Max. Yellow			4.8			11.6			77.0			2.6
1000	Ave. Maize	3.9			9.1			73.9			2.2		
	Min. Maize		3.2			6.7			70.0			1.8	
	Max. Maize			5.2			11.6			77.4			2.6

TABLE 25: NUTRITIONAL VALUES OF WHITE AND YELLOW MAIZE (2023/24)

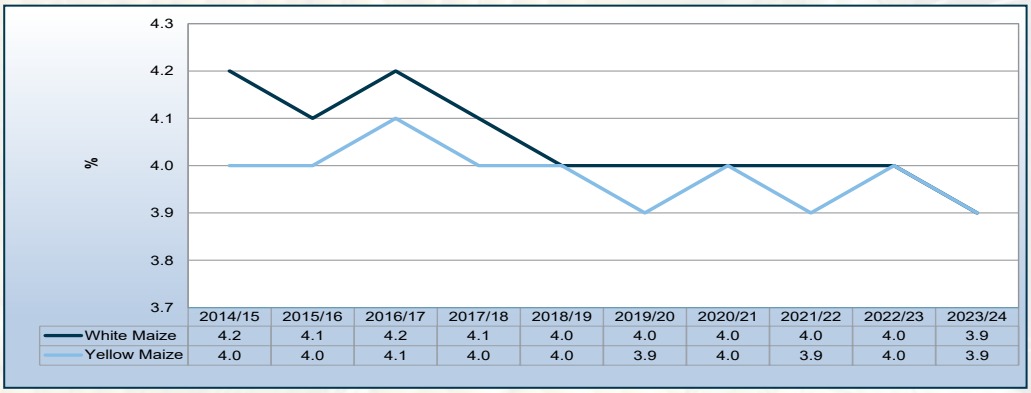
Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)			Crude Fibre % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
WHITE													
17	Region 12	4.2	3.7	4.6	9.6	8.7	10.3	73.4	72.0	75.0	2.2	2.1	2.3
8	Region 13	4.2	3.7	5.2	9.4	8.1	10.6	73.5	71.0	74.6	2.3	2.2	2.4
20	Region 14	3.9	3.5	4.3	9.4	8.4	10.2	73.9	71.6	76.2	2.2	2.1	2.4
13	Region 15	3.9	3.7	4.3	9.1	8.2	10.3	74.4	72.0	76.0	2.2	2.0	2.3
9	Region 16	3.8	3.5	4.1	9.3	8.6	10.1	74.2	73.4	75.7	2.2	2.1	2.3
26	Region 17	4.0	3.5	4.4	9.0	7.4	10.6	74.4	70.9	76.8	2.2	1.9	2.4
24	Region 18	4.0	3.5	4.4	8.7	7.0	10.4	74.8	72.2	77.1	2.2	1.9	2.5
23	Region 19	4.2	3.7	4.6	9.3	7.8	10.4	73.6	71.4	76.5	2.2	2.0	2.5
22	Region 20	3.9	3.6	4.4	9.1	7.8	10.4	73.7	71.7	75.4	2.2	2.1	2.4
27	Region 21	4.0	3.6	4.4	9.1	7.5	10.4	74.1	71.5	76.8	2.2	2.1	2.5
32	Region 22	3.9	3.7	4.2	8.6	6.7	9.6	74.9	73.2	77.4	2.2	2.0	2.5
37	Region 23	3.9	3.6	4.2	8.7	7.7	9.2	74.8	73.4	76.5	2.1	2.0	2.3
28	Region 24	4.0	3.4	4.3	9.1	7.6	10.8	74.0	70.5	76.4	2.3	2.0	2.5
1	Region 25	4.2	-	-	8.5	-	-	74.7	-	-	2.3	-	-
7	Region 26	3.9	3.5	4.2	9.4	7.8	10.9	73.8	71.7	75.7	2.2	2.1	2.3
13	Region 28	3.7	3.4	4.1	9.9	8.2	11.0	73.3	72.0	76.1	2.3	2.0	2.4
33	Region 29	3.8	3.4	4.3	9.1	7.8	11.1	74.0	71.4	76.2	2.2	2.0	2.5
38	Region 30	3.8	3.4	4.3	8.6	7.7	9.5	74.3	73.3	75.5	2.1	1.8	2.3
14	Region 31	3.7	3.5	4.2	9.5	9.0	10.2	73.0	72.0	73.9	2.2	2.1	2.5
16	Region 32	3.8	3.5	4.3	8.8	7.5	9.9	74.1	72.8	75.6	2.2	2.1	2.3
51	Region 33	3.9	3.6	4.2	8.4	7.3	9.2	74.7	73.4	75.8	2.1	1.9	2.3
33	Region 34	3.9	3.5	4.7	8.6	7.4	9.9	74.8	72.3	77.3	2.1	1.8	2.5
10	Region 35	4.2	3.9	4.6	8.6	7.1	10.2	74.0	72.1	75.9	2.2	2.1	2.4
16	Region 36	3.9	3.5	4.5	8.3	7.6	9.2	74.9	73.9	76.6	2.1	2.0	2.2
518	**Ave. white**	**3.9**			**8.9**			**74.3**			**2.2**		
	Min. white		**3.4**			**6.7**			**70.5**			**1.8**	
	Max. white			**5.2**			**11.1**			**77.4**			**2.5**
YELLOW													
5	Region 06	3.7	3.5	3.9	8.1	7.6	8.3	75.0	74.9	75.3	2.2	2.1	2.3
14	Region 08	4.0	3.6	4.4	9.1	7.9	10.1	74.2	72.0	76.1	2.1	1.8	2.4
16	Region 10	3.9	3.5	4.1	8.3	7.7	9.0	75.7	73.1	77.0	2.1	2.0	2.3
12	Region 11	3.8	3.4	4.1	8.6	8.1	9.4	74.9	73.4	76.2	2.2	2.0	2.3
2	Region 12	4.3	4.1	4.6	9.0	9.0	9.1	74.1	73.9	74.3	2.1	1.8	2.4
2	Region 13	4.0	3.9	4.1	9.6	9.2	10.0	72.9	72.2	73.6	2.3	2.2	2.4
8	Region 14	3.9	3.7	4.2	9.8	8.7	10.8	73.3	71.0	75.3	2.2	2.0	2.3
7	Region 15	4.1	4.0	4.2	8.7	8.4	8.9	74.3	73.5	75.5	2.2	2.0	2.4
6	Region 17	4.0	3.8	4.4	9.3	8.7	10.7	73.8	71.6	75.0	2.2	2.1	2.3
8	Region 18	3.8	3.4	4.2	9.2	8.5	11.0	73.9	71.2	75.3	2.2	1.9	2.6
14	Region 19	4.1	3.8	4.4	9.5	8.2	11.0	73.4	70.9	75.0	2.2	2.0	2.5
6	Region 20	3.8	3.6	3.9	8.8	7.8	9.3	74.1	72.9	75.4	2.1	2.0	2.3
6	Region 21	3.8	3.5	4.7	10.6	9.3	11.4	72.1	70.0	73.9	2.3	2.0	2.4
3	Region 22	3.9	3.7	4.0	9.0	8.3	9.4	74.1	73.9	74.4	2.3	2.3	2.3
14	Region 24	3.8	3.4	4.2	9.1	7.6	10.7	74.2	71.8	76.4	2.2	2.0	2.4
12	Region 25	3.9	3.4	4.3	9.1	8.3	10.2	74.1	73.2	75.1	2.3	2.0	2.4

TABLE 25: NUTRITIONAL VALUES OF WHITE AND YELLOW MAIZE (2023/24) (continue)

Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)			Crude Fibre % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
YELLOW													
15	Region 26	3.9	3.5	4.3	9.6	7.9	11.6	73.2	70.1	75.1	2.3	2.2	2.6
5	Region 27	3.9	3.7	4.0	9.7	8.2	10.5	72.8	71.2	74.5	2.1	2.1	2.2
44	Region 28	3.8	3.3	4.7	9.5	8.1	10.8	73.2	71.0	76.2	2.2	2.0	2.5
41	Region 29	3.8	3.2	4.3	9.9	8.7	11.2	72.7	70.3	75.5	2.1	1.9	2.5
43	Region 30	3.9	3.3	4.8	9.1	7.9	11.3	73.3	70.3	75.1	2.1	1.8	2.5
65	Region 31	3.8	3.4	4.5	9.8	8.1	11.3	72.8	70.8	74.5	2.2	1.9	2.5
49	Region 32	3.9	3.3	4.5	9.5	8.0	10.5	72.9	71.5	75.3	2.2	1.9	2.6
29	Region 33	4.0	3.5	4.6	8.8	7.6	9.6	73.8	72.3	75.6	2.1	1.8	2.3
26	Region 34	3.8	3.4	4.2	9.2	8.0	10.9	74.0	71.4	75.6	2.1	1.9	2.5
7	Region 35	4.1	4.0	4.3	9.2	7.8	10.6	73.6	70.7	75.6	2.3	2.1	2.4
23	Region 36	3.9	3.6	4.3	8.4	7.5	9.6	74.8	72.9	76.2	2.1	2.0	2.3
482	**Ave. white**	**3.9**			**9.3**			**73.5**			**2.2**		
	Min. white		**3.2**			**7.5**			**70.0**			**1.8**	
	Max. white			**4.8**			**11.6**			**77.0**			**2.6**
WHITE AND YELLOW													
5	Region 6	3.7	3.5	3.9	8.1	7.6	8.3	75.0	74.9	75.3	2.2	2.1	2.3
14	Region 8	4.0	3.6	4.4	9.1	7.9	10.1	74.2	72.0	76.1	2.1	1.8	2.4
16	Region 10	3.9	3.5	4.1	8.3	7.7	9.0	75.7	73.1	77.0	2.1	2.0	2.3
12	Region 11	3.8	3.4	4.1	8.6	8.1	9.4	74.9	73.4	76.2	2.2	2.0	2.3
19	Region 12	4.2	3.7	4.6	9.5	8.7	10.3	73.4	72.0	75.0	2.2	1.8	2.4
10	Region 13	4.2	3.7	5.2	9.4	8.1	10.6	73.4	71.0	74.6	2.3	2.2	2.4
28	Region 14	3.9	3.5	4.3	9.5	8.4	10.8	73.8	71.0	76.2	2.2	2.0	2.4
20	Region 15	3.9	3.7	4.3	9.0	8.2	10.3	74.4	72.0	76.0	2.2	2.0	2.4
9	Region 16	3.8	3.5	4.1	9.3	8.6	10.1	74.2	73.4	75.7	2.2	2.1	2.3
32	Region 17	4.0	3.5	4.4	9.1	7.4	10.7	74.3	70.9	76.8	2.2	1.9	2.4
32	Region 18	3.9	3.4	4.4	8.8	7.0	11.0	74.6	71.2	77.1	2.2	1.9	2.6
37	Region 19	4.1	3.7	4.6	9.4	7.8	11.0	73.5	70.9	76.5	2.2	2.0	2.5
28	Region 20	3.8	3.6	4.4	9.0	7.8	10.4	73.8	71.7	75.4	2.2	2.0	2.4
33	Region 21	3.9	3.5	4.7	9.4	7.5	11.4	73.7	70.0	76.8	2.3	2.0	2.5
35	Region 22	3.9	3.7	4.2	8.6	6.7	9.6	74.8	73.2	77.4	2.2	2.0	2.5
37	Region 23	3.9	3.6	4.2	8.7	7.7	9.2	74.8	73.4	76.5	2.1	2.0	2.3
42	Region 24	3.9	3.4	4.3	9.1	7.6	10.8	74.1	70.5	76.4	2.2	2.0	2.5
13	Region 25	3.9	3.4	4.3	9.0	8.3	10.2	74.2	73.2	75.1	2.3	2.0	2.4
22	Region 26	3.9	3.5	4.3	9.6	7.8	11.6	73.4	70.1	75.7	2.3	2.1	2.6
5	Region 27	3.9	3.7	4.0	9.7	8.2	10.5	72.8	71.2	74.5	2.1	2.1	2.2
57	Region 28	3.8	3.3	4.7	9.6	8.1	11.0	73.2	71.0	76.2	2.2	2.0	2.5
74	Region 29	3.8	3.2	4.3	9.6	7.8	11.2	73.3	70.3	76.2	2.1	1.9	2.5
81	Region 30	3.8	3.3	4.8	8.9	7.7	11.3	73.8	70.3	75.5	2.1	1.8	2.5
79	Region 31	3.8	3.4	4.5	9.7	8.1	11.3	72.9	70.8	74.5	2.2	1.9	2.5
65	Region 32	3.9	3.3	4.5	9.4	7.5	10.5	73.2	71.5	75.6	2.2	1.9	2.6
80	Region 33	3.9	3.5	4.6	8.5	7.3	9.6	74.4	72.3	75.8	2.1	1.8	2.3
59	Region 34	3.9	3.4	4.7	8.9	7.4	10.9	74.4	71.4	77.3	2.1	1.8	2.5
17	Region 35	4.1	3.9	4.6	8.9	7.1	10.6	73.8	70.7	75.9	2.2	2.1	2.4
39	Region 36	3.9	3.5	4.5	8.3	7.5	9.6	74.8	72.9	76.6	2.1	2.0	2.3
1000	**Ave. white**	**3.9**			**9.1**			**73.9**			**2.2**		
	Min. white		**3.2**			**6.7**			**70.0**			**1.8**	
	Max. white			**5.2**			**11.6**			**77.4**			**2.6**

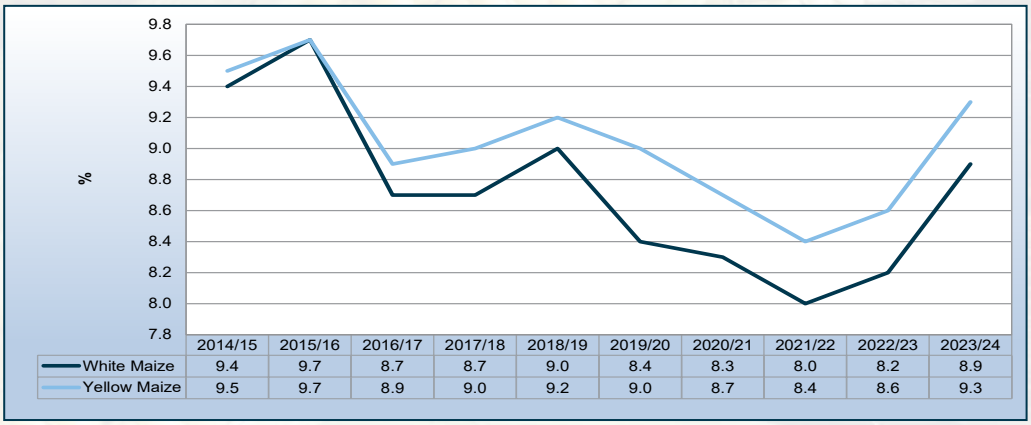
TABLE 26: NUTRITIONAL VALUES OF SOUTH AFRICAN WHITE AND YELLOW MAIZE 2014/15 - 2023/24

Season	Number of samples	Fat % (db)			Protein % (db)			Starch % (db)			Crude Fibre % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
White Maize													
2014/15	485	4.2	3.3	5.8	9.4	6.3	11.2	72.6	69.8	74.9	-	-	-
2015/16	415	4.1	3.5	5.2	9.7	7.5	12.2	72.6	69.8	76.3	-	-	-
2016/17	549	4.2	3.4	5.3	8.7	6.8	11.5	74.1	69.8	75.9	-	-	-
2017/18	451	4.1	3.4	5.0	8.7	6.8	11.2	73.2	69.4	74.8	-	-	-
2018/19	404	4.0	3.0	5.3	9.0	7.4	12.3	73.6	69.7	75.4	1.9	1.7	2.8
2019/20	516	4.0	3.4	5.0	8.4	6.7	11.7	73.2	69.6	74.9	1.9	1.6	2.6
2020/21	560	4.0	3.4	5.1	8.3	6.0	11.3	75.5	71.4	77.3	2.3	2.1	2.5
2021/22	524	4.0	3.3	5.2	8.0	6.1	10.0	76.0	72.8	76.9	2.2	1.7	2.7
2022/23	520	4.0	3.4	5.3	8.2	6.4	10.5	75.1	71.1	76.7	2.1	1.8	2.4
2023/24	518	3.9	3.4	5.2	8.9	6.7	11.1	74.3	70.5	77.4	2.2	1.8	2.5
Weighted Average		**4.0**			**8.7**			**74.1**			**2.4**		
Minimum			**3.0**			**6.0**			**69.4**			**1.6**	
Maximum				**5.8**			**12.3**			**77.4**			**2.8**
Yellow Maize													
2014/15	515	4.0	3.1	5.1	9.5	7.1	11.9	72.9	70.8	75.2	-	-	-
2015/16	505	4.0	3.3	5.1	9.7	7.7	12.6	72.3	70.0	75.3	-	-	-
2016/17	451	4.1	3.3	5.1	8.9	7.1	10.8	73.7	71.3	76.2	-	-	-
2017/18	449	4.0	3.2	5.0	9.0	6.7	11.3	72.0	68.5	74.6	-	-	-
2018/19	404	4.0	3.3	5.0	9.2	6.7	11.4	72.7	70.2	75.2	2.0	1.6	2.3
2019/20	374	3.9	3.3	4.6	9.0	7.0	10.9	72.3	68.3	74.9	1.9	1.6	2.5
2020/21	440	4.0	3.2	5.1	8.7	7.1	10.3	74.7	71.9	76.5	2.3	2.0	2.6
2021/22	476	3.9	3.3	4.7	8.4	6.4	10.0	75.1	72.4	76.8	2.3	1.7	2.7
2022/23	480	4.0	3.3	4.9	8.6	6.6	10.6	73.9	70.8	76.5	2.2	1.8	2.6
2023/24	482	3.9	3.2	4.8	9.3	7.5	11.6	73.5	70.0	77.0	2.2	1.8	2.6
Weighted Average		**4.0**			**9.0**			**73.3**			**2.5**		
Minimum			**3.1**			**6.4**			**68.3**			**1.6**	
Maximum				**5.1**			**12.6**			**77.0**			**2.7**
White and Yellow Maize													
2014/15	1000	4.1	3.1	5.8	9.4	6.3	11.9	72.8	69.8	75.2	-	-	-
2015/16	920	4.1	3.3	5.2	9.7	7.5	12.6	72.4	69.8	76.3	-	-	-
2016/17	1000	4.1	3.3	5.3	8.8	6.8	11.5	73.9	69.8	76.2	-	-	-
2017/18	900	4.0	3.2	5.0	8.8	6.7	11.3	72.6	68.5	74.8	-	-	-
2018/19	808	4.0	3.0	5.3	9.1	6.7	12.3	73.2	69.7	75.4	1.9	1.6	2.8
2019/20	890	4.0	3.3	5.0	8.7	6.7	11.7	72.8	68.3	74.9	1.9	1.6	2.6
2020/21	1000	4.0	3.2	5.1	8.5	6.0	11.3	75.2	71.4	77.3	2.3	2.0	2.6
2021/22	1000	3.9	3.3	5.2	8.2	6.1	10.0	75.6	72.4	76.9	2.2	1.7	2.7
2022/23	1000	4.0	3.3	5.3	8.4	6.4	10.6	74.5	70.8	76.7	2.1	1.8	2.6
2023/24	1000	3.9	3.2	5.2	9.1	6.7	11.6	73.9	70.0	77.4	2.2	1.8	2.6
Weighted Average		**4.0**			**8.9**			**73.7**			**2.5**		
Minimum			**3.0**			**6.0**			**68.3**			**1.6**	
Maximum				**5.8**			**12.6**			**77.4**			**2.8**



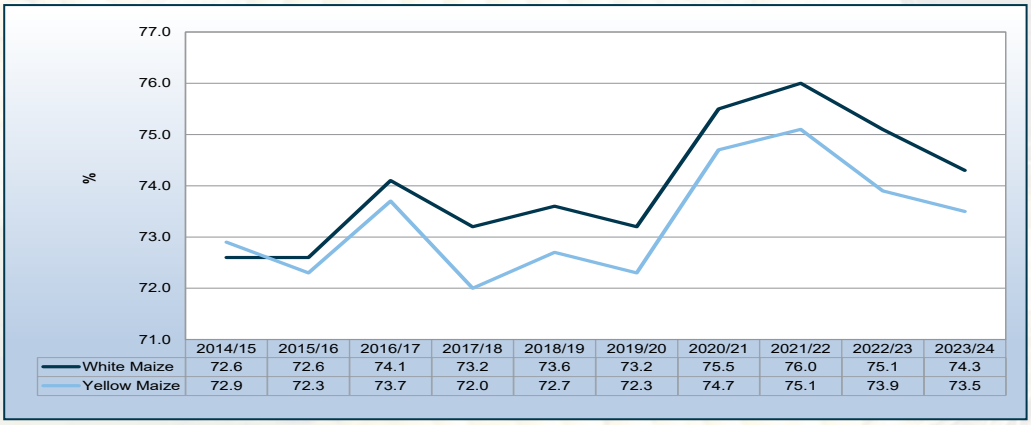
	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
White Maize	4.2	4.1	4.2	4.1	4.0	4.0	4.0	4.0	4.0	3.9
Yellow Maize	4.0	4.0	4.1	4.0	4.0	3.9	4.0	3.9	4.0	3.9

