South African Maize Crop

Quality Report
2014/2015 Season

Index

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SOUTH AFRICAN
COMMERCIAL MAIZE QUALITY
2014/2015

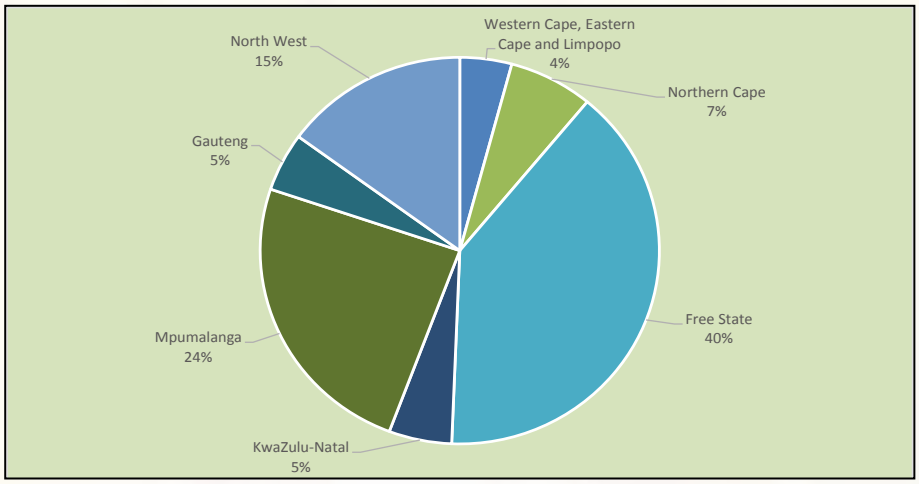
Acknowledgments
With gratitude to:

- *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, Forestry and Fisheries 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 harvesting season (April to August), a representative sample of each delivery of maize at the various silos was taken according to the prescribed grading regulations. The sampling procedure for the samples used in this survey is described on page 87. A total of 1000 composite samples, representing white and yellow maize of each production region, were received and analysed for quality. The samples consisted of 485 white and 515 yellow maize samples.

Graph 1: Production contribution of the provinces to the 2014/2015 maize crop



Figures provided by the CEC.

The quality attributes which were tested for, include:

a. RSA grading: All samples were graded according to the following factors, as defined in the South African grading regulation: defective kernels above and below 6.35 mm sieve, total defective kernels, foreign matter, other colour kernels, combined deviations and pinked kernels.
b. USA grading according to regulations on all samples 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.
c. Nutritional values (on all samples): Crude protein, crude fat and starch.
d. Physical Quality factors (on all samples): Hectolitre mass, 100 kernel mass, kernel size, breakage susceptibility, stress cracks and milling index.
e. All white maize samples were milled on the Roff laboratory mill and the whiteness index of the maize meal determined.

f. Mycotoxin analyses were performed on 350 samples representative of white and yellow maize produced per region.
g. Testing for the presence of Genetically Modified (GM) maize were performed on 100 samples representative of white and yellow maize produced per region.

Please refer to pages 87 - 91 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 one national and sixteen international proficiency testing schemes as part of our ongoing quality assurance procedures to demonstrate technical competency and international comparability.

The results of this, as well as previous surveys are available on the SAGL website (www.sagl.co.za). The hard copy reports are distributed to all the Directly Affected Groups and interested parties. The report is also available for download in a PDF format from the website.

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 is provided in table and graph format as is import and export data. Information on the manufacture, import and export of maize products is now also included in this report. The national grading regulations as published in the Government Gazette of 8 May 2009, are included (page 107).

The goal of this crop quality survey is to accumulate quality data on the commercial maize crop on a national level. This valuable data reveal general tendencies, highlight quality differences in the commercial maize produced in different local production regions and provide important information on the quality of commercial maize intended for export.

The Maize Trust investment in the annual Crop Quality Surveys, has created a unique and extremely useful database of crop quality measurements over several seasons and regions. Up to now, the data has only been presented in table and graph format, but has never been used for trend analyses or to assist in the development of prediction models such as the Milling Index Model.

In order to address this issue, SAGL undertook a data mining project, titled "Data Mining of past eleven years' Milling Index and Crop survey Results", funded by the Maize Trust. A complete statistical analysis of the maize quality data from the 2001/2002 to 2011/2012 seasons were performed for the following measurements: Protein (crude), starch, fat (crude), hectolitre mass, 100 kernel mass, total deviations (grading data), Roff Milling Index, Break 1 flour yield, Break 2 flour yield, Break 3 flour yield, Grits yield and Bran yield (all Roff milling data).

As part of the project, the possibility of developing a Geographic Information System (GIS) map system, where grain production regions (with the boundaries illustrated) are presented on a map of South Africa, was explored. SIQ (with additional data from Agbiz Grain on the regional boundary specifications) created a software package based on an open source GIS package (QGIS). These GIS maps show mean values for a trait for a specific region as an average for all seasons combined or as individual seasons on a year to year basis. The results of the crop quality traits are represented in a colour scale format – highest to lowest values are indicated by the darkest to the lightest colour. Mean values are showed as a legend. This GIS tool provides a good starting point but will however require further optimization in future.