Graph 49: Fat content of white and yellow maize over 10 seasons



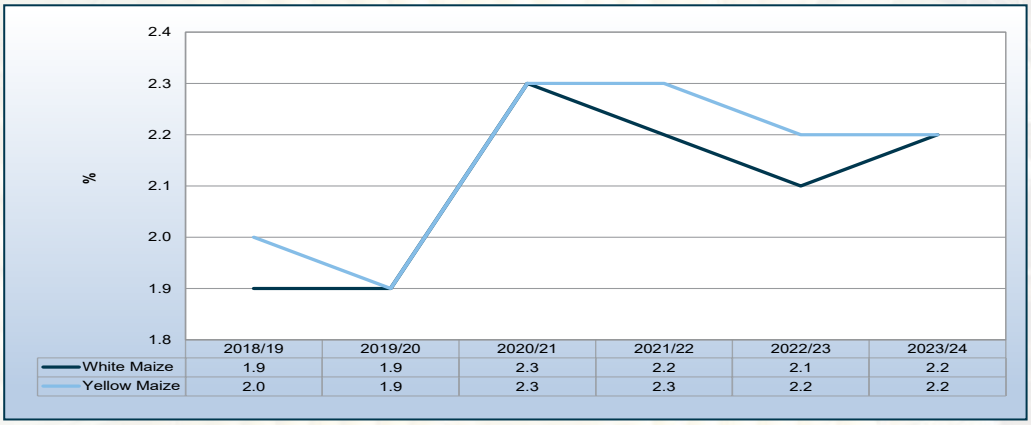
	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
White Maize	9.4	9.7	8.7	8.7	9.0	8.4	8.3	8.0	8.2	8.9
Yellow Maize	9.5	9.7	8.9	9.0	9.2	9.0	8.7	8.4	8.6	9.3

Graph 50: Protein content of white and yellow maize over 10 seasons



	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
White Maize	72.6	72.6	74.1	73.2	73.6	73.2	75.5	76.0	75.1	74.3
Yellow Maize	72.9	72.3	73.7	72.0	72.7	72.3	74.7	75.1	73.9	73.5

Graph 51: Starch content of white and yellow maize over 10 seasons



	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
White Maize	1.9	1.9	2.3	2.2	2.1	2.2
Yellow Maize	2.0	1.9	2.3	2.3	2.2	2.2

Graph 52: Crude Fibre content of white and yellow maize over 6 seasons

Mycotoxins

The results of fourteen mycotoxins, including aflatoxin B_1, B_2, G_1 and G_2 (AFLA Total), fumonisin B_1, B_2 and B_3 (FUM Total), deoxynivalenol (DON), 15-acetyl-deoxynivalenol (15-ADON), ochratoxin A, T2-toxin, H-T2 toxin, zearalenone (ZON), and diplodiatoxin, are reported in 350 maize samples selected from the 1000 maize crop samples of the 2023/24 season. This is the first year that we also include results for diplodiatoxin. It should be noted that the levels for diplodiatoxin should be seen as indicative values as the analyses are not validated due to the lack of certified reference materials for this mycotoxin. Levels of 15-ADON, the acetylated derivative of DON, are commonly associated with DON levels and are typically found when samples contain DON. For the purpose of this report, 15-ADON levels were not discussed.

Multi-mycotoxin monitoring in locally produced maize has been included in the maize crop quality survey since the 2010/11 maize production season, thus for a total of fourteen seasons to date. The samples were representatively selected for white and yellow maize from all the production regions, representing approximately 35 - 40 % of the survey samples.

Number of samples analysed over the fourteen seasons

Since the onset of mycotoxin analyses in the maize quality monitoring program in 2010, a total of 4 127 maize samples have been analysed. During the first three seasons, fewer samples were analysed. As the annual crop quality program matured, the number of samples was increased to 350 per year for the last eleven years (Table 27). The majority of samples were analysed from the Mpumalanga, Free State, and North West production regions. More yellow maize samples were analysed from Mpumalanga, KwaZulu Natal, and Northern Cape, while more white maize samples were analysed for the Free State, North West, Gauteng, and Limpopo production regions. The fewest samples were analysed form the Western and eastern Cape regions, which are not typically considered as maize production regions. For these two provinces, only yellow maize samples were analysed.

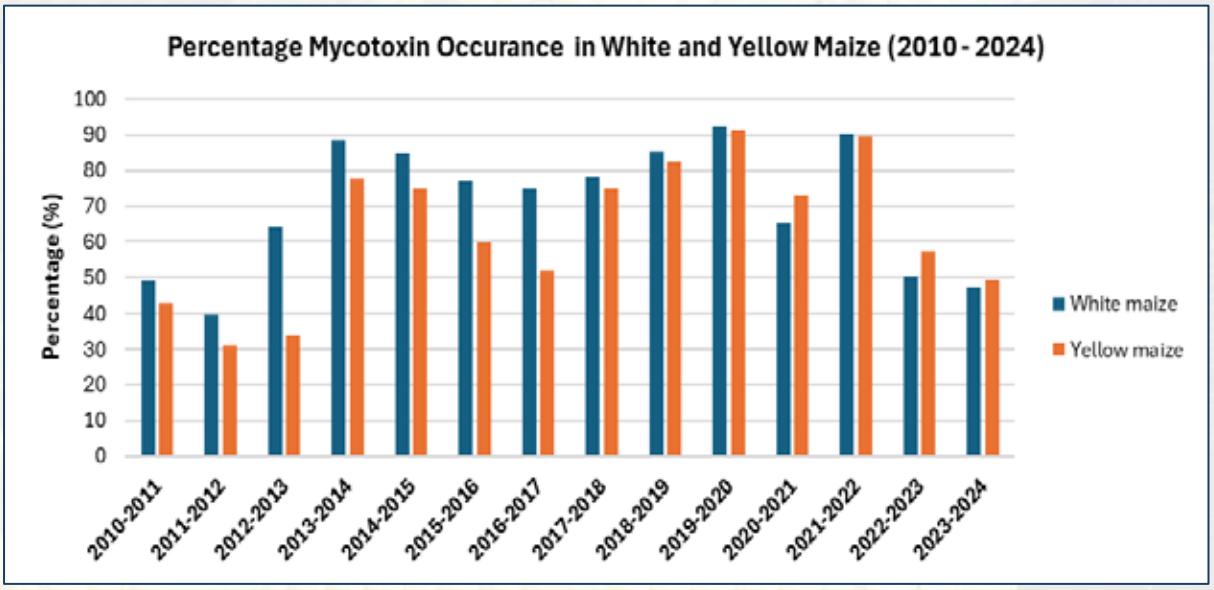
Table 27. Number of white and yellow maize samples analysed from the nine provinces over fourteen production seasons from 2010 to 2024

Region	Maize	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
Western Cape (Region 1-6)	White	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Yellow	0	0	0	0	0	1	0	0	1	0	0	0	2	3
Eastern Cape (Region 7-9)	White	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Yellow	0	0	0	0	0	4	0	0	0	1	0	3	3	4
Northern Cape (Region 10 -11)	White	0	0	1	0	1	1	2	3	2	3	2	1	1	0
	Yellow	2	3	3	5	9	17	14	9	16	10	8	13	13	10
North West (Region 12 - 20)	White	20	25	10	33	53	48	42	68	50	72	54	65	65	53
	Yellow	13	9	9	26	51	25	27	46	27	29	32	36	32	31
Free State (Region 21 - 28)	White	19	17	23	63	32	26	54	36	51	80	50	58	51	49
	Yellow	7	11	10	51	29	32	45	31	45	41	39	37	45	38
Mpumalanga (Region 29 -33)	White	4	11	14	45	60	48	52	43	42	27	59	37	41	59
	Yellow	5	17	16	80	71	80	59	63	52	47	61	49	49	62
Gauteng (Region 34)	White	2	3	5	13	12	11	14	12	12	9	11	10	11	9
	Yellow	0	1	3	12	11	13	14	12	14	8	12	10	10	10
Limpopo (Region 35)	White	1	1	1	3	2	10	4	6	8	2	2	6	6	6
	Yellow	0	0	1	3	2	6	3	4	7	4	2	6	5	3
KwaZulu Natal (Region 36)	White	3	1	2	8	8	12	11	7	10	7	8	8	7	6
	Yellow	1	1	2	8	9	16	9	10	13	10	10	11	9	7
Total White Maize Samples		**49**	**58**	**56**	**165**	**168**	**156**	**179**	**175**	**175**	**200**	**186**	**185**	**182**	**182**
Total Yellow Maize Samples		**28**	**42**	**44**	**185**	**182**	**194**	**171**	**175**	**175**	**150**	**164**	**165**	**168**	**168**
Total Samples		**77**	**100**	**100**	**350**	**350**	**350**	**350**	**350**	**350**	**350**	**350**	**350**	**350**	**350**

Number of samples that tested positive for at least one mycotoxin over the fourteen seasons

As shown in Graph 53, the percentage of white maize that tested positive for at least one mycotoxin was higher than that for yellow maize from the 2010/11 to the 2019/20 production seasons. Starting in the 2020/21 season, this trend changed, with a higher percentage of yellow maize testing positive. It should be noted that the percentages for both white and yellow maize that tested positive were similar in the 2019/20 season. For the current production season, the percentages of white and yellow maize that tested positive for at least one mycotoxin were the lowest since the 2013/14 season, during which a consistent number of samples (350) were analysed.

The highest percentage of maize that tested positive were during the 2019/20 and 2021/22 seasons, where more than 90 % of the samples tested positive.



Graph 53. The percentage white and yellow maize tested positive for at least one mycotoxin over fourteen seasons from 2010 to 2024

The mean mycotoxin concentrations in white and yellow maize over fourteen production seasons, from the 2010/11 to 2023/24 production seasons will be discussed. The mean concentrations are calculated for samples that tested positive. The report will first provide a summary of all the production regions, followed by a detailed analysis of each of the nine individual provinces. Diplodiatoxin was only analysed in the last six seasons from the 2018/19 season.

All production regions

The mean mycotoxin concentrations in white and yellow maize from all the production regions over fourteen seasons from 2010 to 2024 are shown in Graph 54. The maximum mycotoxin concentrations (µg/kg) in white and yellow maize samples in Tables 28 and 29, respectively.

Aflatoxins were detected in two maize samples (one white and one yellow) analysed during the current season with concentrations of 41 µg/kg and 45 µg/kg, respectively. Both these values exceed the maximum allowable level for certain farm feeds and human consumption.

The mean total FUM concentration for white maize was 285 µg/kg. While this level is higher than the 132 µg/kg reported in the previous season, it remains lower than the average concentration over the thirteen seasons. The mean total FUM concentration for yellow maize was 223 µg/kg, this level is the lowest concentration over the thirteen seasons. The mean DON concentration in white maize was 316 µg/kg and 230 µg/kg in yellow maize. These levels were lower than the past seven

seasons. None of the samples contained FUM or DON higher than the South African regulated maximum allowable level for farm feed or human consumption during the current season.

The mean ZON concentration in white maize was 43 µg/kg and concentrations appear to be constant over the past twelve seasons, ranging from 31 to 90 µg/kg. The mean ZON concentration in yellow maize was 62 µg/kg, lower than levels reported for the previous two seasons. In the first three seasons from 2010 to 2013, no ZON was detected in yellow maize, since then levels ranged from 33 to 131 µg/kg.

The mean diplodiatoxin concentration was 123 µg/kg in white maize, which was lower than the previous two seasons. Yellow maize had a mean diplodiatoxin concentration of 222 µg/kg. There appears to be an increase in diplodiatoxin in yellow maize over the last six seasons.

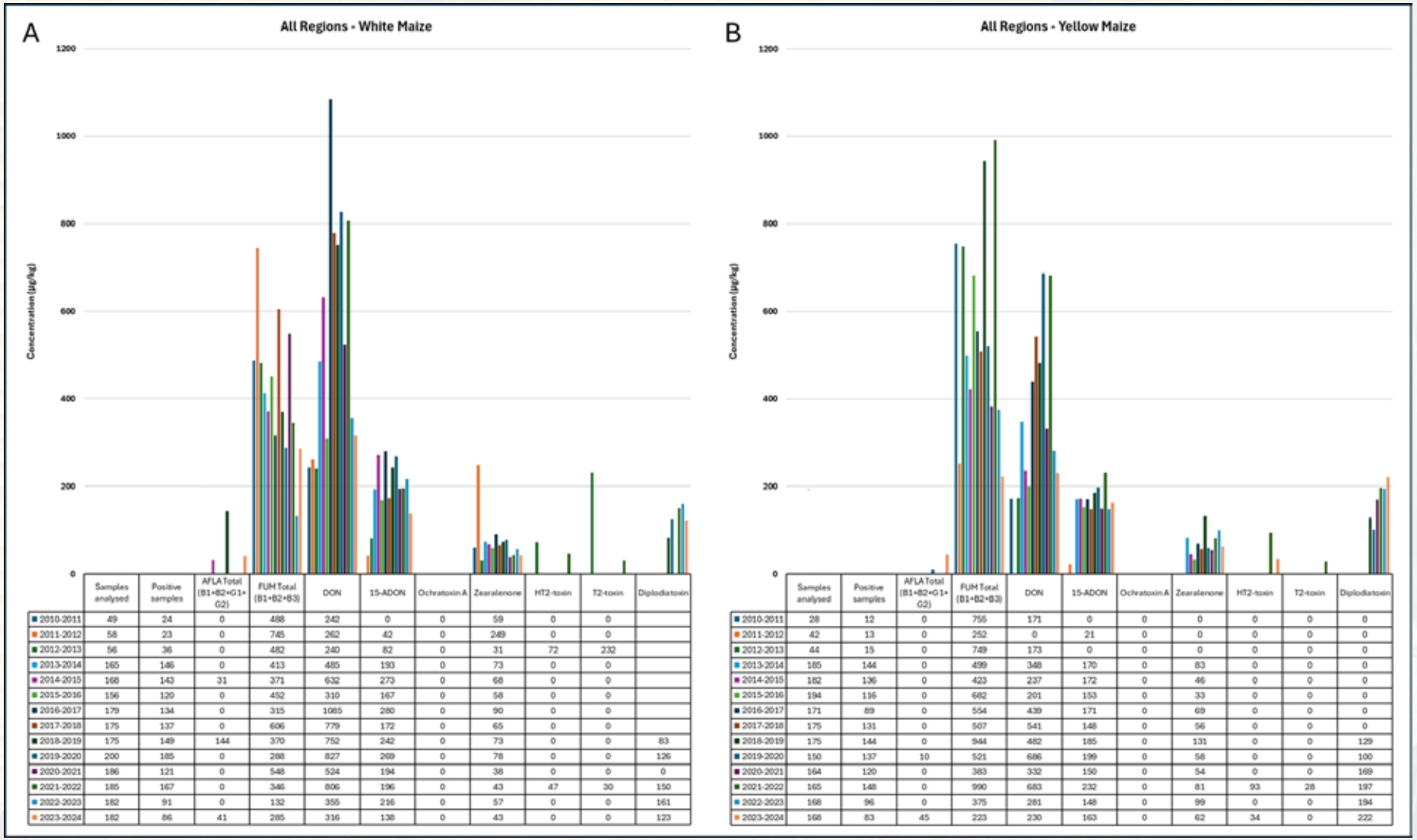
Considering the data from the last fourteen production seasons, the maize samples analysed as part of the annual crop quality survey show that they are predominantly contaminated by DON, 15-ADON, FUM, diplodiatoxin, and ZON in both white and yellow maize. DON concentrations seem to be slightly higher in white maize compared to the levels reported in yellow maize. Although ochratoxin A was not detected in any maize samples over the past fourteen years, infrequent detection of Aflatoxin (AFLA), HT2-toxin, and T2-toxin occurred.

Table 28. The maximum mycotoxin concentrations (µg/kg) in white maize samples analysed for all production regions

Season	Samples analysed	AFLA Total (B_1+B_2+G_1+G_2)	FUM Total (B_1+B_2+B_3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodia-toxin
2010-2011	49	-	1341	883	-	-	187	-	-	
2011-2012	58	-	4419	485	85	-	297	-	-	
2012-2013	56	-	1600	617	82	-	41	72	232	
2013-2014	165	-	2927	6134	861	-	445	-	-	
2014-2015	168	48	1809	9736	1768	-	337	-	-	
2015-2016	156	-	6865	1585	310	-	127	-	-	
2016-2017	179	-	3913	7698	964	-	399	-	-	
2017-2018	175	-	8356	3510	394	-	361	-	-	
2018-2019	175	143	7341	11181	737	-	271	-	-	319
2019-2020	200	-	3911	7700	1173	-	539	-	-	663
2020-2021	186	-	5373	3256	571	-	101	-	-	0
2021-2022	185	-	1333	3934	491	-	143	47	30	595
2022-2023	182	-	557	2061	379	-	107	-	-	560
2023-2024	182	41	1805	908	154	-	107	-	-	402

Table 29. The maximum mycotoxin concentrations (µg/kg) in yellow maize samples analysed for all production regions

Season	Samples analysed	AFLA Total (B_1+B_2+G_1+G_2)	FUM Total (B_1+B_2+B_3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodia-toxin
2010-2011	28	-	1401	222	-	-	-	-	-	
2011-2012	42	-	720	-	21	-	-	-	-	
2012-2013	44	-	4395	184	-	-	-	-	-	
2013-2014	185	-	5357	2601	300	-	354	-	-	
2014-2015	182	-	3382	851	238	-	124	-	-	
2015-2016	194	-	11347	640	184	-	44	-	-	
2016-2017	171	-	6059	1552	381	-	113	-	-	
2017-2018	175	-	6082	2348	263	-	121	-	-	
2018-2019	175	-	34740	3256	593	-	957	-	-	1235
2019-2020	150	10	5928	5060	768	-	243	-	-	360
2020-2021	164	-	2648	2169	309	-	56	-	-	312
2021-2022	165	-	18301	6879	1115	-	428	93	28	1347
2022-2023	168	-	3127	2205	255	-	328	-	-	777
2023-2024	168	45	1339	741	262	-	113	34	-	2389



	Samples analysed	Positive samples	AFLA Total (B1+B2+G1+G2)	FUM Total (B1+B2+B3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodiatoxin
2010-2011	49	24	0	488	242	0	0	59	0	0	
2011-2012	58	23	0	745	262	42	0	249	0	0	
2012-2013	56	36	0	482	240	82	0	31	72	232	
2013-2014	165	146	0	413	485	193	0	73	0	0	
2014-2015	168	143	31	371	632	273	0	68	0	0	
2015-2016	156	120	0	452	310	167	0	58	0	0	
2016-2017	179	134	0	315	1085	280	0	90	0	0	
2017-2018	175	137	0	606	779	172	0	65	0	0	
2018-2019	175	149	144	370	752	242	0	73	0	0	83
2019-2020	200	185	0	288	827	269	0	78	0	0	126
2020-2021	186	121	0	548	524	194	0	38	0	0	0
2021-2022	185	167	0	346	806	196	0	43	47	30	150
2022-2023	182	91	0	132	355	216	0	57	0	0	161
2023-2024	182	86	41	285	316	138	0	43	0	0	123

	Samples analysed	Positive samples	AFLA Total (B1+B2+G1+G2)	FUM Total (B1+B2+B3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodiatoxin
2010-2011	28	12	0	755	171	0	0	0	0	0	0
2011-2012	42	13	0	252	0	21	0	0	0	0	0
2012-2013	44	15	0	749	173	0	0	0	0	0	0
2013-2014	185	144	0	499	348	170	0	83	0	0	0
2014-2015	182	136	0	423	237	172	0	46	0	0	0
2015-2016	194	116	0	682	201	153	0	33	0	0	0
2016-2017	171	89	0	554	439	171	0	69	0	0	0
2017-2018	175	131	0	507	541	148	0	56	0	0	0
2018-2019	175	144	0	944	482	185	0	131	0	0	129
2019-2020	150	137	10	521	686	199	0	58	0	0	100
2020-2021	164	120	0	383	332	150	0	54	0	0	169
2021-2022	165	148	0	990	683	232	0	81	93	28	197
2022-2023	168	96	0	375	281	148	0	99	0	0	194
2023-2024	168	83	45	223	230	163	0	62	34	0	222

Graph 54. The mean mycotoxin concentrations in white maize (A) and yellow maize (B) from all production regions over fourteen seasons from 2010 to 2024

Western Cape (Region 1 - 6) and Eastern Cape (Region 7 - 9)

The mean mycotoxin concentrations in yellow maize from the Western Cape and Eastern Cape regions over fourteen seasons from 2010 to 2024 are shown in Graph 55, and the maximum mycotoxin concentrations (µg/kg) in yellow maize samples in Tables 30 and 31, respectively.