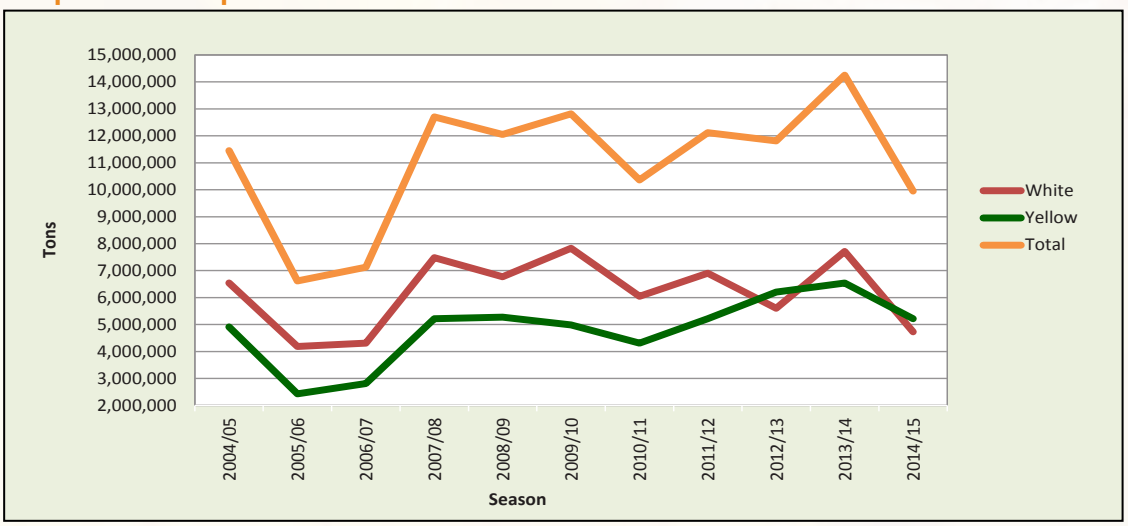
The project outcome provides a decision making tool to the maize industry stakeholders to assist in the identification of potential problem areas in maize quality and to focus future research activities.

Production

The finalized crop figure for commercial maize for the 2014/2015 season as overseen by the National Crop Estimates Liaison Committee (CELC) is 9 955 000 tons. This is the lowest South African maize crop since the 2006/2007 season when 7 125 000 tons of maize were produced and a 30% reduction compared to the previous harvest. White maize's contribution to the total production was 4 735 000 tons (47.6%) and that of yellow maize 5 220 000 tons (52.4%).

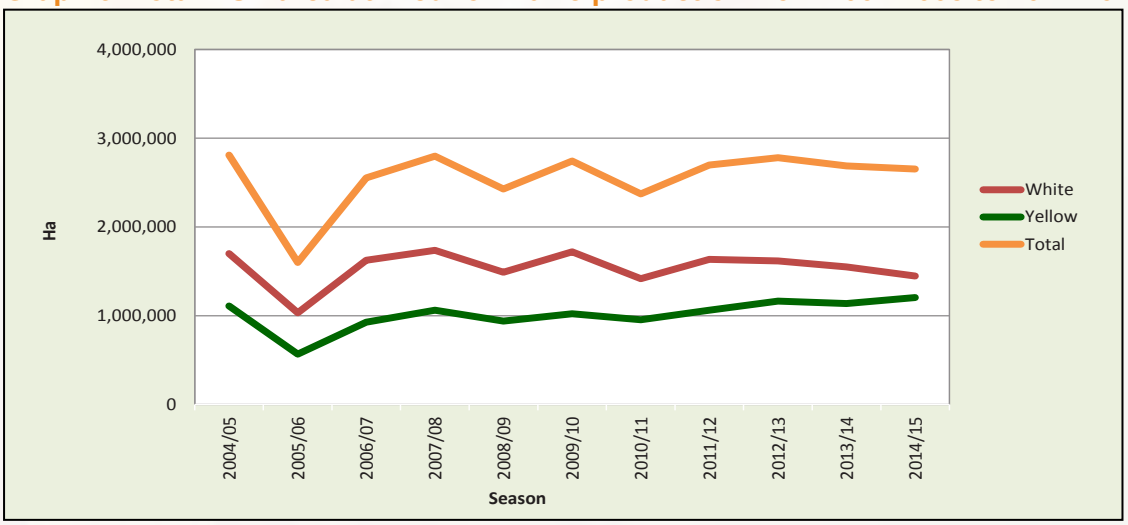
The national Crop Estimates Committee's (CEC) estimated total production figures was revised, using as basis for the calculations, the South African Grain Information Services' (SAGIS) published figures of actual deliveries. Figures to determine on-farm usage and retentions from the maize utilization survey, which was conducted by the Department of Agriculture, Forestry and Fisheries (DAFF) and 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 2004/2005 to 2014/2015



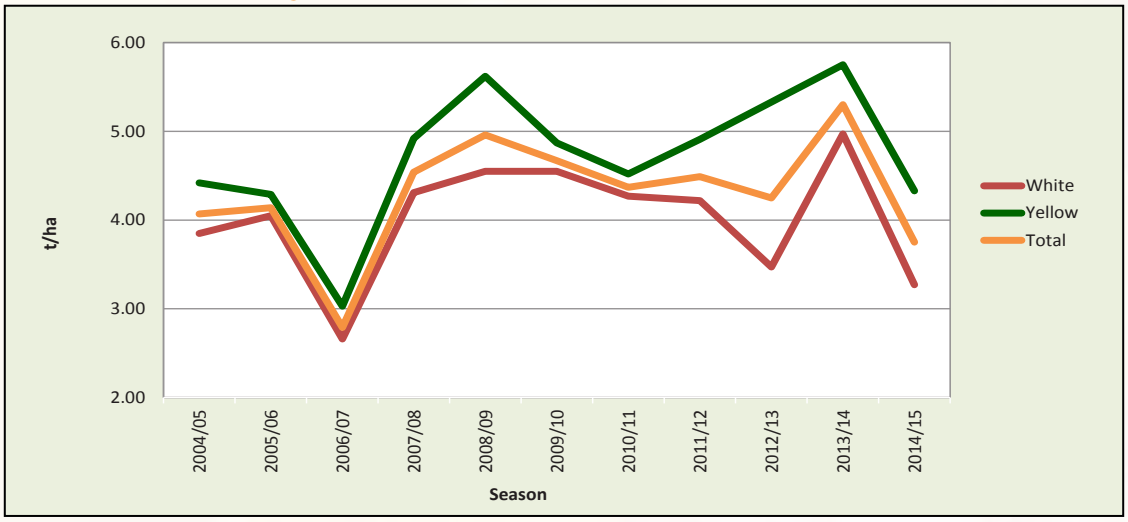
The total area utilized for maize production in the 2014/2015 season was 2 652 850 hectares, a decrease of only 1.3% compared to the previous season, which shows the impact of the drought conditions experienced over large parts of the maize production regions. White maize was planted on 1 448 050 hectares and yellow maize on 1 204 800 hectares (1 551 200 and 1 137 000 hectares respectively in the 2013/2014 season).

Graph 3: Total RSA area utilized for maize production from 2004/2005 to 2014/2015



The maize yield decreased from 5.30 t/ha in the previous season to 3.75 t/ha this season. White maize yielded 3.27 t/ha and yellow maize 4.33 t/ha, representing decreases of 34% and 25% respectively compared to the previous season. The lower yields observed were a result of dry and hot weather conditions during the growing season.

Graph 4: RSA Maize yield from 2004/2005 to 2014/2015



As with commercial maize production, both the area planted as well as the crop size of maize planted in the non-commercial agricultural sector decreased compared to the previous season. Approximately 60% of non-commercial maize is produced in the Eastern Cape.

Table1: Maize production overview - 2014/2015 season

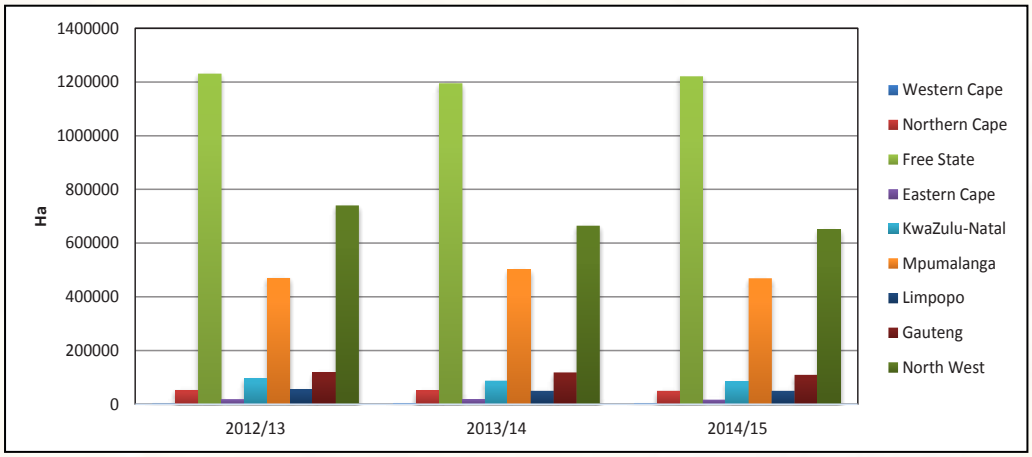
Province	Type of production	White			Yellow		
		Hectares planted, ha	Production, tons	Yield, t/ha	Hectares planted, ha	Production, tons	Yield, t/ha
Western Cape	Dryland	-	-	-	-	-	-
	Irrigation	450	4 050	9.00	3 800	34 200	9.00
	Total	450	4 050	9.00	3 800	34 200	9.00
Northern Cape	Dryland	-	-	-	-	-	-
	Irrigation	3 500	35 000	10.00	46 000	644 000	14.00
	Total	3 500	35 000	10.00	46 000	644 000	14.00
Free State	Dryland	695 000	2 110 500	3.04	466 000	1 312 000	2.82
	Irrigation	15 000	126 000	8.40	44 000	396 500	9.01
	Total	710 000	2 236 500	3.15	510 000	1 708 500	3.35
Eastern Cape	Dryland	1 700	5 100	3.00	6 500	19 500	3.00
	Irrigation	900	10 500	11.67	7 500	64 500	8.60
	Total	2 600	15 600	6.00	14 000	84 000	6.00
KwaZulu-Natal	Dryland	28 500	124 000	4.35	35 000	195 000	5.57
	Irrigation	11 500	100 000	8.70	10 000	88 500	8.85
	Total	40 000	224 000	5.60	45 000	283 500	6.30
Mpumalanga	Dryland	146 000	745 000	5.10	302 500	1 488 000	4.92
	Irrigation	8 000	79 000	9.88	12 500	117 300	9.38
	Total	154 000	824 000	5.35	315 000	1 605 300	5.10
Limpopo	Dryland	13 500	30 750	2.28	11 300	20 000	1.77
	Irrigation	15 000	126 000	8.40	9 700	104 000	10.72
	Total	28 500	156 750	5.50	21 000	124 000	5.90
Gauteng	Dryland	39 650	144 800	3.65	60 000	240 000	4.00
	Irrigation	4 350	48 800	11.22	5 000	52 500	10.50
	Total	44 000	193 600	4.40	65 000	292 500	4.50
North West	Dryland	448 000	896 000	2.00	167 500	284 000	1.70
	Irrigation	17 000	150 000	8.82	17 500	160 000	9.14
	Total	465 000	1 046 000	2.25	185 000	444 000	2.40
RSA	Dryland	1 372 350	4 056 150	2.96	1 048 800	3 558 500	3.39
	Irrigation	75 700	679 350	8.97	156 000	1 661 500	10.65
	Total	1 448 050	4 735 500	3.27	1 204 800	5 220 000	4.33