In total only 7 and 15 yellow maize samples were analysed for the Western and Eastern Cape, respectively; no white maize samples were analysed for mycotoxins.

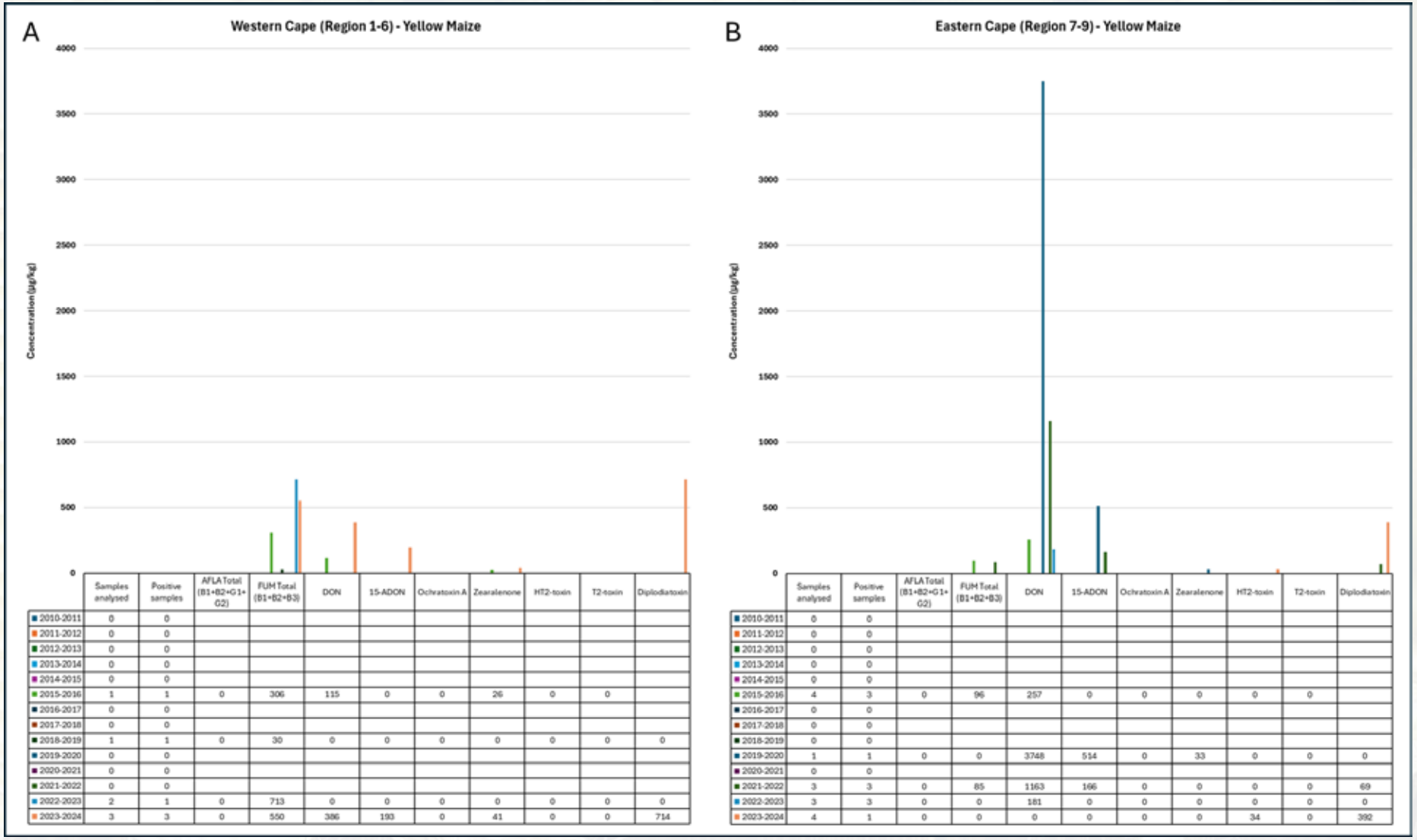
The mean concentrations for the total FUM, DON, and ZON in the yellow maize samples for the Western Cape were 550 µg/kg, 386 µg/kg, and 41 µg/kg respectively. No FUM, DON, or ZON were detected in the yellow maize samples from the Eastern Cape. The HT2-toxin concentration in a single sample from the Eastern Cape was 34 µg/kg. The mean diplodiatoxin concentrations were 714 µg/kg and 392 µg/kg for the Western and Eastern Cape regions respectively.

Table 30. The maximum mycotoxin concentrations (µg/kg) in yellow maize samples analysed for the Western Cape (Region 1 - 6)

Season	Samples analysed	AFLA Total ($B_1+B_2+G_1+G_2$)	FUM Total ($B_1+B_2+B_3$)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodia-toxin
2010-2011	0	-	-	-	-	-	-	-	-	
2011-2012	0	-	-	-	-	-	-	-	-	
2012-2013	0	-	-	-	-	-	-	-	-	
2013-2014	0	-	-	-	-	-	-	-	-	
2014-2015	0	-	-	-	-	-	-	-	-	
2015-2016	1	-	306	115	-	-	26	-	-	
2016-2017	0	-	-	-	-	-	-	-	-	
2017-2018	0	-	-	-	-	-	-	-	-	
2018-2019	1	-	30	-	-	-	-	-	-	-
2019-2020	0	-	-	-	-	-	-	-	-	-
2020-2021	0	-	-	-	-	-	-	-	-	-
2021-2022	0	-	-	-	-	-	-	-	-	-
2022-2023	2	-	713	-	-	-	-	-	-	-
2023-2024	3	-	1339	708	262	-	41	-	-	714

Table 31. The maximum mycotoxin concentrations (µg/kg) in yellow maize samples analysed for the Easten Cape (Region 7 - 8)

Season	Samples analysed	AFLA Total ($B_1+B_2+G_1+G_2$)	FUM Total ($B_1+B_2+B_3$)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodia-toxin
2010-2011	0	-	-	-	-	-	-	-	-	
2011-2012	0	-	-	-	-	-	-	-	-	
2012-2013	0	-	-	-	-	-	-	-	-	
2013-2014	0	-	-	-	-	-	-	-	-	
2014-2015	0	-	-	-	-	-	-	-	-	
2015-2016	4	-	143	439	-	-	-	-	-	
2016-2017	0	-	-	-	-	-	-	-	-	
2017-2018	0	-	-	-	-	-	-	-	-	
2018-2019	0	-	-	-	-	-	-	-	-	-
2019-2020	1	-	-	3748	514	-	33	-	-	-
2020-2021	0	-	-	-	-	-	-	-	-	-
2021-2022	3	-	85	2001	220	-	-	-	-	69
2022-2023	3	-	-	241	-	-	-	-	-	-
2023-2024	4	-	-	-	-	-	-	34	-	392



	Samples analysed	Positive samples	AFLA Total (B1+B2+G1+G2)	FUM Total (B1+B2+B3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodiatoxin
2010-2011	0	0									
2011-2012	0	0									
2012-2013	0	0									
2013-2014	0	0									
2014-2015	0	0									
2015-2016	1	1	0	306	115	0	0	26	0	0	
2016-2017	0	0									
2017-2018	0	0									
2018-2019	1	1	0	30	0	0	0	0	0	0	0
2019-2020	0	0									
2020-2021	0	0									
2021-2022	0	0									
2022-2023	2	1	0	713	0	0	0	0	0	0	0
2023-2024	3	3	0	550	386	193	0	41	0	0	714

	Samples analysed	Positive samples	AFLA Total (B1+B2+G1+G2)	FUM Total (B1+B2+B3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodiatoxin
2010-2011	0	0									
2011-2012	0	0									
2012-2013	0	0									
2013-2014	0	0									
2014-2015	0	0									
2015-2016	4	3	0	96	257	0	0	0	0	0	
2016-2017	0	0									
2017-2018	0	0									
2018-2019	0	0									
2019-2020	1	1	0	0	3748	514	0	33	0	0	0
2020-2021	0	0									
2021-2022	3	3	0	85	1163	166	0	0	0	0	69
2022-2023	3	3	0	0	181	0	0	0	0	0	0
2023-2024	4	1	0	0	0	0	0	0	34	0	392

Graph 55. The mean mycotoxin concentrations in yellow maize from the Western Cape (A) and Eastern Cape (B) regions over fourteen seasons from 2010 to 2024

Northern Cape (Region 10 - 11)

The mean mycotoxin concentrations in white and yellow maize from the Northern Cape regions over fourteen seasons from 2010 to 2024 are shown in Graph 56, and the maximum mycotoxin concentrations (µg/kg) in white and yellow maize samples in Tables 32 and 33, respectively.

Over the past fourteen seasons, 17 white maize and 132 yellow maize samples were analysed for mycotoxins. No white maize samples were analysed this season.

The mean FUM concentration of 161 µg/kg in yellow maize samples was lower than the previous two seasons. The highest mean concentration (2 669 µg/kg) was reported for the 2021/22 season. The highest FUM concentration of 18 301 µg/kg in yellow maize (2021/22 season) and 8 356 µg/kg in white maize (2017/18 season).

The mean DON concentration of 393 µg/kg were similar to the previous season (327 µg/kg), but lower than the highest mean concentration of 2 067 µg/kg reported for the 2021/22 season. The highest DON concentration was 6 879 µg/kg in yellow maize (2021/22 season), while the highest DON concentration in white maize was 1 915 µg/kg (2019/22 season).

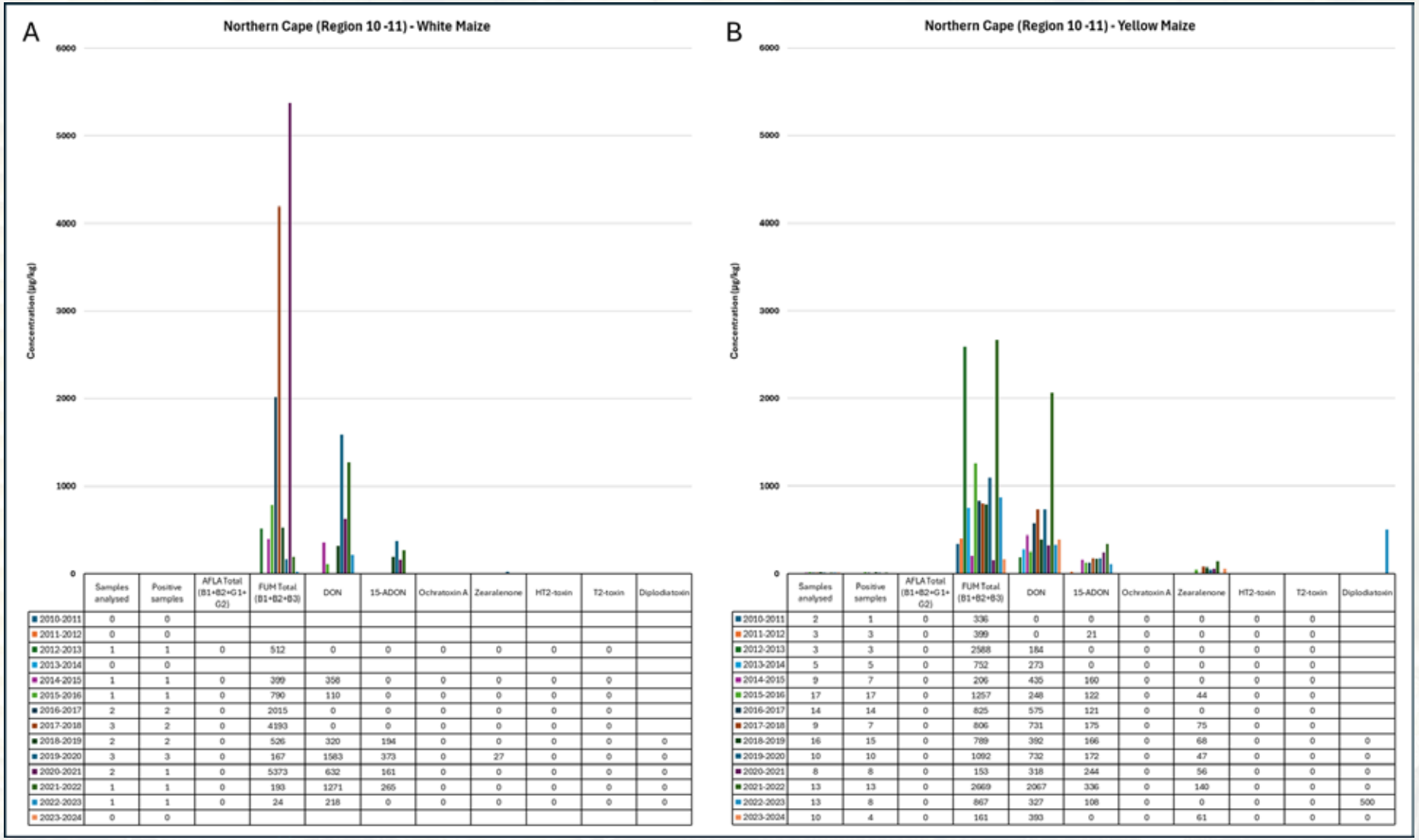
ZON levels have been consistently higher in yellow maize compared to white maize over fourteen seasons from 2010 to 2024. Diplodiatoxin was only reported in yellow maize (500 µg/kg) during the 2022/23 season.

Table 32. The maximum mycotoxin concentrations (µg/kg) in white maize samples analysed for the Northern Cape (Region 10 - 11)

Season	Samples analysed	AFLA Total (B_1+B_2+G_1+G_2)	FUM Total (B_1+B_2+B_3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodia-toxin
2010-2011	0	-	-	-	-	-	-	-	-	-
2011-2012	0	-	-	-	-	-	-	-	-	-
2012-2013	1	-	512	-	-	-	-	-	-	-
2013-2014	0	-	-	-	-	-	-	-	-	-
2014-2015	1	-	399	358	-	-	-	-	-	-
2015-2016	1	-	790	110	-	-	-	-	-	-
2016-2017	2	-	3913	-	-	-	-	-	-	-
2017-2018	3	-	8356	-	-	-	-	-	-	-
2018-2019	2	-	526	509	194	-	-	-	-	-
2019-2020	3	-	311	1915	433	-	27	-	-	-
2020-2021	2	-	5373	632	161	-	-	-	-	-
2021-2022	1	-	193	1271	265	-	-	-	-	-
2022-2023	1	-	24	218	-	-	-	-	-	-
2023-2024	0	-	-	-	-	-	-	-	-	-

Table 33. The maximum mycotoxin concentrations (µg/kg) in yellow maize samples analysed for the Northern Cape (Region 10 - 11)

Season	Samples analysed	AFLA Total (B_1+B_2+G_1+G_2)	FUM Total (B_1+B_2+B_3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodia-toxin
2010-2011	2	-	336	-	-	-	-	-	-	
2011-2012	3	-	720	-	21	-	-	-	-	
2012-2013	3	-	4395	184	-	-	-	-	-	
2013-2014	5	-	1801	391	-	-	-	-	-	
2014-2015	9	-	779	567	169	-	-	-	-	
2015-2016	17	-	7801	554	122	-	44	-	-	
2016-2017	14	-	2435	795	153	-	-	-	-	
2017-2018	9	-	2996	1822	263	-	75	-	-	
2018-2019	16	-	2043	1318	166	-	109	-	-	-
2019-2020	10	-	5928	1838	252	-	88	-	-	-
2020-2021	8	-	376	516	244	-	56	-	-	-
2021-2022	13	-	18301	6879	1115	-	428	-	-	-
2022-2023	13	-	3127	642	109	-	-	-	-	500
2023-2024	10	-	235	559	-	-	61	-	-	-



	Samples analysed	Positive samples	AFLA Total (B1+B2+G1+G2)	FUM Total (B1+B2+B3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodiatoxin
2010-2011	0	0									
2011-2012	0	0									
2012-2013	1	1	0	512	0	0	0	0	0	0	
2013-2014	0	0									
2014-2015	1	1	0	399	358	0	0	0	0	0	
2015-2016	1	1	0	790	110	0	0	0	0	0	
2016-2017	2	2	0	2015	0	0	0	0	0	0	
2017-2018	3	2	0	4193	0	0	0	0	0	0	
2018-2019	2	2	0	526	320	194	0	0	0	0	0
2019-2020	3	3	0	167	1583	373	0	27	0	0	0
2020-2021	2	1	0	5373	632	161	0	0	0	0	0
2021-2022	1	1	0	193	1271	265	0	0	0	0	0
2022-2023	1	1	0	24	218	0	0	0	0	0	0
2023-2024	0	0									

	Samples analysed	Positive samples	AFLA Total (B1+B2+G1+G2)	FUM Total (B1+B2+B3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodiatoxin
2010-2011	2	1	0	336	0	0	0	0	0	0	
2011-2012	3	3	0	399	0	21	0	0	0	0	
2012-2013	3	3	0	2588	184	0	0	0	0	0	
2013-2014	5	5	0	752	273	0	0	0	0	0	
2014-2015	9	7	0	206	435	160	0	0	0	0	
2015-2016	17	17	0	1257	248	122	0	44	0	0	
2016-2017	14	14	0	825	575	121	0	0	0	0	
2017-2018	9	7	0	806	731	175	0	75	0	0	
2018-2019	16	15	0	789	392	166	0	68	0	0	0
2019-2020	10	10	0	1092	732	172	0	47	0	0	0
2020-2021	8	8	0	153	318	244	0	56	0	0	0
2021-2022	13	13	0	2669	2067	336	0	140	0	0	0
2022-2023	13	8	0	867	327	108	0	0	0	0	500
2023-2024	10	4	0	161	393	0	0	61	0	0	0

Graph 56. The mean mycotoxin concentrations in white maize (A) and yellow maize (B) from the Northern Cape regions over fourteen seasons from 2010 to 2024

North West (Region 12 – 20)

The mean mycotoxin concentrations in white and yellow maize from the Northern West regions over fourteen seasons from 2010 to 2024 are shown in Graph 57. The maximum mycotoxin concentrations (µg/kg) in white and yellow maize samples in Tables 34 and 35, respectively.

Over the past fourteen seasons, 658 white maize and 393 yellow maize samples were analysed for mycotoxins. Aflatoxins were detected in two maize samples (one white and one yellow) analysed during the current season. The AFLA B_1 concentration in the white maize sample was 41 µg/kg and the AFLA B_1 concentration in the yellow maize sample was 19 µg/kg. Both these values exceed the maximum allowable level for certain farm feeds and human consumption. Six maize samples have tested positive for total Aflatoxin over the past fourteen years. This includes three samples from the 2014/15 season in white maize, with total AFLA concentrations ranging from 6 to 48 µg/kg one sample from the 2019/20 season in yellow maize, with a concentration of 10 µg/kg; and two samples from the current season (one white and one yellow), with concentrations of 41 µg/kg and 45 µg/kg, respectively.

The mean concentration of total FUM in white maize was 436 µg/kg, which is higher than the previous season (101 µg/kg). For yellow maize, the mean total FUM concentration was 170 µg/kg, the lowest concentration reported for the previous thirteen seasons. The mean DON concentration in the white maize samples of 342 µg/kg was lower than the last two seasons, and the mean DON concentration in the yellow maize of 141 µg/kg is lower than the last seven seasons. None of the samples contained FUM or DON higher than the South African regulated maximum allowable level for farm feed or human consumption during the current season.