Figures provided by the CEC.

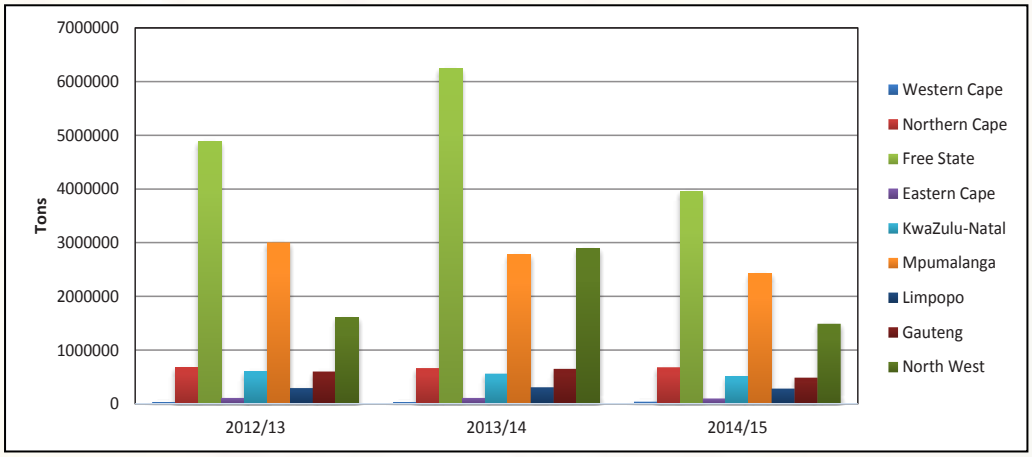
The major commercial maize-producing provinces are the Free State, Mpumalanga and North West, contributing 79% of the total maize production in the RSA. The Free State produced 3 944 500 tons of maize on 1 220 000 hectares with a yield of 3.23 t/ha. Mpumalanga produced 2 429 300 tons of maize on 469 000 hectares with a yield of 5.18 t/ha and North West harvested 1 490 000 tons of maize on 650 000 hectares yielding 2.29 t/ha. Yellow maize contributed 66% of the total maize production in Mpumalanga while the majority of maize produced in the North West (70%) and Free State (57%) is white.

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

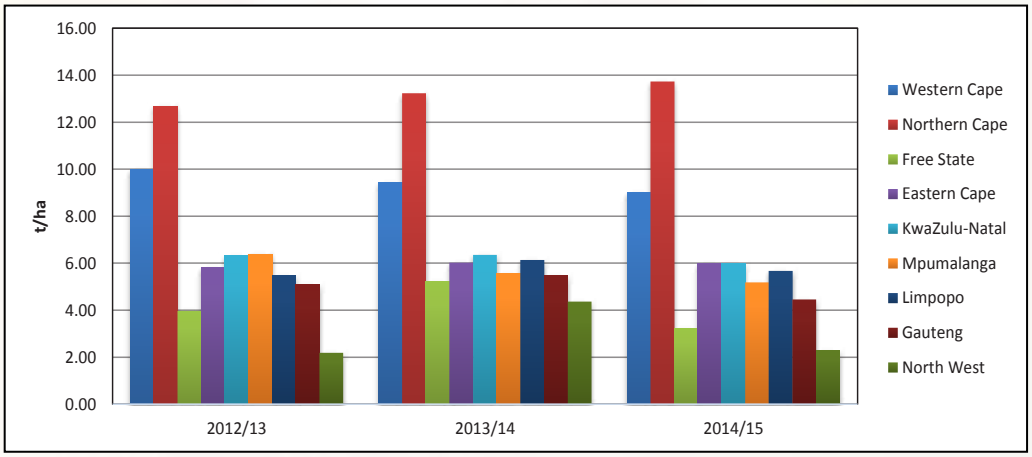
Graph 5: Area utilized for maize production per province over three seasons