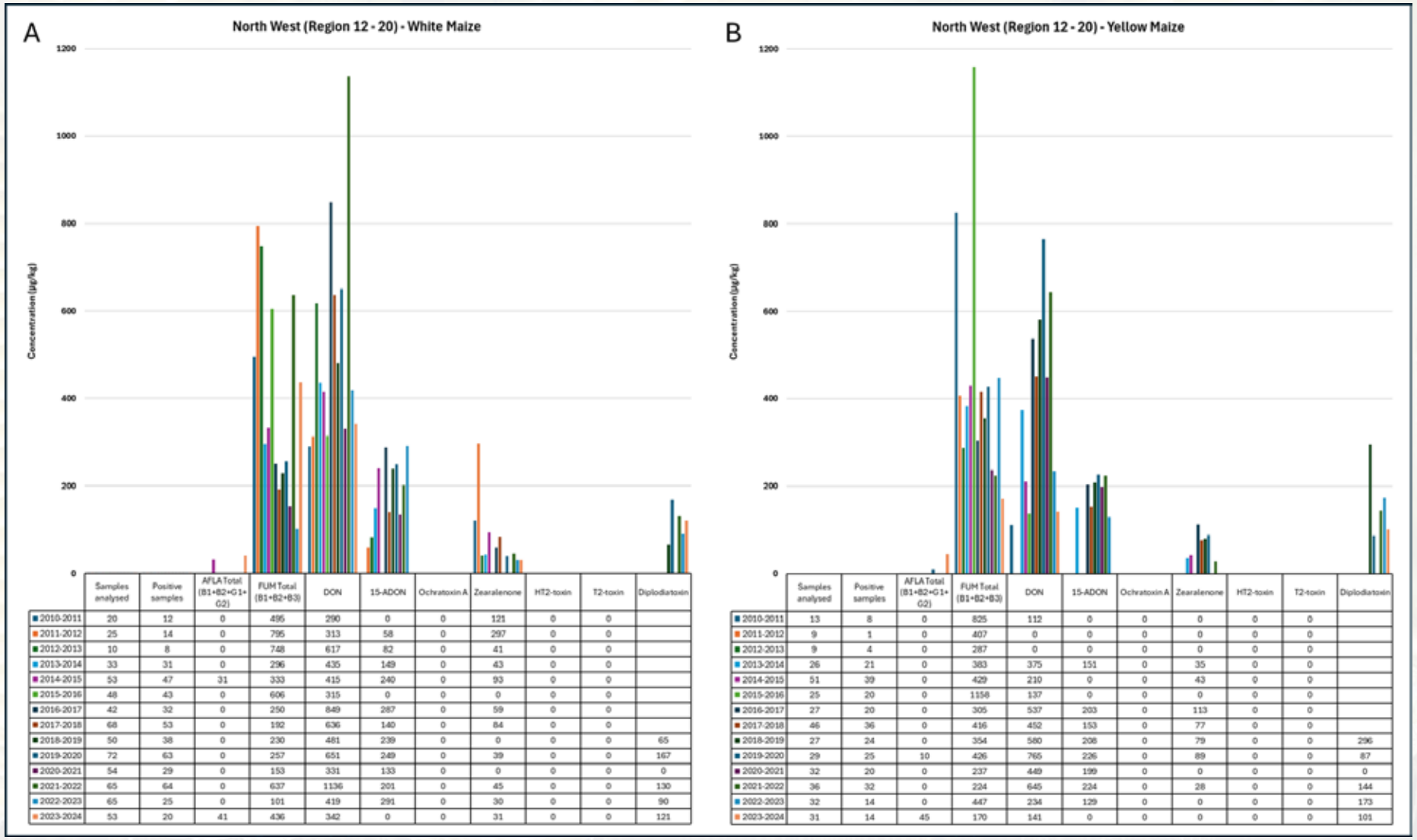
The ZON level of 31 µg/kg was similar to the last season (30 µg/kg) for white maize and was not detected in yellow maize. Diplodiatoxin concentrations appear to be constant over the past three seasons, ranging from 90 to 130 µg/kg for white maize and 101 to 173 µg/kg for yellow maize.

Table 34. The maximum mycotoxin concentrations (µg/kg) in white maize samples analysed for the North West (Region 12 - 20)

Season	Samples analysed	AFLA Total (B_1+B_2+G_1+G_2)	FUM Total (B_1+B_2+B_3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodia-toxin
2010-2011	20	-	1341	883	-	-	187	-	-	-
2011-2012	25	-	2235	485	85	-	297	-	-	-
2012-2013	10	-	1592	617	82	-	41	-	-	-
2013-2014	33	-	758	1837	248	-	64	-	-	-
2014-2015	53	48	1439	1391	290	-	93	-	-	-
2015-2016	48	-	6865	598	-	-	-	-	-	-
2016-2017	42	-	1441	7698	964	-	65	-	-	-
2017-2018	68	-	771	3016	261	-	84	-	-	-
2018-2019	50	-	781	2410	467	-	-	-	-	68
2019-2020	72	-	638	7516	829	-	54	-	-	663
2020-2021	54	-	351	810	151	-	-	-	-	-
2021-2022	65	-	1333	3678	491	-	132	-	-	491
2022-2023	65	-	229	2061	379	-	30	-	-	91
2023-2024	53	41	1538	604	-	-	36	-	-	299

Table 35. The maximum mycotoxin concentrations (µg/kg) in yellow maize samples analysed for the North West (Region 12 - 20)

Season	Samples analysed	AFLA Total (B_1+B_2+G_1+G_2)	FUM Total (B_1+B_2+B_3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodia-toxin
2010-2011	13	-	1401	119	-	-	-	-	-	
2011-2012	9	-	407	-	-	-	-	-	-	
2012-2013	9	-	541	-	-	-	-	-	-	
2013-2014	26	-	1003	1353	270	-	44	-	-	
2014-2015	51	-	2200	328	-	-	60	-	-	
2015-2016	25	-	11347	159	-	-	-	-	-	
2016-2017	27	-	1244	1488	381	-	113	-	-	
2017-2018	46	-	2109	1696	244	-	86	-	-	
2018-2019	27	-	1393	2501	593	-	127	-	-	555
2019-2020	29	10	1901	5060	768	-	243	-	-	112
2020-2021	32	-	691	2169	237	-	-	-	-	-
2021-2022	36	-	549	2955	787	-	42	-	-	711
2022-2023	32	-	1073	730	129	-	-	-	-	226
2023-2024	31	45	397	207	-	-	-	-	-	124



	Samples analysed	Positive samples	AFLA Total (B1+B2+G1+G2)	FUM Total (B1+B2+B3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodiatoxin
2010-2011	20	12	0	496	290	0	0	121	0	0	
2011-2012	25	14	0	795	313	58	0	297	0	0	
2012-2013	10	8	0	748	617	82	0	41	0	0	
2013-2014	33	31	0	296	435	149	0	43	0	0	
2014-2015	53	47	31	333	415	240	0	93	0	0	
2015-2016	48	43	0	606	315	0	0	0	0	0	
2016-2017	42	32	0	250	849	287	0	59	0	0	
2017-2018	68	53	0	192	636	140	0	84	0	0	
2018-2019	50	38	0	230	481	239	0	0	0	0	65
2019-2020	72	63	0	257	651	249	0	39	0	0	167
2020-2021	54	29	0	153	331	133	0	0	0	0	0
2021-2022	65	64	0	637	1136	201	0	45	0	0	130
2022-2023	65	25	0	101	419	291	0	30	0	0	90
2023-2024	53	20	41	436	342	0	0	31	0	0	121

	Samples analysed	Positive samples	AFLA Total (B1+B2+G1+G2)	FUM Total (B1+B2+B3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodiatoxin
2010-2011	13	8	0	825	112	0	0	0	0	0	
2011-2012	9	1	0	407	0	0	0	0	0	0	
2012-2013	9	4	0	287	0	0	0	0	0	0	
2013-2014	26	21	0	383	375	151	0	35	0	0	
2014-2015	51	39	0	429	210	0	0	43	0	0	
2015-2016	25	20	0	1158	137	0	0	0	0	0	
2016-2017	27	20	0	305	537	203	0	113	0	0	
2017-2018	46	36	0	416	452	153	0	77	0	0	
2018-2019	27	24	0	354	580	208	0	79	0	0	296
2019-2020	29	25	10	426	765	226	0	89	0	0	87
2020-2021	32	20	0	237	449	199	0	0	0	0	0
2021-2022	36	32	0	224	645	224	0	28	0	0	144
2022-2023	32	14	0	447	234	129	0	0	0	0	173
2023-2024	31	14	45	170	141	0	0	0	0	0	101

Graph 57. The mean mycotoxin concentrations in white maize (A) and yellow maize (B) from the Northern West regions over fourteen seasons from 2010 to 2024

Free State (Region 21 - 28)

The mean mycotoxin concentrations in white and yellow maize from the Free State regions over fourteen seasons from 2010 to 2024 are shown in Graph 58, and the maximum mycotoxin concentrations (µg/kg) in white and yellow maize samples in Tables 36 and 37, respectively.

Over the past fourteen seasons, 609 white maize and 461 yellow maize samples were analysed for mycotoxins. No Aflatoxins were reported for this season. However, during the 2018/19 season, one sample contained a total Aflatoxin concentration of 143 µg/kg, with AFLA B_1 reported at 48 µg/kg and AFLA G_1 at 95 µg/kg.

The mean total FUM concentrations for both the white maize (133 µg/kg) and yellow maize (113 µg/kg) were lower than the past season. There appears to be a consistent decreasing trend in the mean total FUM concentrations for white and yellow maize.

The mean DON concentrations were 331 µg/kg for white maize and 192 µg/kg for yellow maize. These levels were similar to the previous season. None of the samples contained FUM or DON higher than the South African regulated maximum allowable level for farm feed or human consumption during the current season.

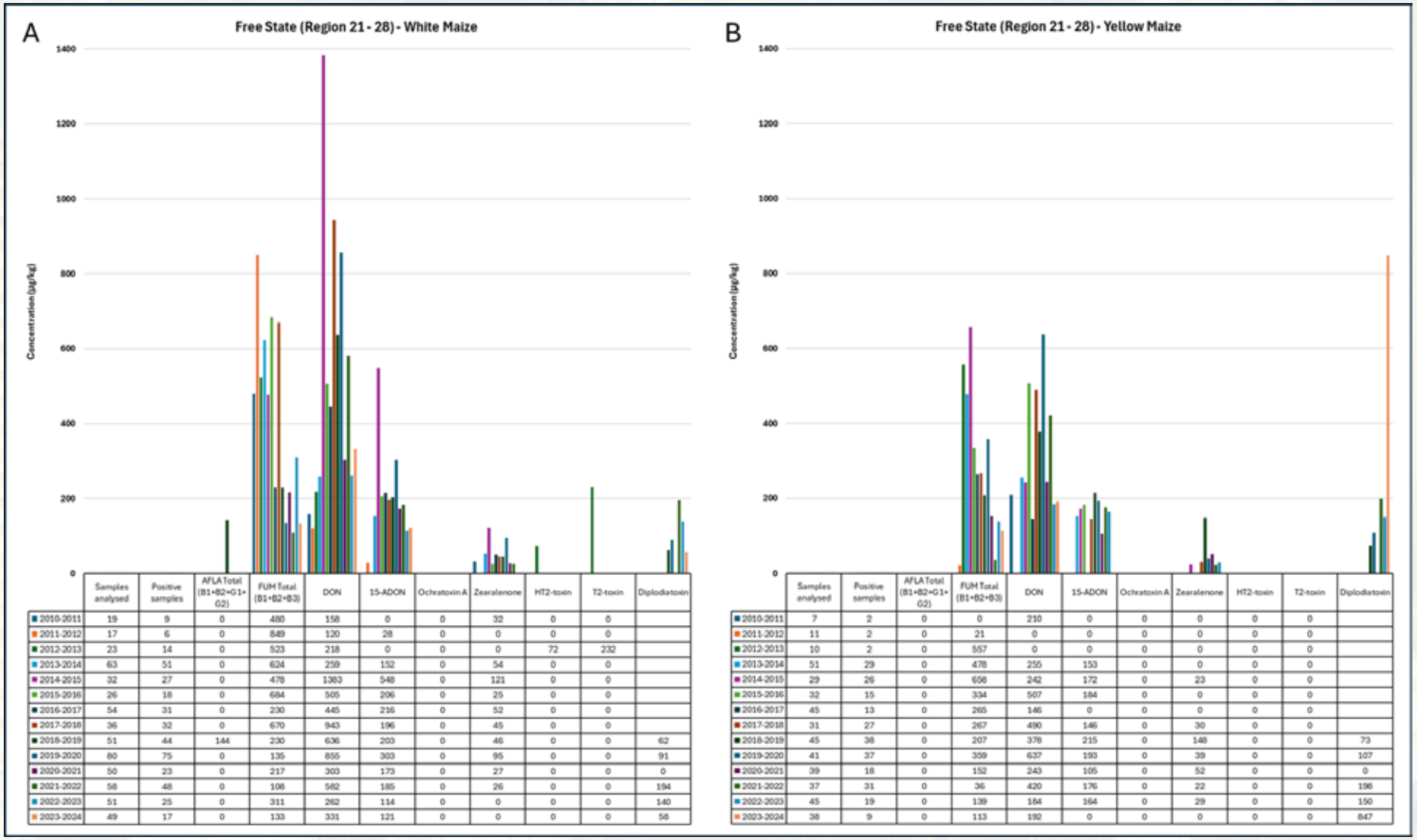
No ZON was detected in any of the white or yellow maize, in this season. The mean diplodiatoxin concentrations in the white maize of 85 µg/kg was lower than the past two seasons. For yellow maize the mean diplodiatoxin concentration was 847 µg/kg, which is higher than the levels previously reported, with a maximum concentration of 2 389 µg/kg.

Table 36. The maximum mycotoxin concentrations (µg/kg) in white maize samples analysed for the Free State (Region 21 - 28)

Season	Samples analysed	AFLA Total (B_1+B_2+G_1+G_2)	FUM Total (B_1+B_2+B_3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodia-toxin
2010-2011	19	-	1126	201	-	-	41	-	-	-
2011-2012	17	-	4419	120	28	-	-	-	-	-
2012-2013	23	-	1600	241	-	-	-	72	232	-
2013-2014	63	-	2927	791	269	-	82	-	-	-
2014-2015	32	-	1727	9736	1768	-	337	-	-	-
2015-2016	26	-	3430	1585	310	-	26	-	-	-
2016-2017	54	-	836	1868	365	-	73	-	-	-
2017-2018	36	-	7328	2378	391	-	91	-	-	-
2018-2019	51	143	1303	3604	593	-	60	-	-	98
2019-2020	80	-	491	7700	1173	-	539	-	-	188
2020-2021	50	-	239	1159	315	-	27	-	-	-
2021-2022	58	-	285	2545	301	-	35	-	-	595
2022-2023	51	-	557	653	114	-	-	-	-	396
2023-2024	49	-	232	855	121	-	-	-	-	65

Table 37. The maximum mycotoxin concentrations (µg/kg) in yellow maize samples analysed for the Free State (Region 21 - 28)

Season	Samples analysed	AFLA Total (B_1+B_2+G_1+G_2)	FUM Total (B_1+B_2+B_3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodia-toxin
2010-2011	7	-	-	222	-	-	-	-	-	
2011-2012	11	-	21	-	-	-	-	-	-	
2012-2013	10	-	943	-	-	-	-	-	-	
2013-2014	51	-	1720	868	196	-	-	-	-	
2014-2015	29	-	3382	528	238	-	23	-	-	
2015-2016	32	-	1109	640	184	-	-	-	-	
2016-2017	45	-	847	148	-	-	-	-	-	
2017-2018	31	-	685	1606	217	-	30	-	-	
2018-2019	45	-	872	1454	294	-	148	-	-	246
2019-2020	41	-	1420	2150	278	-	39	-	-	242
2020-2021	39	-	228	531	105	-	52	-	-	-
2021-2022	37	-	40	3330	211	-	22	-	-	806
2022-2023	45	-	252	562	164	-	29	-	-	281
2023-2024	38	-	147	308	-	-	-	-	-	2389



	Samples analysed	Positive samples	AFLA Total (B1+B2+G1+G2)	FUM Total (B1+B2+B3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodiatoxin
2010-2011	19	9	0	480	158	0	0	32	0	0	
2011-2012	17	6	0	849	120	28	0	0	0	0	
2012-2013	23	14	0	523	218	0	0	0	72	232	
2013-2014	63	51	0	624	259	152	0	54	0	0	
2014-2015	32	27	0	478	1383	548	0	121	0	0	
2015-2016	26	18	0	684	505	206	0	25	0	0	
2016-2017	54	31	0	230	445	216	0	52	0	0	
2017-2018	36	32	0	670	943	196	0	45	0	0	
2018-2019	51	44	144	230	636	203	0	46	0	0	62
2019-2020	80	75	0	135	855	303	0	95	0	0	91
2020-2021	50	23	0	217	303	173	0	27	0	0	0
2021-2022	58	48	0	108	582	185	0	26	0	0	194
2022-2023	51	25	0	311	262	114	0	0	0	0	140
2023-2024	49	17	0	133	331	121	0	0	0	0	58

	Samples analysed	Positive samples	AFLA Total (B1+B2+G1+G2)	FUM Total (B1+B2+B3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodiatoxin
2010-2011	7	2	0	0	210	0	0	0	0	0	
2011-2012	11	2	0	21	0	0	0	0	0	0	
2012-2013	10	2	0	557	0	0	0	0	0	0	
2013-2014	51	29	0	478	255	153	0	0	0	0	
2014-2015	29	26	0	658	242	172	0	23	0	0	
2015-2016	32	15	0	334	507	184	0	0	0	0	
2016-2017	45	13	0	265	146	0	0	0	0	0	
2017-2018	31	27	0	267	490	146	0	30	0	0	
2018-2019	45	38	0	207	378	215	0	148	0	0	73
2019-2020	41	37	0	359	637	193	0	39	0	0	107
2020-2021	39	18	0	152	243	105	0	52	0	0	0
2021-2022	37	31	0	36	420	176	0	22	0	0	198
2022-2023	45	19	0	139	184	164	0	29	0	0	150
2023-2024	38	9	0	113	192	0	0	0	0	0	847

Graph 58. The mean mycotoxin concentrations in white maize (A) and yellow maize (B) from the Free State regions over fourteen seasons from 2010 to 2024

Mpumalanga (Region 29 - 33)

The mean mycotoxin concentrations in white and yellow maize from the Mpumalanga regions over fourteen seasons from 2010 to 2024 are shown in Graph 59. The maximum mycotoxin concentrations (µg/kg) in white and yellow maize samples in Tables 38 and 39, respectively.

Over the past fourteen seasons, 542 white maize and 711 yellow maize samples were analysed for mycotoxins. The mean total FUM concentration for white maize (184 µg/kg) was slightly higher than the previous season (89 µg/kg) but still lower than the last ten seasons. The mean total FUM concentration for yellow maize was 235 µg/kg, which was also lower than the last ten seasons.

The mean DON concentrations were 337 µg/kg for white maize and 243 µg/kg for yellow maize. These levels were lower than the last seven seasons. None of the samples contained FUM or DON higher than the South African regulated maximum allowable level for farm feed or human consumption during the current season.