Graph 6: Maize production per province over three seasons



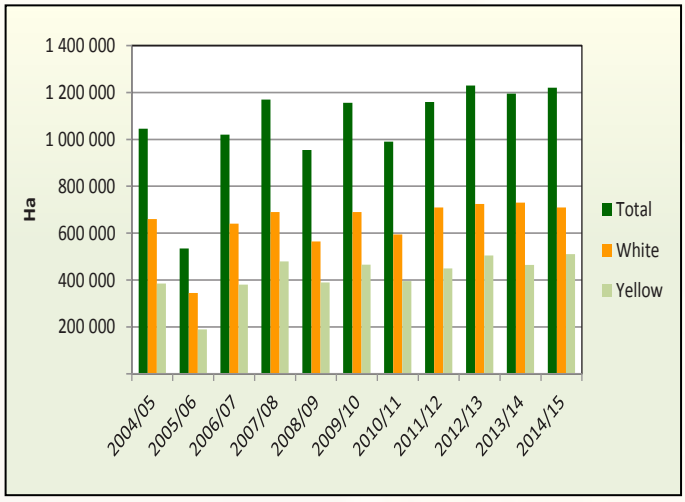
Graph 7: Maize yield per province over three seasons



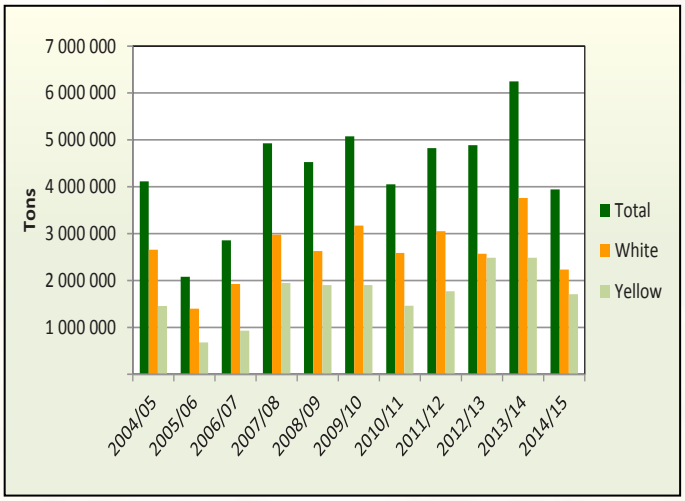
Information provided by the CEC.

Graphs 8 to 13 provide an overview of the area planted and production figures for the Free State, Mpumalanga and North West from the 2004/2005 to 2014/2015 seasons.

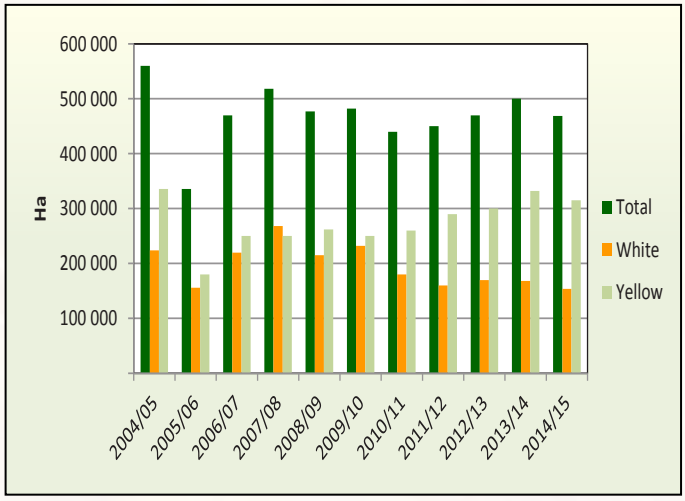
Graph 8: Area utilized for maize production in the Free State since 2004/2005



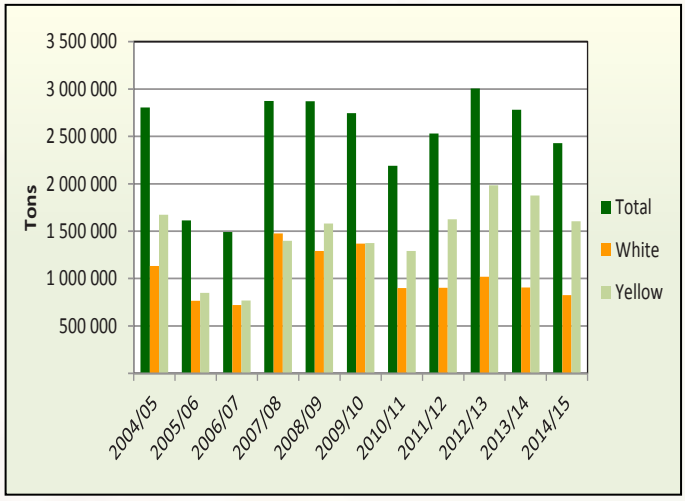
Graph 9: Maize production in the Free State since 2004/2005