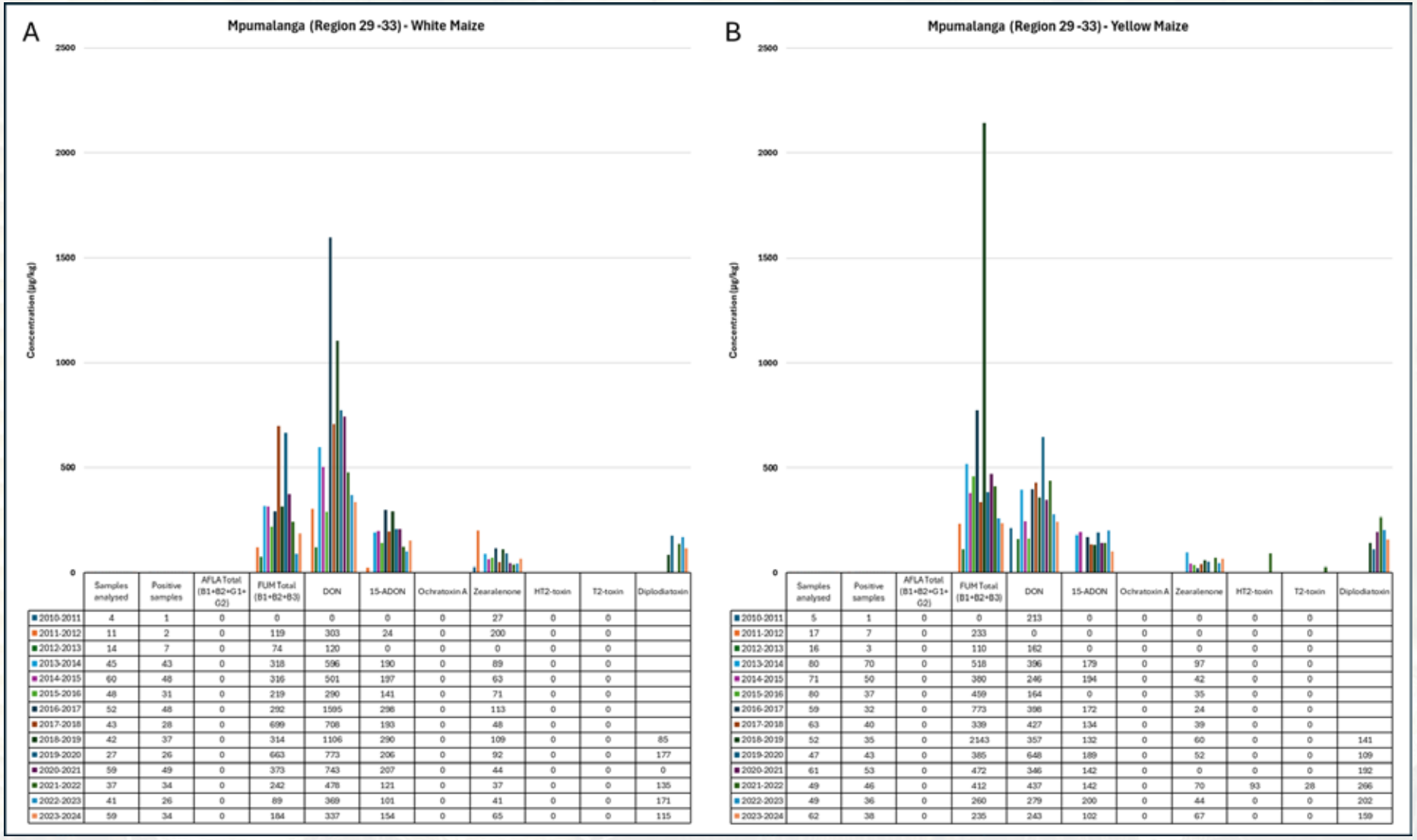
The mean ZON concentrations were 65 µg/kg for white maize and 67 µg/kg for yellow maize, higher than the previous season. The mean diplodiatoxin concentrations were lower than the previous season for both white maize (115 µg/kg) and yellow maize (159 µg/kg).

Table 38. The maximum mycotoxin concentrations (µg/kg) in white maize samples analysed for Mpumalanga (Region 29 - 33)

Season	Samples analysed	AFLA Total (B_1+B_2+G_1+G_2)	FUM Total (B_1+B_2+B_3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodia-toxin
2010-2011	4	-	-	-	-	-	27	-	-	-
2011-2012	11	-	119	303	24	-	200	-	-	-
2012-2013	14	-	143	139	-	-	-	-	-	-
2013-2014	45	-	1195	2730	305	-	445	-	-	-
2014-2015	60	-	1320	3260	764	-	212	-	-	-
2015-2016	48	-	785	801	184	-	127	-	-	-
2016-2017	52	-	2135	7671	802	-	399	-	-	-
2017-2018	43	-	3316	2812	394	-	97	-	-	-
2018-2019	42	-	1503	11181	737	-	271	-	-	319
2019-2020	27	-	3911	5225	612	-	270	-	-	504
2020-2021	59	-	2356	3256	571	-	101	-	-	-
2021-2022	37	-	603	1794	141	-	49	-	-	317
2022-2023	41	-	293	1366	101	-	43	-	-	560
2023-2024	59	-	607	908	154	-	107	-	-	304

Table 39. The maximum mycotoxin concentrations (µg/kg) in yellow maize samples analysed for Mpumalanga (Region 29 - 33)

Season	Samples analysed	AFLA Total (B_1+B_2+G_1+G_2)	FUM Total (B_1+B_2+B_3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodia-toxin
2010-2011	5	-	-	213	-	-	-	-	-	
2011-2012	17	-	695	-	-	-	-	-	-	
2012-2013	16	-	212	162	-	-	-	-	-	
2013-2014	80	-	5357	2601	300	-	354	-	-	
2014-2015	71	-	1236	851	228	-	71	-	-	
2015-2016	80	-	1993	304	-	-	36	-	-	
2016-2017	59	-	6059	1552	212	-	24	-	-	
2017-2018	63	-	1540	2348	192	-	58	-	-	
2018-2019	52	-	34740	777	193	-	75	-	-	1235
2019-2020	47	-	1084	1857	333	-	79	-	-	360
2020-2021	61	-	2648	1248	309	-	-	-	-	312
2021-2022	49	-	1603	2373	240	-	179	93	28	1347
2022-2023	49	-	1314	851	255	-	45	-	-	777
2023-2024	62	-	627	741	102	-	113	-	-	676



	Samples analysed	Positive samples	AFLA Total (B1+B2+G1+G2)	FUM Total (B1+B2+B3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodiatoxin
2010-2011	4	1	0	0	0	0	0	27	0	0	
2011-2012	11	2	0	119	303	24	0	200	0	0	
2012-2013	14	7	0	74	120	0	0	0	0	0	
2013-2014	45	43	0	318	596	190	0	89	0	0	
2014-2015	60	48	0	316	501	197	0	63	0	0	
2015-2016	48	31	0	219	290	141	0	71	0	0	
2016-2017	52	48	0	292	1595	298	0	113	0	0	
2017-2018	43	28	0	699	708	193	0	48	0	0	
2018-2019	42	37	0	314	1106	290	0	109	0	0	85
2019-2020	27	26	0	663	773	206	0	92	0	0	177
2020-2021	59	49	0	373	743	207	0	44	0	0	0
2021-2022	37	34	0	242	478	121	0	37	0	0	135
2022-2023	41	26	0	89	369	101	0	41	0	0	171
2023-2024	59	34	0	184	337	154	0	65	0	0	115

	Samples analysed	Positive samples	AFLA Total (B1+B2+G1+G2)	FUM Total (B1+B2+B3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodiatoxin
2010-2011	5	1	0	0	213	0	0	0	0	0	
2011-2012	17	7	0	233	0	0	0	0	0	0	
2012-2013	16	3	0	110	162	0	0	0	0	0	
2013-2014	80	70	0	518	396	179	0	97	0	0	
2014-2015	71	50	0	380	246	194	0	42	0	0	
2015-2016	80	37	0	459	164	0	0	35	0	0	
2016-2017	59	32	0	773	398	172	0	24	0	0	
2017-2018	63	40	0	339	427	134	0	39	0	0	
2018-2019	52	35	0	2143	357	132	0	60	0	0	141
2019-2020	47	43	0	385	648	189	0	52	0	0	109
2020-2021	61	53	0	472	346	142	0	0	0	0	192
2021-2022	49	46	0	412	437	142	0	70	93	28	266
2022-2023	49	36	0	260	279	200	0	44	0	0	202
2023-2024	62	38	0	235	243	102	0	67	0	0	159

Graph 59. The mean mycotoxin concentrations in white maize (A) and yellow maize (B) from the Mpumalanga regions over fourteen seasons from 2010 to 2024

Gauteng (Region 34)

The mean mycotoxin concentrations in white and yellow maize from the Gauteng region over fourteen seasons from 2010 to 2024 are shown in Graph 60, and the maximum mycotoxin concentrations (µg/kg) in white and yellow maize samples in Tables 40 and 41 respectively.

Over the past fourteen seasons, 134 white maize and 130 yellow maize samples were analysed for mycotoxins. In the current season, only FUM and DON were reported for white maize. The mean concentration for total FUM was 52 µg/kg; FUM was not detected in white maize samples during the previous two seasons. The mean DON concentration was 155 µg/kg, which is lower than the concentrations reported for the last eleven seasons.

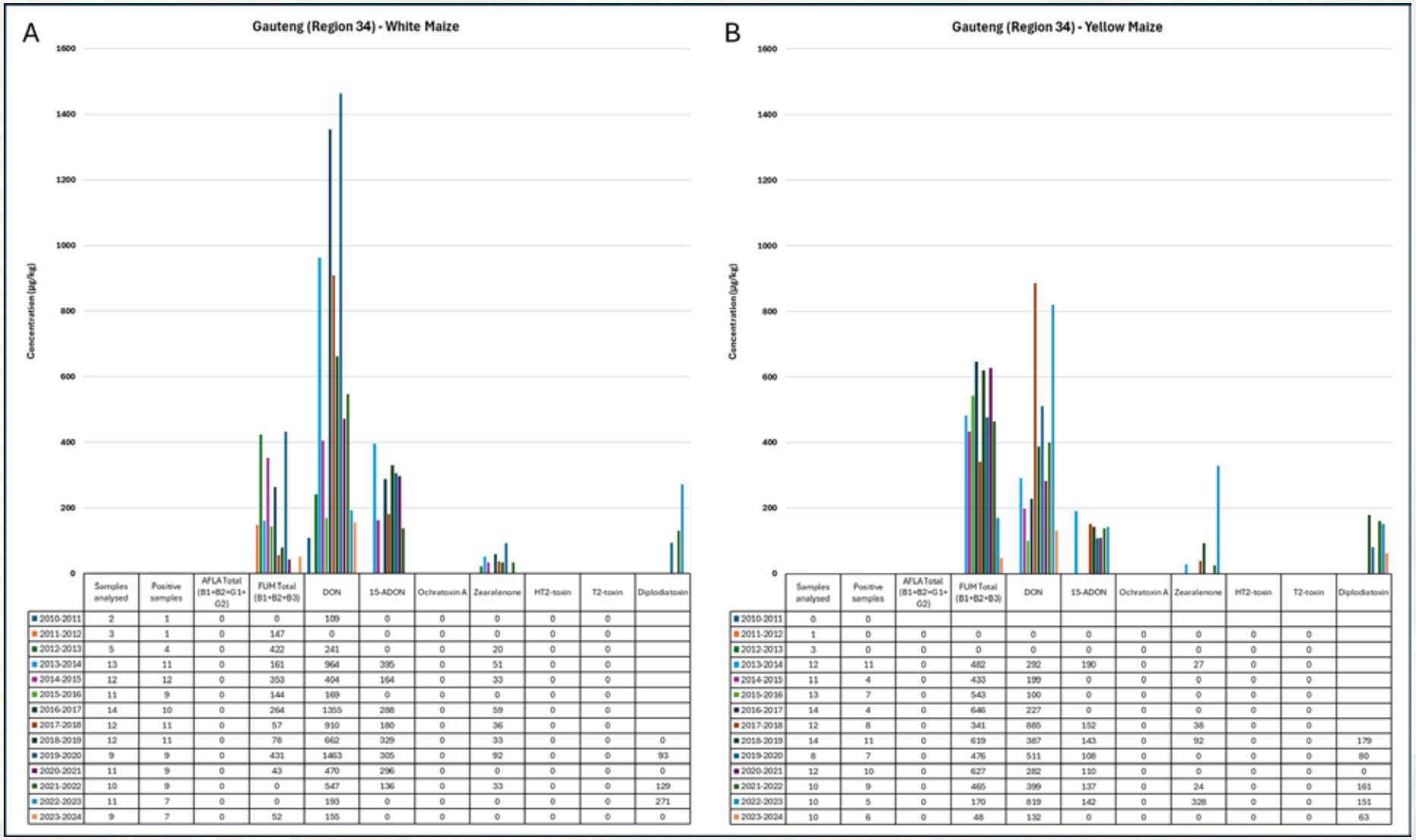
For yellow maize, FUM, DON, and diplodiatoxin levels were reported. The mean total FUM concentration of 48 µg/kg was lower than the previous ten seasons. The mean DON concentration was 132 µg/kg, which was lower than the last seven seasons. The mean diplodiatoxin concentration was 63 µg/kg, which was lower than the last three seasons.

Table 40. The maximum mycotoxin concentrations (µg/kg) in white maize samples analysed for Gauteng (Region 34)

Season	Samples analysed	AFLA Total (B_1+B_2+G_1+G_2)	FUM Total (B_1+B_2+B_3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodia-toxin
2010-2011	2	-	-	109	-	-	-	-	-	-
2011-2012	3	-	147	-	-	-	-	-	-	-
2012-2013	5	-	1161	241	-	-	20	-	-	-
2013-2014	13	-	418	6134	861	-	56	-	-	-
2014-2015	12	-	1809	1135	215	-	35	-	-	-
2015-2016	11	-	339	257	-	-	-	-	-	-
2016-2017	14	-	708	3157	364	-	117	-	-	-
2017-2018	12	-	86	2432	310	-	49	-	-	-
2018-2019	12	-	152	3394	554	-	33	-	-	-
2019-2020	9	-	1314	3975	501	-	124	-	-	101
2020-2021	11	-	50	1599	403	-	-	-	-	-
2021-2022	10	-	-	1044	168	-	44	-	-	129
2022-2023	11	-	-	413	-	-	-	-	-	477
2023-2024	9	-	52	243	-	-	-	-	-	-

Table 41. The maximum mycotoxin concentrations (µg/kg) in yellow maize samples analysed for Gauteng (Region 34)

Season	Samples analysed	AFLA Total (B_1+B_2+G_1+G_2)	FUM Total (B_1+B_2+B_3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodia-toxin
2010-2011	0	-	-	-	-	-	-	-	-	
2011-2012	1	-	-	-	-	-	-	-	-	
2012-2013	3	-	-	-	-	-	-	-	-	
2013-2014	12	-	1429	825	246	-	27	-	-	
2014-2015	11	-	652	287	-	-	-	-	-	
2015-2016	13	-	1431	100	-	-	-	-	-	
2016-2017	14	-	1307	321	-	-	-	-	-	
2017-2018	12	-	751	1828	163	-	38	-	-	
2018-2019	14	-	2962	804	154	-	180	-	-	711
2019-2020	8	-	1231	905	109	-	-	-	-	96
2020-2021	12	-	782	508	115	-	-	-	-	-
2021-2022	10	-	812	969	137	-	24	-	-	393
2022-2023	10	-	298	2205	207	-	328	-	-	151
2023-2024	10	-	54	134	-	-	-	-	-	65



	Samples analysed	Positive samples	AFLA Total (B1+B2+G1+G2)	FUM Total (B1+B2+B3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodiatoxin
2010-2011	2	1	0	0	109	0	0	0	0	0	
2011-2012	3	1	0	147	0	0	0	0	0	0	
2012-2013	5	4	0	422	241	0	0	20	0	0	
2013-2014	13	11	0	161	964	395	0	51	0	0	
2014-2015	12	12	0	353	404	164	0	33	0	0	
2015-2016	11	9	0	144	169	0	0	0	0	0	
2016-2017	14	10	0	264	1355	288	0	59	0	0	
2017-2018	12	11	0	57	910	180	0	36	0	0	
2018-2019	12	11	0	78	662	329	0	33	0	0	0
2019-2020	9	9	0	431	1463	305	0	92	0	0	93
2020-2021	11	9	0	43	470	296	0	0	0	0	0
2021-2022	10	9	0	0	547	136	0	33	0	0	129
2022-2023	11	7	0	0	193	0	0	0	0	0	271
2023-2024	9	7	0	52	155	0	0	0	0	0	0

	Samples analysed	Positive samples	AFLA Total (B1+B2+G1+G2)	FUM Total (B1+B2+B3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodiatoxin
2010-2011	0	0									
2011-2012	1	0	0	0	0	0	0	0	0	0	
2012-2013	3	0	0	0	0	0	0	0	0	0	
2013-2014	12	11	0	482	292	190	0	27	0	0	
2014-2015	11	4	0	433	199	0	0	0	0	0	
2015-2016	13	7	0	543	100	0	0	0	0	0	
2016-2017	14	4	0	646	227	0	0	0	0	0	
2017-2018	12	8	0	341	885	152	0	38	0	0	
2018-2019	14	11	0	619	387	143	0	92	0	0	179
2019-2020	8	7	0	476	511	108	0	0	0	0	80
2020-2021	12	10	0	627	282	110	0	0	0	0	0
2021-2022	10	9	0	465	399	137	0	24	0	0	161
2022-2023	10	5	0	170	819	142	0	328	0	0	151
2023-2024	10	6	0	48	132	0	0	0	0	0	63

Graph 60. The mean mycotoxin concentrations in white maize (A) and yellow maize (B) from the Gauteng region over fourteen seasons from 2010 to 2024

Limpopo (Region 35)

The mean mycotoxin concentrations in white and yellow maize from the Limpopo region over fourteen seasons from 2010 to 2024 are shown in Graph 61. The maximum mycotoxin concentrations (µg/kg) in white and yellow maize samples in Tables 42 and 43 respectively.

In total, 58 white maize and 46 yellow maize samples were analysed for mycotoxins over the past fourteen seasons.

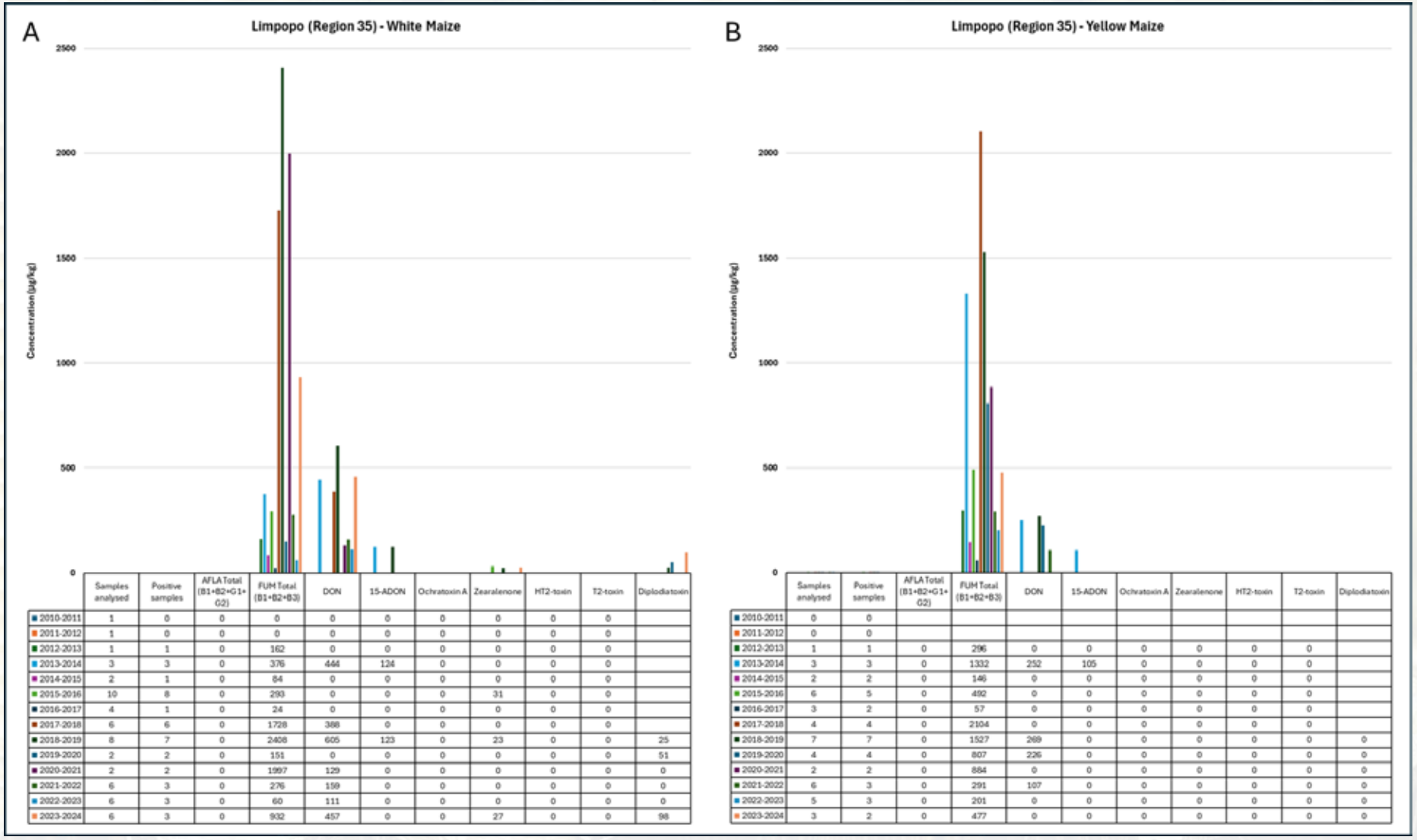
In the current season, FUM, DON, ZON, and diplodiatoxin were reported for white maize, while only FUM was detected in yellow maize. The mean concentrations for the total FUM were 932 µg/kg for white maize and 477 µg/kg for yellow maize. These concentrations are higher than the last two seasons. The mean DON concentration in the white maize samples was 457 µg/kg, which is higher than the levels reported for the last four seasons. This season was only the third time that ZON was reported in the last fourteen seasons, at a mean concentration of 27 µg/kg. The mean diplodiatoxin concentration was 98 µg/kg, higher than the past five seasons.

Table 42. The maximum mycotoxin concentrations (µg/kg) in white maize samples analysed for Limpopo (Region 35)

Season	Samples analysed	AFLA Total (B_1+B_2+G_1+G_2)	FUM Total (B_1+B_2+B_3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodia-toxin
2010-2011	1	-	-	-	-	-	-	-	-	-
2011-2012	1	-	-	-	-	-	-	-	-	-
2012-2013	1	-	162	-	-	-	-	-	-	-
2013-2014	3	-	394	444	124	-	-	-	-	-
2014-2015	2	-	84	-	-	-	-	-	-	-
2015-2016	10	-	854	-	-	-	31	-	-	-
2016-2017	4	-	24	-	-	-	-	-	-	-
2017-2018	6	-	4505	701	-	-	-	-	-	-
2018-2019	8	-	7341	1047	123	-	23	-	-	25
2019-2020	2	-	253	-	-	-	-	-	-	51
2020-2021	2	-	3952	129	-	-	-	-	-	-
2021-2022	6	-	504	159	-	-	-	-	-	-
2022-2023	6	-	86	111	-	-	-	-	-	-
2023-2024	6	-	1805	457	-	-	27	-	-	98

Table 43. The maximum mycotoxin concentrations (µg/kg) in yellow maize samples analysed for Limpopo (Region 35)

Season	Samples analysed	AFLA Total (B_1+B_2+G_1+G_2)	FUM Total (B_1+B_2+B_3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodia-toxin
2010-2011	0	-	-	-	-	-	-	-	-	
2011-2012	0	-	-	-	-	-	-	-	-	
2012-2013	1	-	296	-	-	-	-	-	-	
2013-2014	3	-	2482	350	105	-	-	-	-	
2014-2015	2	-	210	-	-	-	-	-	-	
2015-2016	6	-	1086	-	-	-	-	-	-	
2016-2017	3	-	75	-	-	-	-	-	-	
2017-2018	4	-	6082	-	-	-	-	-	-	
2018-2019	7	-	4393	369	-	-	-	-	-	-
2019-2020	4	-	2702	226	-	-	-	-	-	-
2020-2021	2	-	1708	-	-	-	-	-	-	-
2021-2022	6	-	550	107	-	-	-	-	-	-
2022-2023	5	-	316	-	-	-	-	-	-	-
2023-2024	3	-	818	-	-	-	-	-	-	-



	Samples analysed	Positive samples	AFLA Total (B1+B2+G1+G2)	FUM Total (B1+B2+B3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodiatoxin
2010-2011	1	0	0	0	0	0	0	0	0	0	
2011-2012	1	0	0	0	0	0	0	0	0	0	
2012-2013	1	1	0	162	0	0	0	0	0	0	
2013-2014	3	3	0	376	444	124	0	0	0	0	
2014-2015	2	1	0	84	0	0	0	0	0	0	
2015-2016	10	8	0	293	0	0	0	31	0	0	
2016-2017	4	1	0	24	0	0	0	0	0	0	
2017-2018	6	6	0	1728	388	0	0	0	0	0	
2018-2019	8	7	0	2408	605	123	0	23	0	0	25
2019-2020	2	2	0	151	0	0	0	0	0	0	51
2020-2021	2	2	0	1997	129	0	0	0	0	0	0
2021-2022	6	3	0	276	159	0	0	0	0	0	0
2022-2023	6	3	0	60	111	0	0	0	0	0	0
2023-2024	6	3	0	932	457	0	0	27	0	0	98

	Samples analysed	Positive samples	AFLA Total (B1+B2+G1+G2)	FUM Total (B1+B2+B3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodiatoxin
2010-2011	0	0									
2011-2012	0	0									
2012-2013	1	1	0	296	0	0	0	0	0	0	
2013-2014	3	3	0	1332	252	105	0	0	0	0	
2014-2015	2	2	0	146	0	0	0	0	0	0	
2015-2016	6	5	0	492	0	0	0	0	0	0	
2016-2017	3	2	0	57	0	0	0	0	0	0	
2017-2018	4	4	0	2104	0	0	0	0	0	0	
2018-2019	7	7	0	1527	269	0	0	0	0	0	0
2019-2020	4	4	0	807	226	0	0	0	0	0	0
2020-2021	2	2	0	884	0	0	0	0	0	0	0
2021-2022	6	3	0	291	107	0	0	0	0	0	0
2022-2023	5	3	0	201	0	0	0	0	0	0	0
2023-2024	3	2	0	477	0	0	0	0	0	0	0

Graph 61. The mean mycotoxin concentrations in white maize (A) and yellow maize (B) from the Limpopo region over fourteen seasons from 2010 to 2024

KwaZulu Natal (Region 36)

The mean mycotoxin concentrations in white and yellow maize from the KwaZulu Natal region over fourteen seasons from 2010 to 2024 are shown in Graph 62, and the maximum mycotoxin concentrations (µg/kg) in white and yellow maize samples in Tables 44 and 45 respectively.

Over the past fourteen seasons, 98 white maize and 116 yellow maize samples were analysed for mycotoxins. No FUM was detected in white maize samples during the current season and there has been a consistent decline in FUM levels over the past four seasons. The mean total FUM concentration for yellow maize was 133 µg/kg. While this level is higher than the 21 µg/kg reported in the previous season, it remains lower than the average concentration of the past eight seasons. The mean DON concentrations were 430 µg/kg in white maize and 186 µg/kg in yellow maize. These levels are lower than those reported for the last six seasons.

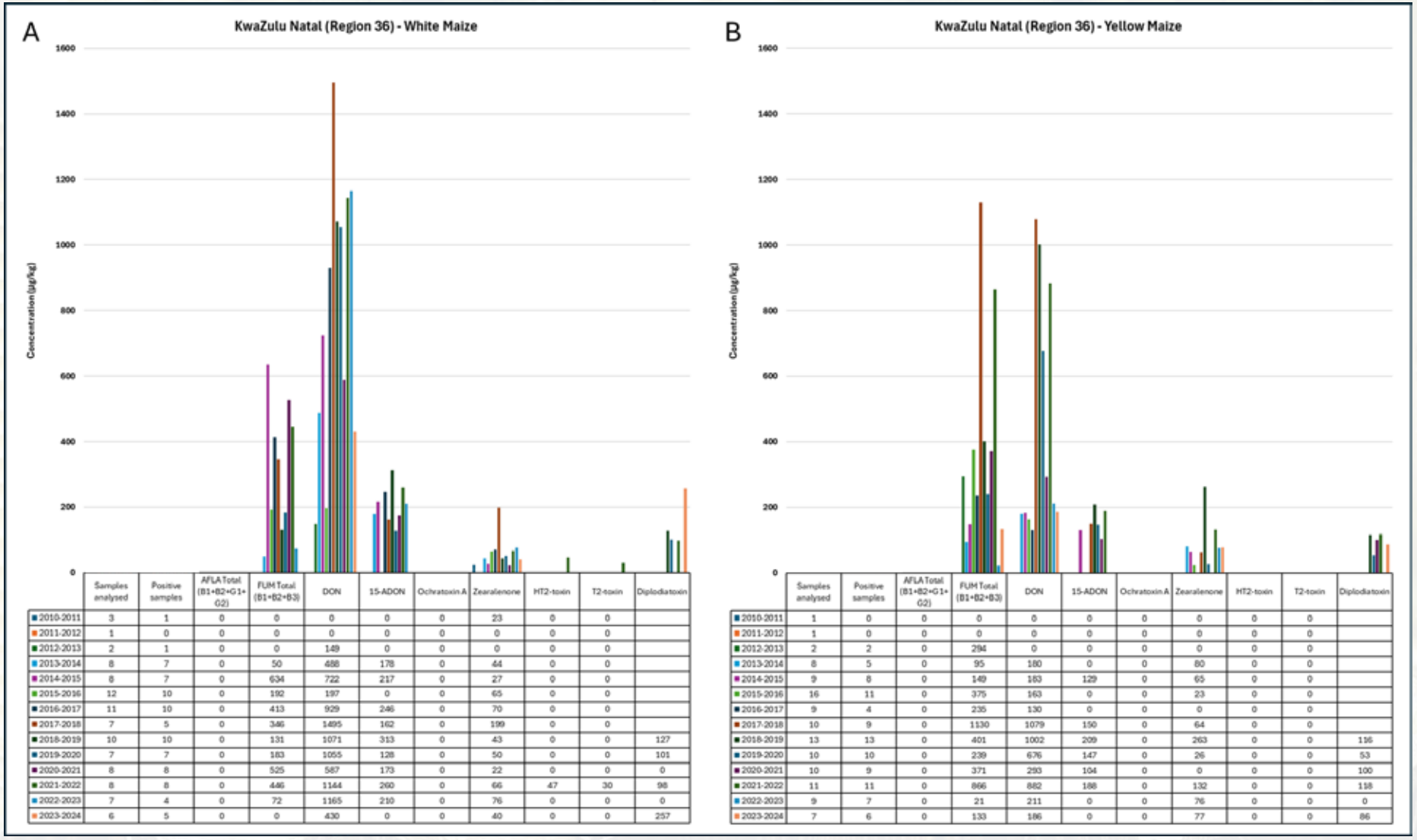
The mean ZON concentration in white maize was 40 µg/kg, a level lower than the past two seasons. For yellow maize the mean ZON concentration (77 µg/kg) was similar to the previous season. This season, the highest mean diplodiatoxin concentration in white maize was reported at 257 µg/kg. For yellow maize, the mean diplodiatoxin concentration was 86 µg/kg, which is higher than the previous season when no diplodiatoxin was detected.

Table 44. The maximum mycotoxin concentrations (µg/kg) in white maize samples analysed for KwaZulu Natal (Region 36)

Season	Samples analysed	AFLA Total (B_1+B_2+G_1+G_2)	FUM Total (B_1+B_2+B_3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodia-toxin
2010-2011	3	-	-	-	-	-	23	-	-	-
2011-2012	1	-	-	-	-	-	-	-	-	-
2012-2013	2	-	-	149	-	-	-	-	-	-
2013-2014	8	-	78	1351	245	-	47	-	-	-
2014-2015	8	-	1575	1285	307	-	36	-	-	-
2015-2016	12	-	426	253	-	-	65	-	-	-
2016-2017	11	-	783	3836	387	-	128	-	-	-
2017-2018	7	-	447	3510	210	-	361	-	-	-
2018-2019	10	-	400	4058	694	-	93	-	-	239
2019-2020	7	-	279	2105	152	-	78	-	-	145
2020-2021	8	-	852	1198	210	-	22	-	-	-
2021-2022	8	-	1113	3934	315	-	143	47	30	109
2022-2023	7	-	72	1848	210	-	107	-	-	-
2023-2024	6	-	-	675	-	-	49	-	-	402

Table 45. The maximum mycotoxin concentrations (µg/kg) in yellow maize samples analysed for KwaZulu Natal (Region 36)

Season	Samples analysed	AFLA Total (B_1+B_2+G_1+G_2)	FUM Total (B_1+B_2+B_3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodia-toxin
2010-2011	1	-	-	-	-	-	-	-	-	
2011-2012	1	-	-	-	-	-	-	-	-	
2012-2013	2	-	361	-	-	-	-	-	-	
2013-2014	8	-	163	236	-	-	127	-	-	
2014-2015	9	-	331	372	129	-	124	-	-	
2015-2016	16	-	863	234	-	-	23	-	-	
2016-2017	9	-	453	130	-	-	-	-	-	
2017-2018	10	-	2708	1956	174	-	121	-	-	
2018-2019	13	-	1319	3256	331	-	957	-	-	493
2019-2020	10	-	661	1353	184	-	28	-	-	53
2020-2021	10	-	955	442	104	-	-	-	-	100
2021-2022	11	-	866	3128	420	-	257	-	-	233
2022-2023	9	-	21	358	-	-	111	-	-	-
2023-2024	7	-	217	332	-	-	77	-	-	110



	Samples analysed	Positive samples	AFLA Total (B1+B2+G1+G2)	FUM Total (B1+B2+B3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodiatoxin
2010-2011	3	1	0	0	0	0	0	23	0	0	
2011-2012	1	0	0	0	0	0	0	0	0	0	
2012-2013	2	1	0	0	149	0	0	0	0	0	
2013-2014	8	7	0	50	488	178	0	44	0	0	
2014-2015	8	7	0	634	722	217	0	27	0	0	
2015-2016	12	10	0	192	197	0	0	65	0	0	
2016-2017	11	10	0	413	929	246	0	70	0	0	
2017-2018	7	5	0	346	1495	162	0	199	0	0	
2018-2019	10	10	0	131	1071	313	0	43	0	0	127
2019-2020	7	7	0	183	1055	128	0	50	0	0	101
2020-2021	8	8	0	525	587	173	0	22	0	0	0
2021-2022	8	8	0	446	1144	260	0	66	47	30	98
2022-2023	7	4	0	72	1165	210	0	76	0	0	0
2023-2024	6	5	0	0	430	0	0	40	0	0	257

	Samples analysed	Positive samples	AFLA Total (B1+B2+G1+G2)	FUM Total (B1+B2+B3)	DON	15-ADON	Ochratoxin A	Zearalenone	HT2-toxin	T2-toxin	Diplodiatoxin
2010-2011	1	0	0	0	0	0	0	0	0	0	
2011-2012	1	0	0	0	0	0	0	0	0	0	
2012-2013	2	2	0	294	0	0	0	0	0	0	
2013-2014	8	5	0	95	180	0	0	80	0	0	
2014-2015	9	8	0	149	163	129	0	65	0	0	
2015-2016	16	11	0	375	163	0	0	23	0	0	
2016-2017	9	4	0	235	130	0	0	0	0	0	
2017-2018	10	9	0	1130	1079	150	0	64	0	0	
2018-2019	13	13	0	401	1002	209	0	263	0	0	116
2019-2020	10	10	0	239	676	147	0	26	0	0	53
2020-2021	10	9	0	371	293	104	0	0	0	0	100
2021-2022	11	11	0	866	882	188	0	132	0	0	118
2022-2023	9	7	0	21	211	0	0	76	0	0	0
2023-2024	7	6	0	133	186	0	0	77	0	0	86

Graph 62. The mean mycotoxin concentrations in white maize (A) and yellow maize (B) from the KwaZulu Natal region over fourteen seasons from 2010 to 2024

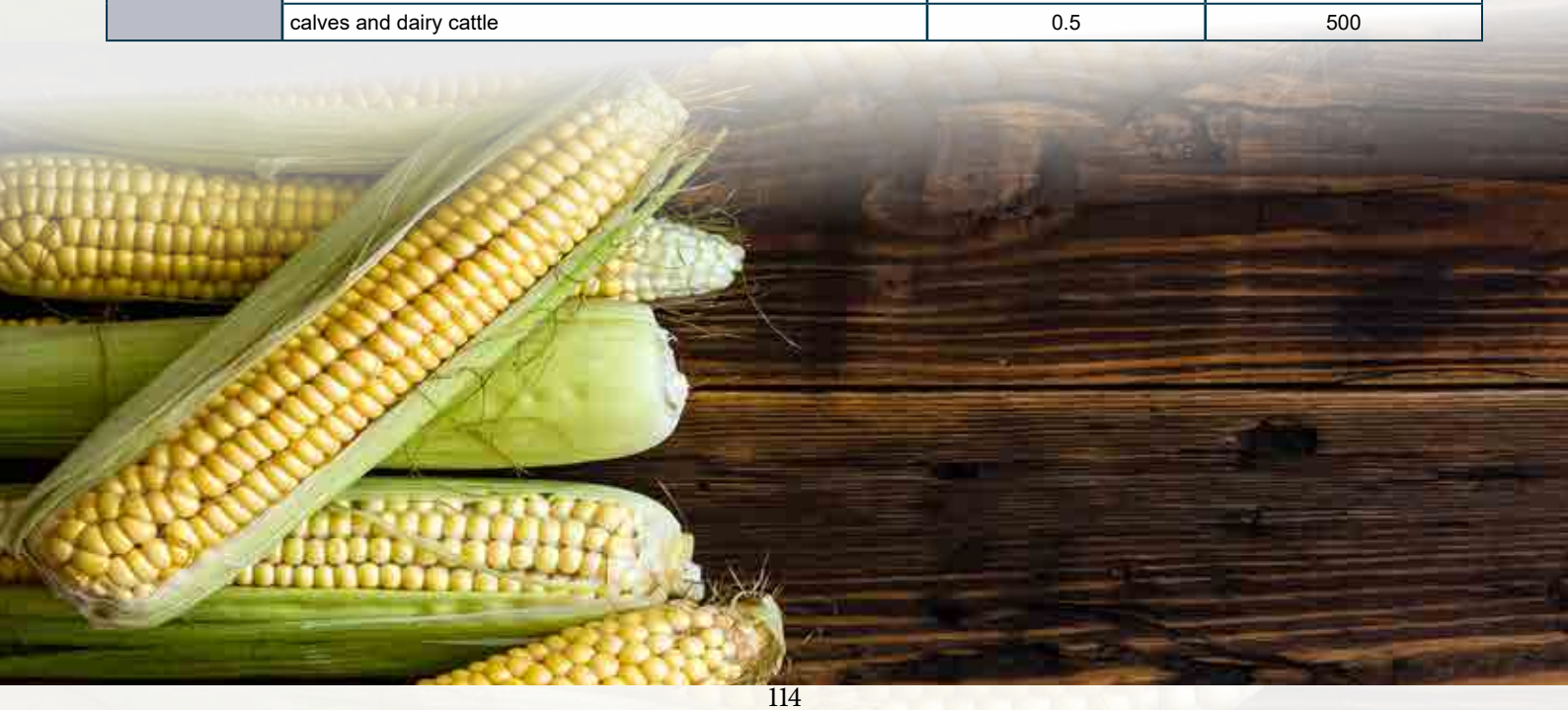
National mycotoxin regulations

According to the Foodstuffs, Cosmetics and Disinfectants Act (Act 54 of 1972) and Regulations Relating to the Maximum Levels of Mycotoxins in Foodstuffs published in Government Notice No. 5505 of 01 November 2024, the maximum allowable levels of mycotoxins in foodstuffs, are as follows:

Mycotoxins	Foodstuff	Notes/Remarks	Maximum Level (µg/kg or µg/L)
Aflatoxins, Total (B_1+B_2+G_1+G_2)	Almonds (whole commodity)	Ready-to-eat	10
	Almonds (whole commodity)	Intended for further processing	15
	Brazil nuts (shelled)	Ready-to-eat	10
	Brazil nuts (shelled)	Intended for further processing	15
	Hazelnuts (whole commodity)	Ready-to-eat	10
	Hazelnuts (whole commodity)	Intended for further processing	15
	Peanuts	Intended for further processing	15
	Pistachios (whole commodity)	Ready-to-eat	10
	Pistachios (whole commodity)	Intended for further processing	15
	Dried figs (whole commodity)	Ready-to-eat	10
	All other foodstuffs not specified (Ready-to-eat)	Of which Aflatoxin B1 is not more than 5 µg/kg	10
	Maize grain	Destined for further processing	15
	Flour, meal, semolina and flakes erived from maize		10
	Husked rice (whole commodity)		20
	Polished rice (whole commodity)		5
	Sorghum grain (whole commodity)	Destined for further processing	10
	Cereal-based food for Infants and young children	Whole commodity as sold; not reconstituted or otherwise prepared for consumption	5
	Chilli pepper, nutmeg (dried/dry)	Whole/Powder/Crushed/Ground	20
Aflatoxin M_1	Milk		0.5
Deoxynivalenol (DON)	Cereal-based food for Infants and young children	As sold; not reconstituted or otherwise prepared for consumption	200
	Flour, meal, semolina and flakes erived from wheat, maize or barley		1 000
	Cereal grains (wheat, maize and barley)	Destined for further processing	2 000
Fumonisins (B_1+B_2)	Raw maize grain (whole commodity)		4 000
	Maize flour and maize meal		2 000
Ochratoxin A	Wheat (whole commodity)		5
	Raw Barley		5
	Raw Rye		5
	Chilli pepper, paprike, nutmeg (dried/dry)	Whole/Powder/Crushed/Ground	20
Patulin	Apple juice (Excludes concentrated juice)		50

February 2010 and R. 789 of 10 September 2010, the maximum allowable levels of mycotoxins in animal feeds, are as follows:

Substance, Products	Farm Feeds	MAXIMUM CONTENT IN mg/kg (ppm) relative to a farm feed with a moisture content of 120 g/kg	MAXIMUM CONTENT IN µg/kg (ppb) relative to a farm feed with a moisture content of 120 g/kg
Aflatoxin B_1	Feed ingredients with the exception of:	0.05	50
	groundnut, copra, palm-kernel cotton seed, maize and products derived from the processing thereof	0.02	20
	Complete farm feeds for cattle, sheep and goats with the exeption of:	0.05	50
	dairy cattle	0.005	5
	calves and lambs	0.01	10
	complete feeds for pigs and poultry (except young animals)	0.02	20
	other complete farm feeds (including pets)	0.01	10
	maize products intended for feedlots	0.3	300
	supplement/cncentrates for cattle, sheep and goats (except for dairy animals, calves and lambs)	0.05	50
Deoxynivalenol (DON)	Feeding stuffs on a full ration basis for:		
	Pigs	1	1 000
	cattle	5	5 000
	calves up tp 4 months	2	2 000
	dairy cattle	3	3 000
	poultry	4	4 000
	pets	1	1 000
Fumonisin B_1	Horses and pets	5	5 000
	Pigs	10	10 000
	Beef and poultry	50	50 000
	Fish	10	10 000
Ochratoxin A	Feeding stuffs on full ration basis for:		
	Pigs	0.05	50
	poultry	0.2	200
Zearalenone	Feeding stuffs on full ration basis for:		
	sows and pigs	5	5 000
	piglets	3	3 000
	calves and dairy cattle	0.5	500



Methods

Sampling Procedure

A working group determined the process to be followed to ensure that the crop quality samples sent to the SAGL by the various grain silo owners/agricultural businesses, are representative of the total crop.