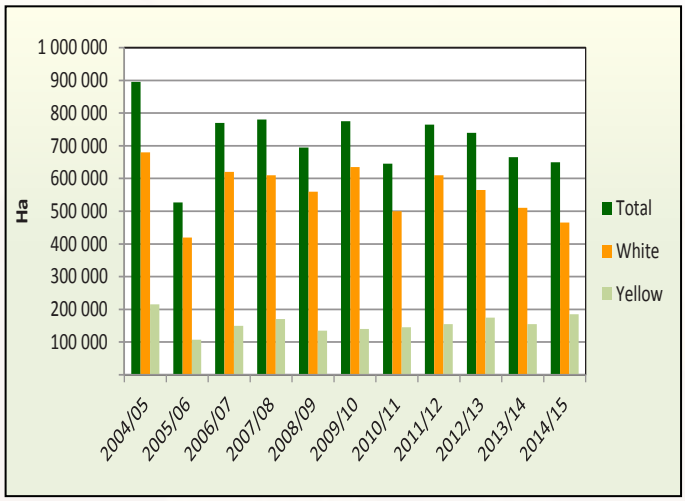
Graph 10: Area utilized for maize production in Mpumalanga since 2004/2005



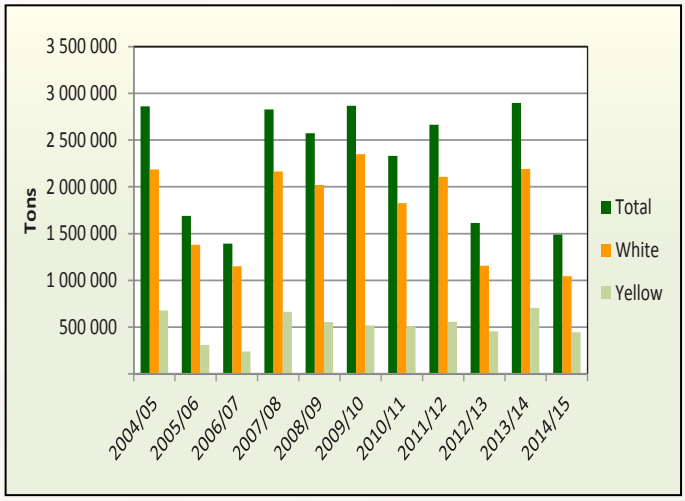
Graph 11: Maize production in Mpumalanga since 2004/2005



Graph 12: Area utilized for maize production in North West since 2004/2005



Graph 13: Maize production in North West since 2004/2005



Information provided by the CEC.

Supply and Demand

World maize production for the 2014/2015 season is estimated at 1 015.6 million tons according to the *International Grains Council Grain Market Report GMR 464 – 1 April 2016*, the major maize producing countries being the USA, China and Brazil. The USA, Brazil, Ukraine and Argentina are the biggest exporters of maize. Maize usage figures are estimated at 112.1, 263.2 and 577.4 million tons respectively for food, industrial and feed purposes. World production for the 2015/2016 season is forecasted at 972.4 million tons.

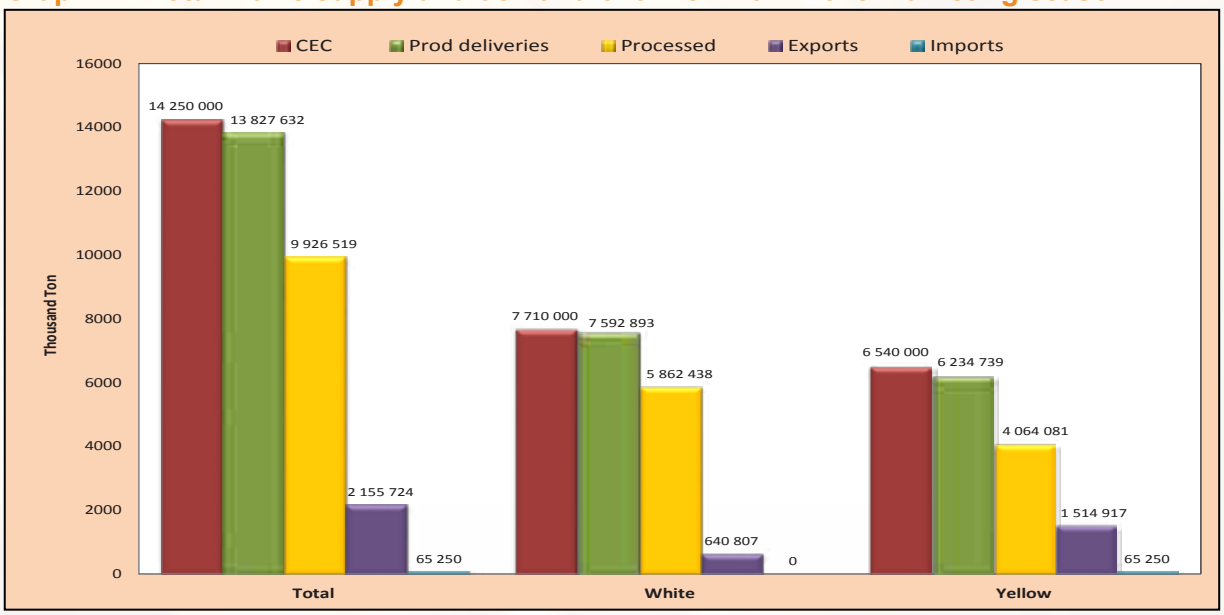
According to the *BFAP Agricultural Outlook 2015 – 2024,* the bulk of maize utilized in South Africa is for animal feed (38.4%) and food (36.1%) products. The remainder is exported and utilized for the production of starch and glucose. South Africa has been a net exporter of maize for several seasons and this position is expected to remain over the next ten years. Exports are however projected to decline from 2.23 million tons in the 2013/2014 season to 1.96 million tons in the 2023/2024 season, with growth in demand for especially yellow maize, slightly exceeding the growth in production.

Feed demand is expected to grow from 4.8 million tons currently, to just over 7 million tons in 2023/2024. Demand for maize-based food products is estimated to have limited growth, increasing by only 90 000 tons by 2023/2024. The smaller domestic crop will necessitate increased imports of maize during 2015 and 2016. The bulk of the imports will supply animal feed factories in especially the coastal regions.

Due to food security concerns, maize is currently excluded as a feed stock within the South African Biofuels Industrial Strategy (BIS) and it is therefore not possible to legitimately produce maize-based ethanol.

Please see local Supply and Demand figures provided by SAGIS in graphs and tables below and on pages 8 to 13.

Graph 14: Total maize supply and demand overview 2014/2015 marketing season



Information provided by SAGIS.

SAGIS 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)

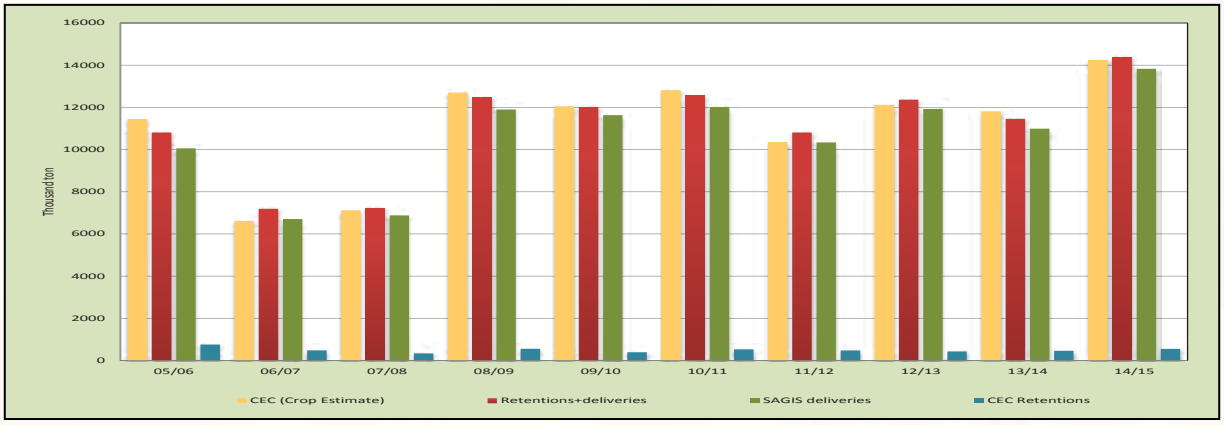
Publication date: 2016-03-29

Marketing Season (May - Apr)																			Current Season May-Feb	10 Year average
Season	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	2005/06-2014/15
																			***	
																			10	
CEC (Crop Estimate)	8,488,000	7,082,000	6,716,000	10,141,000	7,225,000	9,732,000	9,392,000	9,482,000	11,450,000	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	11,129,926
CEC (Retention)		469,000	502,000	614,000	414,000	462,000	366,000	410,000	754,000	480,000	337,000	554,000	389,000	527,000	474,000	433,000	457,810	550,000	0	495,581
SUPPLY																				
Opening stock (1 May)	1,283,000	1,949,000	847,000	983,000	2,115,000	1,202,000	2,710,000	2,624,000	3,148,000	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	1,848,442
Prod deliveries	9,732,000	6,854,000	7,075,000	10,409,000	7,936,000	9,310,000	8,409,000	9,093,000	10,055,000	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	9,058,925	10,627,663
Imports	109,000	98,000	569,000	0	395,000	925,000	441,000	219,000	360,000	931,000	1,120,000	27,000	27,000	0	421,000	11,000	79,682	65,250	1,254,801	304,193
Surplus	0	0	0	0	0	0	40,000	0	0	32,000	29,000	30,000	68,000	77,000	54,000	42,000	122,608	26,153	33,550	48,076
Total Supply	**11,124,000**	**8,901,000**	**8,491,000**	**11,392,000**	**10,446,000**	**11,437,000**	**11,600,000**	**11,936,000**	**13,563,000**	**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**	**12,420,911**	**12,828,374**
DEMAND																				
Processed	6,383,000	6,341,000	6,362,000	6,852,000	7,151,000	6,983,000	7,243,000	7,283,000	7,462,000	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	8,591,271	8,643,019
Human	3,410,000	3,381,000	3,426,000	3,589,000	3,877,000	3,708,000	3,712,000	3,740,000	3,825,000	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	3,941,114	4,339,133
Animal	2,973,000	2,960,000	2,936,000	3,068,000	3,146,000	3,155,000	3,416,000	3,427,000	3,537,000	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	4,624,299	4,234,494
-gristing	n/a	n/a	n/a	195,000	128,000	120,000	115,000	116,000	100,000	81,000	63,000	69,000	86,000	73,000	67,000	58,000	51,065	45,851	25,858	69,392