Each delivery is sampled as per the grading regulations for grading purposes.

Once grading has been completed, these grading samples are placed in separate containers according to class and grade, per silo bin/bag/bunker/dam at each silo.

When the container is full or at the end of each week, the content of each container is divided with a multi slot divider in order to obtain a 3 kg sample (this should be done for each class and grade separately).

If there is more than one container per class and grade per silo bin/bag/bunker/dam, the combined contents of the containers are mixed thoroughly before dividing it with a multi slot divider to obtain the required 3 kg sample.

The samples are clearly marked with the name of the depot, the bin/bag/bunker/dam number(s) represented by each individual sample as well as the class and grade and then forwarded to the SAGL.

RSA Grading

RSA grading was done in accordance with the Grading Regulations for maize, as published in Government Notices No. R. 4368 of 16 February 2024 and No. R. 4433 of 1 March 2024.

For the definitions of the deviations referred to in the grading regulations, please refer to pages 125 to 127.

All samples were also inspected for the visual symptoms of Diplodia and Fusarium infection, which were reported separately.

Fusarium spp infections are localized on the cob with discoloured maize kernels, which become reddish (light pink to lilac).

Diplodia maydis normally rots the entire maize cob and infected maize kernels are recognized by a light ash colour to black colour that appears at the germ and can infest the whole kernel.

The % Cobrot reported, represents the percentage maize kernels that are both Fusarium and Diplodia infected.

The maximum permissible deviation (%) per grade for white and yellow maize are provided in the Table on page 134.

USA Grading

USA grading was determined in accordance with the American Grading Regulations (United States Department of Agriculture) as published in the *Grain Inspection Handbook, Book II, Grain Grading Procedures (October 2020), Chapter 4: Corn.*

Corn is defined as grain that consists of 50 percent or more of whole kernels of shelled dent corn and/or shelled flint corn (*Zea mays L.*) and not more than 10.0 percent of other grains for which standards have been established under the United States Grain Standards Act.

Whole kernels are kernels with three-fourths or more of the kernel present.

Corn is divided into three classes: Yellow corn, White corn, and Mixed corn. There are no subclasses in corn. Each class is divided into five numerical grades and U.S. Sample Grade. Special grades emphasize qualities or conditions affecting the value and are added to and made a part of the grade designation. Special grades do not affect the numerical or sample grade designation. Examples of special grades are Flint corn, Flint and Dent corn, Infested corn and Waxy corn.

Description of deviations relating to USA grading:

Heat damaged kernels

Kernels and pieces of kernels which are materially discoloured and damaged by heat, including material discolouration caused by artificial drying methods.

Damaged kernels

Kernels and pieces of corn kernels that are badly ground-damaged, badly weather-damaged, diseased, frost-damaged, germ-damaged, heat-damaged, insect-bored, mould-damaged, sprout-damaged or otherwise materially damaged.

Broken corn and foreign material

Broken corn is all matter that passes readily through a 12/64-inch (4.76 mm) round-hole sieve and over a 6/64-inch (2.38 mm) round-hole sieve according to procedures prescribed in Federal Grain Inspection Service (FGIS) instructions.

Foreign material is all matter that passes readily through a 6/64-inch round-hole sieve and all matter other than corn that remains on top of the 12/64-inch round-hole sieve after sieving according to procedures prescribed in FGIS instructions.

Broken corn and foreign material is all matter that passes readily through a 12/64-inch round-hole sieve and all matter other than corn that remains in the sieved sample after sieving according to procedures prescribed in FGIS instructions.

Test weight

The weight per Winchester bushel (2,150.42 cubic inches) as determined using an approved device according to procedures prescribed in FGIS instructions.

Test weight is determined before the removal of broken corn and foreign material on a portion sufficient quantity to overflow the kettle.

Physical Characteristics

Test weight

Bushel weight in pounds (lbs) was determined on the maize crop samples and the results converted to test weight reported in kilogram/hectoliter (kg/hl), by multiplication with a factor of 1.2872.

The specific mass (or grain density) of maize expressed as test weight is influenced by amongst other, factors like cultivar, moisture content, foreign matter, other grain and damaged kernels like insect damaged and immature kernels.

Hundred (100) kernel mass - Industry accepted method 001

100 kernel mass is the weight in grams of one hundred whole maize kernels and provides a measure of grain size and density. The results are reported on an “as is” basis.

Kernel size - Industry accepted method 017

Kernel size is important to the sophisticated starch manufacturing industry. Kernels that are too small hamper the separation of kernel fractions in the wet milling process. The result is a lower starch yield. A mixture of small and large kernels causes additional problems, as homogeneous steeping cannot be achieved. On the other hand, very large kernels can also cause problems since the ratio between volume and mass is unfavourable to proper steeping.

The dry milling industry also prefers fairly larger maize kernels. However, uniform kernel size is of particular importance to this industry, since too large kernels create problems especially when mixed with smaller kernels.

Kernel size is less important to the animal feed manufacturing industry. Larger kernels are nevertheless preferred, as small kernels are easily lost during the screening stage of processing. The determination of kernel size comprises the sieving of a 100 g representative whole maize sample through both 8 mm and 10 mm round-hole grading sieves, routinely used in the seed industry.

Breakage susceptibility - Industry accepted method 007

Maize is normally cleaned before processing. In the cleaning process, broken kernels are removed together with other impurities, causing losses. Broken kernels are further broken during handling, resulting in excessive grain dust being generated. This creates the

potential for dust explosions, health hazards, hygiene problems, etc. Maize containing a high percentage of broken kernels is more prone to insect infestation and is subject to general deterioration.

In the modern dry milling industry, maize is cleaned first and then conditioned by dampening before the germ is removed. Broken kernels cause many problems during these stages of processing. Broken kernels can also lead to a lower extraction of the so-called high-quality products, like samp and maize grits. The presence of many broken kernels causes problems with the fibre and fat content of maize products (e.g. the various grades of maize meal), because the quantity of germ required to be returned to the milled endosperm cannot be determined accurately.

In the wet milling process broken kernels steep more rapidly than whole kernels and by the time the whole kernels have been sufficiently steeped, the broken kernels have been over-steeped, causing an ineffective separation of protein and starch.

In the livestock feed industry breakability is not an important quality characteristic, except for dust and hygiene reasons.

All samples were subjected to a breakage susceptibility test. After the sample of whole maize kernels was propelled in a Stein Breakage tester for 4 minutes, the fractions below the 6.35 mm and 4.75 mm sieves were collected and the percentages broken kernels smaller than (<) 6.35 mm and < 4.75 mm determined.

Stress cracks - Industry accepted method 006

Stress cracks are determined by visual inspection of a certain amount of whole maize kernels examined on top of a light box for small internal cracks in the endosperm. Some kernels may even have two or more internal cracks. Any form of stress may cause internal cracks, for example rapid moisture loss in the field, during harvest or during drying.

Milling Index - Industry accepted method 015

Milling Index is an indication of the milling abilities and milling quality of maize kernels where a higher milling index means a higher extraction of the high-grade and most profitable products like samp, maize rice and maize grits (degermed products) that are manufactured from the corneous part of the endosperm.

The milling index is a model developed on the Foss NIT Infratec 1241- Generation 3 Standard Version Grain Analyser where the NIT spectra were modelled against the Roff milling fractions. In previous seasons (until 2015/16) the Milling index of the samples were determined with the calibration model developed by the Grain Crops Institute of the ARC. With this model, the average milling index of a sample with good milling characteristics is about 95 with a variation of about 55 (low milling quality) to about 115 (very good milling quality).

The SAGL was tasked by the Maize Trust to develop a new model for Milling Index using samples from maize cultivar trials supplied by the ARC-GCI and by commercial seed breeders over four seasons (from 2012/13 onward). The trials included a range of hardness levels. The New Milling Index (NMI) that was developed is similar to the original ARC formula but on a 14% moisture basis, and with the constants removed. The NMI model has improved precision compared to the older version, due to the almost tenfold increase in the number of samples used to build the calibration model.

During the fifth year, samples of commercial hybrids, selected imported maize samples and outlier samples from the 2014/15 and 2015/16 seasons were included to develop a robust model with the assistance of Foss to produce accurate results. The latest version of the improved new model, SAGL Milling Index 2024, includes two parameters, SAGL Milling Index (SAGL MI) as well as Grit Yield All (GYA).

SAGL MI indicates the relative ratio of total hard endosperm products (B2 grits, B3 fine grits and B3 coarse grits) to offal products (B1 fine flour and total chop/bran) as determined on a Roff mill and used for calibration of the NIT. It is expressed as a dimensionless index value according to the following scale:

SAGL MI	<40	40-60	60-80	80-100	>100
Description	Soft	Medium	Moderately hard	Hard	Very hard

GYA is defined as the sum of the mass fractions of the Roff B2 grits, B3 fine grits and B3 coarse

grits fractions expressed as a mass percentage of the total mass of the whole maize before milling. GYA is linearly correlated with the SAGL MI and indicates the true amount of total hard endosperm that can be extracted from the maize during Roff milling. The NIT calibration value for GYA provides this estimate directly from the whole maize without need for further milling tests. GYA is also reported on a 14% moisture base.

The 2023/24 season maize samples were measured with the NIT on the SAGL Milling Index 2024 model.

Milling of Maize on the Roff Maize Mill - Industry accepted method 013

The Roff 150 Series maize mill is used to mill representative samples of 500 g. The mill is pre-set to the following specifications: Break 1 roll nip - 0.3 mm, Break 2 roll nip - 0.18 mm and Break 3 roll nip - 0.08 mm. These settings are according to the specifications in the method developed by the ARC Grain Crops Institute. Every mill has three separations, namely chop, grits and maize meal. The grits from Break 1 are transferred to the Break 2 rolls and the grits from Break 2 are transferred to Break 3 rolls.

The maize sample is conditioned on two consecutive days and milled on the second conditioning day.

The following fractions are weighed and determined as percentages: Break 1 meal, Break 2 meal, Break 3 meal and Break 3 grits. Break 1, 2 and 3 chop are combined and then weighed for determination of % Chop. Break 3 grits are weighed for determination of % Grits. The percentage extraction total meal is determined as the sum of the percentages Break 1, 2 and 3 meal as well as the % Grits.

Milling of Maize on Bühler Maize Mill - Industry accepted method 029

The Bühler MCKA is used for experimental milling only; the results achieved on the mill will be directly influenced by how the mill is set up.

The maize samples are conditioned on two consecutive days and milled on the second conditioning day.

A 1 kg sample is degermed with the Grainman degerminator before milling on the Bühler Maize mill. The following fractions on the Bühler mill are collected, weighed and determined as percentages, Degerminator meal, Break1 meal, Break 2 meal, Break 3 meal, C1 meal, C2 meal, C3 meal, G3 meal and G1 & G2 chop.

The percentage extraction total meal is determined as the sum of all the meal fractions ($B_1 + B_2 + B_3 + C_1 + C_2 + C_3 + G_3$) divided by the sum of all the fractions multiplied by 100.

Whiteness Index - Industry accepted method 004

Whiteness index of white maize meal was determined with the HunterLab ColorFlex 45°/0°. Whiteness is associated with a region or volume in colour space in which objects are recognized as white. The degree of whiteness is measured by the degree of departure of the object from a perfect white. The higher the whiteness index value, the whiter the sample.

Whiteness index on maize meal obtained from the Roff mill was done on unsifted and sifted maize meal obtained from Break 2 and 3. The sifted samples were obtained by sieving the unsifted samples through a 300 µm sieve. The fractions on top and below the sieve were then combined to result in sifted samples that contain 87% of maize meal > 300 µm and 13% of maize meal < 300 µm.

Whiteness index on maize meal obtained from the Bühler MCKA mill was done on unsifted and sifted maize meal obtained by combining fractions B1, B2 and C1. The sifted samples were obtained by sieving the unsifted samples through a 300 µm sieve. The fractions on top and below the sieve were then combined to result in sifted samples that contain 87% of maize meal > 300 µm and 13% of maize meal < 300 µm.

Nutritional Values

The moisture, fat, protein, starch and crude fibre contents are measured with an Infratec 1241 - Generation 3 Standard Version Whole Grain Analyser. The measurements are based on the fact that the constituents to be measured in the grain, absorb electromagnetic radiation in the near-infrared region of the spectrum. Since the Infratec 1241 Grain Analyser uses transmission absorption, the test is done on intact maize kernels. The results are reported

on a dry (moisture free) basis.

The calibration on the Infratec 1241 Grain Analyser (NIT) including the moisture, protein, fat, starch and crude fibre parameters, is updated annually by Foss using NIT spectra and international primary chemical method results of maize crop quality samples from the specific season under discussion, provided by SAGL.

The chemical methods used to check the calibration are:

- Moisture on whole maize kernels: Sample is dried in an oven for 72 hours at 103 °C (AACCI 44-15.02)
- Moisture on milled maize: Sample is dried in an oven for 1 hour at 130 °C (AACCI 44-15.02)
- Crude fat: Petroleum ether extraction (Soxhlet) method (In house method 024)
- Crude protein: Dumas (Leco) method (AACCI 46-30.01)
- Starch: Hydrochloric Acid dissolution method (Polarimeter) (In house method 019)
- Crude fibre: In-House method 031, based on AACCI method 32-10.01 using the Velp FIWE Advance fibre AutoExtractor.

The results obtained by the Infratec 1241 Grain Analyser (NIT) on the 2023/24 season's samples, were checked by analysing every tenth sample by means of the primary methods.

Mycotoxin Analyses

Mycotoxins are fungal metabolites, toxic to animals and humans, that are produced by moulds commonly found in almost all types of grain.

350 of the 1 000 maize crop samples were selected to proportionally represent the various production regions and the white/yellow maize ratio for each region.

The samples to be analysed were milled with a 1 mm sieve. Two subsamples of 10 g are extracted with an aqueous / organic solvent mixture, filtered, diluted and analysed with the LCMS/MS. The mycotoxins are separated on a reversed-phase column and analysed with positive electrospray (EI) ionisation in the multiple reaction monitoring (MRM) mode. For each compound, one precursor and two product ions are detected, one product ion for quantification and one for confirmation. The mean values of duplicate results are reported in µg/kg.

Matrix-matched working standards are used to draw a calibration curve for each mycotoxin with at least five calibration levels. A blank sample and spiked samples (to determine % recoveries) are analysed with every batch of samples as quality control samples. Reported results are not corrected for recovery.

The mycotoxins included in the multi-mycotoxin screening method (In house method 026) are Aflatoxin B_1, B_2, G_1, G_2, Fumonisin B_1, B_2 and B_3, Deoxynivalenol, 15-ADON, HT-2 Toxin, T-2 Toxin, Zearalenone, Ochratoxin A and Diplodiatoxin.

Limit of quantitation (LOQ) means the lowest concentration level that can be quantified with acceptable precision and accuracy by the mass spectrometer. A concentration measured below the LOQ is reported as <LOQ.

Mycotoxin	Limit of quantitation (LOQ), µg/kg
Aflatoxin B_1	2
Aflatoxin B_2	2
Aflatoxin G_1	2
Aflatoxin G_2	5
Deoxynivalenol	100
15-Acetyl-Deoxynivalenol	100
Fumonisin B_1	20
Fumonisin B_2	20
Fumonisin B_3	20
Ochratoxin A	2
T2-Toxin	20
HT2-Toxin	20
Zearalenone	20

Limit of detection (LOD) is the lowest concentration level that can be detected but not quantified and is 50% of the LOQ of each mycotoxin. A concentration measured below the LOD is reported as not detected (ND).

sanas
South African National Accreditation System

CERTIFICATE OF ACCREDITATION

In terms of section 22(2) (b) of the Accreditation for Conformity Assessment, Calibration and Good Laboratory Practice Act, 2006 (Act 19 of 2006), read with sections 23(1), (2) and (3) of the said Act, I hereby certify that:-

SOUTHERN AFRICAN GRAIN LABORATORY NPC

Co. Reg. No.: 1997/018518/08

Southern African Grain Laboratories NPC

Facility Accreditation Number: **T0116**

is a South African National Accreditation System accredited facility provided that all conditions and requirements are complied with

This certificate is valid as per the scope as stated in the accompanying schedule of accreditation, Annexure "A", bearing the above accreditation number for

CHEMICAL AND PHYSICAL ANALYSIS

The facility is accredited in accordance with the recognised International Standard

ISO/IEC 17025:2017

The accreditation demonstrates technical competency for a defined scope and the operation of a quality management system

While this certificate remains valid, the Accredited Facility named above is authorised to use the relevant accreditation symbol to issue facility reports and/or certificates

Mrs FS Radebe
Acting Chief Executive Officer

Effective Date: 01 November 2024
Certificate Expires: 31 October 2029

ANNEXURE A

SCHEDULE OF ACCREDITATION

Facility Number: **T0116**

Permanent Address of Laboratory:

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Agri-Hub Office Park - Grain Building
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The Willows
Pretoria
0040

Technical Signatories:

Ms J Nortje (All Methods excl. In-house method 029)
Ms A de Jager (Nutrients & Contaminants Methods)
Ms W Louw (In-house Methods 001, 002, 003, 010 & 026)
Ms D Moleke (Rheological Methods)
Mrs H Meyer (All Chemical, Nutrients and Contaminants & Grading Methods)
Ms M Motlanthe (In-house Methods 001, 003 & 026)
Ms T de Beer (Rheological Methods)
Ms S Makhoba (In-House Method 026)
Ms T Mabobo (In-House Methods 001 & 010)
Mr J Kobola (All Grading Methods)
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Issue No.: 36
Date of Issue: 14 March 2025
Expiry Date: 31 October 2029

Material or Products Tested	Type of Tests / Properties Measured, Range of Measurement	Standard Specifications, Techniques / Equipment Used
CHEMICAL		
Ground Barley	Moisture (Oven Method)	Analytical EBC Method 3.2, latest Edition (2 hour; 130°C)
Cereal and cereal products specifically-wheat, rice, (hulled paddy), barley, millet, rye, and oats as grain, semolina and flour	Moisture (Oven Method)	ICC Std No.110/1, Latest Edition (90 min; 130°C) (2 hour; 130°C)
Flour, semolina, bread, all kind of grains and cereal products and food products (except those that are sugar coated)	Moisture (Oven Method)	AACCI 44-15.02, Latest Edition (1 hour; 130°C) (72 hour; 103°C)
Animal feed, Plant tissue and Sunflower (Milled)	Moisture (Oven Method)	AgriLASA 2.1 Latest Edition (% hours, 105°C)

All flours, cereal grains, oilseeds and animal feeds	Nitrogen and protein (Combustion method - Dumas)	AACCI 46-30.01, Latest Edition
Cereal based food stuff	Dietary fibres (Total)	In-house method 012
Food stuff and feeds	Carbohydrates (by difference) (calculation) Energy value (calculation) Total digestible nutritional value (calculation)	SOP MC 23
Food Stuff and feeds	Determination of Ash	In-house method 011
Wheat Kernels	Moisture (Oven Method)	Government Gazette Wheat Regulation, Latest Edition (72 hour, 103°C)
Flours of grains e.g. barley, oats, triticale, maize, rye, sorghum and wheat; oilseeds like soybeans and sunflower, feeds and mixed feeds and foodstuffs	Crude fat (Ether extraction by Soxhlet)	In-house method 024
Meal and flour of wheat, rye, barley, other grains, starch containing and malted products	Falling number	ICC Std 107/1, Latest Edition
NUTRIENTS AND CONTAMINANTS		
Vitamin fortified food and feed products and fortification mixes grain based	Vitamin A as all trans Retinol (Saponification) (HPLC)	In-house method 001
	Thiamine Mononitrate (HPLC) Riboflavin (HPLC) Nicotinamide (HPLC) Pyridoxine Hydrochloride (HPLC)	In-house method 002
	Folic Acid (HPLC)	In-house method 003
Grain based food and feed products (fortified and unfortified) and fortification mixes	Total Sodium (Na) Total Iron (Fe) Total Zinc (Zn)	In-house method 010
Yeast and Bread	Vitamin D_2 (HPLC)	In-House method 029
Food and feed	Multi-Mycotoxin: -Aflatoxin G_1, B_1, G_2, B_2 and total -Deoxynivalenol (DON), 15-ADON -Fumonisin B_1, B_2, B_3 -Ochratoxin A -T2, HT-2 - Zearalenone	In-house method 026

GRADING		
Maize	Defective kernels (White maize/ yellow maize)	Government Gazette Maize Regulation, Latest Edition
Cereal as grains (Wheat, barley, rye and oats)	Hectolitre mass (Kern222)	ISO 7971-3, Latest edition
Wheat	Screenings	Government Gazette Wheat Grading Regulation, Latest Edition
RHEOLOGICAL		
Wheat flour	Alveograph (Rheological properties)	ICC Std.121, Latest Edition
Flours	Farinograph (Rheological properties)	AACCI 54.02, Latest Edition (Rheological behaviour of flour Farinograph: Constant Flour Weight procedure)
Hard, soft and durum wheat (flour and whole wheat flour)	Mixograph (Rheological properties)	Industry accepted method 020 (Based on AACCI 54-40.02, Latest Edition Mixograph Method)

Original Date of Accreditation: 01 November 1999

ISSUED BY THE SOUTH AFRICAN NATIONAL ACCREDITATION SYSTEM

Accreditation Manager

DEPARTMENT OF AGRICULTURE, LAND REFORM AND RURAL DEVELOPMENT

NO. R. 4368 **16 February 2024**

AGRICULTURAL PRODUCT STANDARDS ACT, 1990
(ACT No. 119 OF 1990)

REGULATIONS RELATING TO THE GRADING, PACKING AND MARKING OF MAIZE INTENDED FOR SALE IN THE REPUBLIC OF SOUTH AFRICA

The Minister of Agriculture, Land Reform and Rural Development acting under section 15 of the Agricultural Product Standards Act, 1990 (Act No. 119 of 1990), made the regulations in the Schedule.

MRS AT DIDIZA, MP
MINISTER FOR AGRICULTURE, LAND REFORM AND RURAL DEVELOPMENT

SCHEDULE

Definitions

1. In these regulations any word or expression to which a meaning has been assigned in the Act shall have that meaning and, unless the context otherwise indicates -

"**animal filth**" means all animal matter which may contaminate the maize, such as dead rodents, dead birds including hair, dung and/or feathers;

"**bag**" means a bag manufactured from -

(a) jute or phormium or a mixture of jute and phormium; or

(b) polypropylene that complies with SABS specification CKS632;

"**bulk container**" means any vehicle or container in which bulk maize is stored or transported;

"**consignment**" means -

(a) a quantity of maize of the same class, which belongs to the same owner, delivered at any one time under cover of the same consignment note, delivery note or receipt note, or delivered by the same vehicle or bulk container, or loaded from the same bin of a grain elevator or from a ship's hold; or

(b) in the case where a quantity referred to in paragraph (a), is subdivided into different grades, each such quantity of each of the different grades;

"**coffee-stained maize kernels**" means maize kernels with a shiny brown colour that occurs anywhere on the pericarp of the maize kernel;

"**container**" means a bag or a bulk container;

"**defective maize kernels**" means maize kernels and pieces of maize kernels that:

(a) are shrivelled, obviously immature, fungi infected, heat damaged and frost damaged;

(b) have sprouted, including kernels of which the shoot (plumule) in the germ is visibly discoloured;

(c) have cavities in the germ or endosperm caused by insects or rodents;

(d) are visibly soiled (smeared) or contaminated by smut, fire, soil, smoke or coal-dust;

(e) all matter that can pass through the 6,35 mm round-hole sieve;

(f) are of subspecies other than *Zea mays indentata* or *Zea mays indurata*.

Provided that -

(i) irregularity of shape and size of maize kernels shall not affect the grading thereof;

(ii) chipped or cracked maize kernels or pieces of maize kernels which are in a sound condition, and which appear in a sample of maize, but which do not pass through a 6,35 mm round-hole sieve, shall not be regarded as defective maize kernels under these regulations.

(iii) oxidation-stained maize kernels, coffee-stained maize kernels, pinked maize kernels, water damaged kernels and discoloured maize kernels shall not be considered as defective.

"**discoloured maize kernels**" means maize kernels that are as a result of environmental conditions discoloured on both sides of the kernel, excluding, oxidation-stained maize kernels, coffee-stained maize kernels and pinked maize kernels;

"**foreign matter**" means all matter other than maize, excluding, animal filth, coal, glass, metal, plastic, and stones;

"**frost damaged kernels**" means maize kernels that are damaged by frost characterized by two or more of the following:

(a) a dull brown discoloration from the connecting tip and/or;

(b) an underdeveloped endosperm in relation to the germ; and/or

(c) the pericarp is blistered or flaked.

"**fungi infected kernels**" means maize of which the kernels or pieces of kernels are visibly infected with fungi and has corresponding meaning with mould infected kernels:

(a) are characterised by black, blue, green, yellow or white fungi growth anywhere on the kernel, or are characterised by fungi growth underneath the bran layer of the kernel;

(b) are infected by ear-rot and are characterised by red, pink, or brown discolorations. The kernels are partially to completely infected.

"**heat damaged kernels**" means kernels that are as a result of external heat or internal fermentation affected with excess moisture and have at least one of the following characteristics:

(a) Kernels or pieces of kernels that are amber, brown, dark brown or black discoloured.

(b) Kernels of which the germ has dark-brown to black discoloration.

"**insect**" in relation to maize, means any live insect which is injurious to stored grain, irrespective of the stage of development of the insect;

"**maize**" means the threshed kernels or pieces of kernels of the plants of *Zea mays indurata* and *Zea mays indentata* or one or more crossings of the two types;

"**other colour maize kernels**" in relation to -

(a) **white maize**, means maize kernels or pieces of maize kernels of which the endosperm as a result of genetic (characteristics) composition have another colour than white, excluding pinked maize kernels;

(b) **yellow maize**, means maize kernels or pieces of maize kernels of which the endosperm as a result of genetic (characteristics) composition have another colour than yellow;

"**oxidation-stained maize kernels**" means maize kernels with a shiny light brown colour on the pericarp that are discoloured from the crown and not from the tip cap;

"**pinked maize kernels**" means kernels and pieces of kernels of white maize of which the pericarp or part thereof is shaded red or pink in colour;

"**poisonous seeds**" means seeds or part of seeds of plant species that may in terms of the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972) represent a hazard to human or animal health when consumed, including seeds of *Argemone mexicana, Convolvulus* spp., *Crotalaria* spp., *Datura* spp., *Ipomoea* spp. *Lolium temulentum*, *Ricinus communis* or *Xanthium* spp.;

"**shrivelled or obviously immature maize kernels**" means maize kernels with a thin and shrunken appearance;

"**sprouted maize kernels**" means maize kernels which have sprouted so far that developing roots and/or sprouts are clearly visible, or the shoot (plumule) in the germ is visibly discoloured;

"**the Act**" means the Agricultural Product Standards Act, 1990 (Act No. 119 of 1990);

"**the 6,35 mm round-hole sieve**"(± 0,05mm) means a sieve

(a) with a flat metal sheet bottom of 1,0 mm thickness perforated with round holes of 6,35 mm(±0,05mm) in diameter that are arranged with the centres of the holes at the points of intersection of an equilateral triangular grid with a pitch of 8 mm;

(b) of which the upper surface of the bottom is smooth;

(c) the frame of which is at least 40 mm high;

(d) with the inner width of at least 200 mm and the inner length of at least 300 mm, or, in the case of a circular sieve, the inner diameter of at least 278 mm; and

(e) with a minimum area of 600cm^2 and a maximum of 750cm^2

(f) that fits onto a tray with a solid bottom and must be at least 20mm above the bottom of the tray; and

"**water damaged maize kernels**" means maize kernels with a light yellow shine from the tip cap in a band around the maize kernel.

Scope of regulations

2. These regulations are minimum standards applicable to maize that is destined for sale in the Republic of South Africa but does not include-

(a) maize in retail quantities; and

(b) maize for seed production purposes.

Restrictions on sale of maize

3. (1) No person shall sell maize in the Republic of South Africa -

(a) unless the maize is sold according to the classes set out in regulation 4;

(b) unless the maize complies with the standards for the class concerned set out in regulation 5;

(c) unless the maize complies with the grades of maize and the standards for grades, where applicable, set out in regulations 6 and 7 respectively;

(d) unless the maize is packed in accordance with the packing requirements set out in regulation 8;

(e) unless the containers or sale documents, (as the case may be), are marked in accordance with the marking requirements set out in regulation 9; and

(f) if such maize contains a substance that renders it unfit for human consumption or for processing into or utilisation thereof as food or feed.

(2) The Executive Officer may grant written exemption, entirely or partially to any person on such conditions as he or she may deem necessary, from the provisions of sub regulation 1: Provided that such exemption is done in terms of section 3 (1) (c) of the Act.

PART I
QUALITY STANDARDS

Classes of maize

4. The classes of Maize shall be -

(a) Class White Maize;

(b) Class Yellow Maize; and

(c) Class Other Maize.

Standards for classes of maize

5. (1) A consignment of maize shall be classified as Class White Maize if -

(a) subject to the allowable deviation in respect of other colour maize kernels that apply to the different grades of white maize, it consists of maize the endosperm of which is by nature white in colour; and

(b) it complies with the standards for one of the grades of white maize set out in regulation 7.

(2) A consignment of maize shall be classified as Class Yellow Maize if -

(a) subject to the allowable deviation in respect of other colour maize kernels that apply to the different grades of yellow maize, it consists of maize the endosperm of which is by nature yellow in colour; and

(b) it complies with the standards for one of the grades of yellow maize set out in regulation 7.

(3) A consignment of maize shall be classified as Class Other Maize if the consignment does not comply with the standards for Class White Maize or Class Yellow Maize.

Grades of maize

6. (1) Maize of the Class White Maize shall be graded as WM1, WM2 or WM3.

(2) Maize of the Class Yellow Maize shall be graded as YM1, YM2 or YM3.

(3) No grades are determined for Class Other Maize.

DEPARTMENT OF AGRICULTURE, LAND REFORM AND RURAL DEVELOPMENT

NO. R. 4433 **1 March 2024**

AGRICULTURAL PRODUCT STANDARDS ACT, 1990 (ACT No. 119 OF 1990)

CORRECTION NOTICE: REGULATIONS RELATING TO THE GRADING, PACKING AND MARKING OF MAIZE INTENDED FOR SALE IN THE REPUBLIC OF SOUTH AFRICA

Regulations Relating to the Grading, Packing and Marking of Maize intended for Sale in the Republic of South Africa published in the Government Gazette no. 50129, under Notice. R. 4368 on 16 February 2024 is hereby supplemented as follows:

"Standards for grades and class of Maize

7. All grades and classes of Maize -

(a) shall be free from a musty, sour or other undesired odour;

(b) shall be free from animal filth, coal, glass, metal, plastic;

(c) shall be free from a substance which renders it unfit for human consumption or for processing into or utilisation thereof as food or feed;

(d) shall be free from insects;

(e) shall be free from stones which cannot pass through the 6,35 mm round-hole sieve;

(f) shall contain not more than one gram of stones, which can pass through the 6,35 mm round-hole sieve, per 10 kg;

(g) shall contain not more poisonous seeds than permitted in terms of the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972);

(h) shall have a moisture content of not more than 14 per cent; and

(i) shall not exceed the maximum percentage of permissible deviation as determined in the table in the Annexure for each grade.

PART II
PACKING AND MARKING REQUIREMENTS

Packing requirements

8. Maize of different classes and grades shall be packed in different containers.

Marking requirements

9. Each container or the accompanying sales document of a consignment of maize shall be marked or endorsed with -

(a) the class of the maize; and

(b) the grade, in the case of Class White Maize or Class Yellow Maize.

PART III
SAMPLING

Obtaining sample

10. (1) A sample of a consignment of maize shall -

(a) in the case of maize delivered in bags and subject to regulation 11, be obtained by sampling at least ten per cent of the bags, chosen from that consignment at random, with a bag probe: Provided that at least 25 bags in a consignment shall be sampled and where a consignment consists of less than 25 bags, all the bags in that consignment shall be sampled; and"

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(b) in the case of maize delivered in bulk and subject to regulation 11, be obtained by sampling that consignment throughout the whole depth of the layer, in at least six different places, chosen at random in that bulk quantity, with a bulk sampling apparatus.

(2) The collective sample obtained in subregulation (1) (a) or (b) shall -

(a) have a total mass of at least 10 kg; and

(b) be thoroughly mixed by means of a divider before further examination.

(3) If it is suspected that the sample referred to in subregulation (1)(a) is not representative of that consignment, an additional five per cent of the remaining bags, chosen from that consignment at random, shall be emptied into a suitable bulk container and sampled in the manner contemplated in sub regulation (1)(b).

(4) A sample taken in terms of these regulations shall be deemed representative of the consignment from which it was taken.

Sampling if contents differ

11. (1) If, after an examination of the maize taken from different bags in a consignment in terms of regulation 10 (1), it appears that the contents of those bags differ substantially -

(a) the bags concerned shall be placed separately;

(b) all the bags in the consignment concerned shall be sampled in order to do such separation; and

(c) each group of bags with similar contents in that consignment shall for the purposes of these regulations be deemed to be a separate consignment.

(2) If, after the discharge of a consignment of maize in bulk has commenced, it is suspected that the consignment could be of a class or grade other than that determined by means of the initial sampling, the discharge shall immediately be stopped and the part of the consignment remaining in the bulk container, as well as the grain that is already in the collecting tray, shall be sampled anew with a bulk sampling apparatus or by catching at least 20 samples at regular intervals throughout the whole offloading period with a suitable container from the stream of grain that is flowing in bulk.

Working sample

12. A working sample shall be obtained by dividing the representative sample of the consignment according to the latest version of ICC 101/1 method.

PART IV
DETERMINATION OF OTHER SUBSTANCES

Determination of undesirable odours and harmful substances

13. A sample of a consignment of maize shall be sensorially assessed or chemically analysed in order to determine -

(a) whether it has a musty, sour, or other undesirable odour: Provided that a working sample of unscreened maize that is ground in a grain mill to a fine meal may be used for the determination concerned; and

(b) whether it contains a substance that renders the maize unfit for human consumption or for processing into or for utilisation as food or feed.

Determination of animal filth, coal, glass, insect, metal, plastic, poisonous seed, and stone content

14. A consignment of maize shall be sensorially assessed, and a sample of that consignment shall be sensorial assessed and sorted by hand in order to determine whether the sample contains animal filth, coal, glass, insects, metal, plastic, poisonous seeds, and stones.

Determination of percentage of foreign matter

15. The percentage of foreign matter in a consignment of maize shall be determined as follows:

(a) Obtain a working sample with a mass of at least 150g from the sample of the consignment.

(b) Remove all foreign matter from the working sample and determine the mass thereof.

(c) Express the mass thus determined as a percentage of the total mass of the working sample.

(d) Such percentage shall represent the percentage of foreign matter in the consignment concerned.

PART V
MAIZE KERNELS

Determination of percentage of other colour maize kernels

16. The percentage of other colour maize kernels in a consignment of maize shall be determined as follows:

(a) Obtain a working sample with a mass of at least 150g from the sample of the consignment.

(b) Remove all other colour maize kernels from the working sample and determine the mass thereof.

(c) Express the mass thus determined as a percentage of the mass of the working sample.

(d) Such percentage shall represent the percentage of other colour maize kernels in the consignment concerned.

(e) Other coloured kernels must be returned to the working sample

Determination of percentage of defective maize kernels

17. The percentage of defective maize kernels in a consignment of maize shall be determined as follows:

(a) Obtain a working sample with a mass of at least 150g from the sample of the consignment.

(b) Place the working sample on the 6, 35 mm round-hole sieve and screen the sample by moving the sieve 20 strokes to and fro, alternately away from and towards the operator of the sieve. Move the sieve, which rests on a table or other suitable smooth surface, 250 mm to 460 mm away from and towards the operator with each stroke. The prescribed 20 strokes must be completed within 20 to 30 seconds.

(c) Determine the mass of the defective maize kernels and pieces of maize kernels that has passed through the sieve and express it as a percentage of the mass of the working sample.

(d) Remove all defective maize kernels from that part of the working sample remaining on top of the sieve and express it as a percentage of the mass of the working sample.

(e) Calculate the sum of the masses determined in terms of paragraphs (c) and (d).

(f) Express the combined mass calculated in terms of paragraph (e) as a percentage of the mass of the working sample.

(g) In the case of yellow maize, the percentage obtained -

(i) in terms of paragraph (c), represents the percentage of defective maize kernels and pieces of maize kernels in the consignment concerned, which can pass through the 6,35 mm round-hole sieve; and

(ii) in terms of paragraph (d), represents the percentage of defective maize kernels and pieces of maize kernels in the consignment concerned, which cannot pass through the 6,35 mm round-hole sieve.

(h) In the case of white maize, the percentage obtained in terms of paragraph (g) represents the percentage of defective maize kernels in the consignment concerned.

PART VI
MOISTURE CONTENT

Determination of moisture content

18. The moisture content of a consignment of maize may be determined according to any suitable method: Provided that the results thus obtained are in accordance with the maximum permissible deviation (± 0,3 per cent) for a class 1 moisture meter as detailed in ISO 7700/1-1994 based on the results of the 72 hour, 103°C oven dried method (AACC Method 44/15A/1981).

OFFENCE AND PENALTIES

19. Any person who contravenes or fails to comply with any provision of these regulations shall be guilty of an offence and upon conviction be liable to a fine or imprisonment in terms of section 11 of the Act.

COMMENCEMENT

20. The regulations shall come into operation on date of publication.

REPEAL

21. Regulations published by Government Notices No, R. 473 of 8th May 2009 hereby repealed from the date of commencement of these regulations

ANNEXURE A
TABLE

STANDARDS FOR GRADES OF CLASS WHITE MAIZE AND CLASS YELLOW MAIZE

	Maximum permissible deviation					
Deviation	White maize			Yellow maize/		
	WM1	WM2	WM3	YM1	YM2	YM3
1	2	3	4	5	6	7
1. Foreign matter [regulation 15]	0,3%	0,5%	0,75%	0,3%	0,5%	0,75%
2. Other colour maize kernels [regulation 16]	3%	6%	10%	2%	5%	5%
3. Defective maize kernels, above and below the 6,35 mm round-hole sieve [regulation 17]	7%	13%	30%	*	*	*
4. Defective maize kernels that can pass through the 6,35 mm round-hole sieve [regulation 17(c)]	*	*	*	4%	10%	30%
5. Defective maize kernels that can not pass through the 6,35 mm round-hole sieve [regulation 17(e)]	*	*	*	9%	20%	30%
6. Deviations referred to in items 1, 2, 3, 4 and 5 collectively: Provided that the deviations are individually within the specified limits	8%	16%	30%	9%	20%	30%

* No specifications.