-bio-fuel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Withdrawn by producers	211,000	0	0	500,000	325,000	301,000	299,000	255,000	315,000	241,000	217,000	273,000	291,000	267,000	142,000	138,000	148,909	124,508	66,503	215,742
Released to end-consumers	0	0	423,000	267,000	214,000	206,000	224,000	351,000	340,000	235,000	230,000	220,000	378,000	526,000	484,000	478,000	280,432	205,577	154,214	337,701
Net receipts(-)/disp(+)	0	0	0	2,000	63,000	35,000	25,000	18,000	28,000	36,000	42,000	49,000	51,000	44,000	15,000	62,000	12,043	22,100	28,219	36,114
Deficit	0	98,000	79,000	168,000	156,000	14,000	0	49,000	12,000	0	0	0	0	0	0	0	0	0	0	1,200
Total Exports	1,921,000	1,388,000	652,000	1,488,000	1,335,000	1,188,000	1,185,000	832,000	2,237,000	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	723,659	1,853,632
Products	**0**	**0**		**65,000**	**54,000**	**118,000**	**89,000**	**100,000**	**94,000**	**49,000**	**62,000**	**107,000**	**126,000**	**128,000**	**129,000**	**133,000**	**176,978**	**198,319**	**155,225**	**120,330**
African Countries				**28,000**	**38,000**	**61,000**	**34,000**	**48,000**	**56,000**	**28,000**	**35,000**	**67,000**	**87,000**	**84,000**	**86,000**	**95,000**	**123,040**	**137,742**	**110,142**	**79,878**
Other Countries				**37,000**	**16,000**	**57,000**	**55,000**	**52,000**	**38,000**	**21,000**	**27,000**	**40,000**	**39,000**	**44,000**	**43,000**	**38,000**	**53,938**	**60,577**	**45,083**	**40,452**
Whole maize	**0**	**0**		**1,423,000**	**1,281,000**	**1,070,000**	**1,096,000**	**732,000**	**2,143,000**	**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**	**568,434**	**1,733,302**
Border Posts				**352,000**	**752,000**	**1,033,000**	**950,000**	**591,000**	**1,311,000**	**488,000**	**472,000**	**1,332,000**	**703,000**	**629,000**	**584,000**	**613,000**	**921,454**	**691,659**	**561,979**	**774,511**
Harbours				**1,071,000**	**529,000**	**37,000**	**146,000**	**141,000**	**832,000**	**60,000**	**0**	**830,000**	**967,000**	**1,437,000**	**1,862,000**	**1,200,000**	**1,134,164**	**1,264,326**	**6,455**	**958,649**
Total Demand	**8,515,000**	**7,827,000**	**7,516,000**	**9,277,000**	**9,244,000**	**8,727,000**	**8,976,000**	**8,788,000**	**10,394,000**	**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**	**9,563,866**	**11,087,408**
Ending Stock (30 Apr)	**2,609,000**	**1,074,000**	**975,000**	**2,115,000**	**1,202,000**	**2,710,000**	**2,624,000**	**3,148,000**	**3,169,000**	**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**	**2,857,045**	**1,740,966**
- processed p/month	531,900	528,400	530,200	571,000	595,900	581,900	603,600	606,900	621,800	638,300	669,100	717,800	721,500	738,100	745,100	744,583	779,056	827,210	859,127	720,255
- months' stock	4.9	2.0	1.8	3.7	2.0	4.7	4.3	5.2	5.1	3.2	1.6	2.2	3.0	3.2	1.3	1.9	0.8	2.5	3.3	3

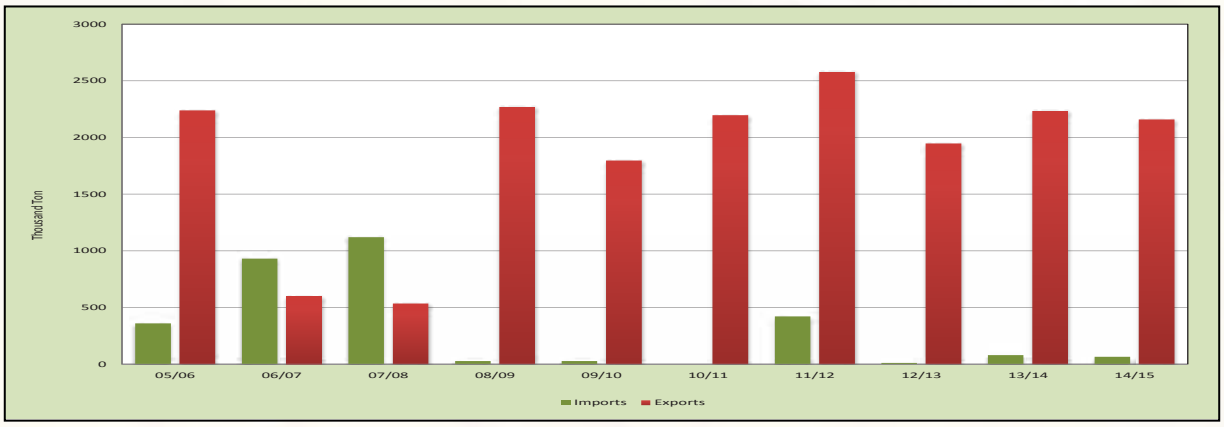
Note: 1998/1999 and 1999/2000 Includes storage on behalf of producers

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

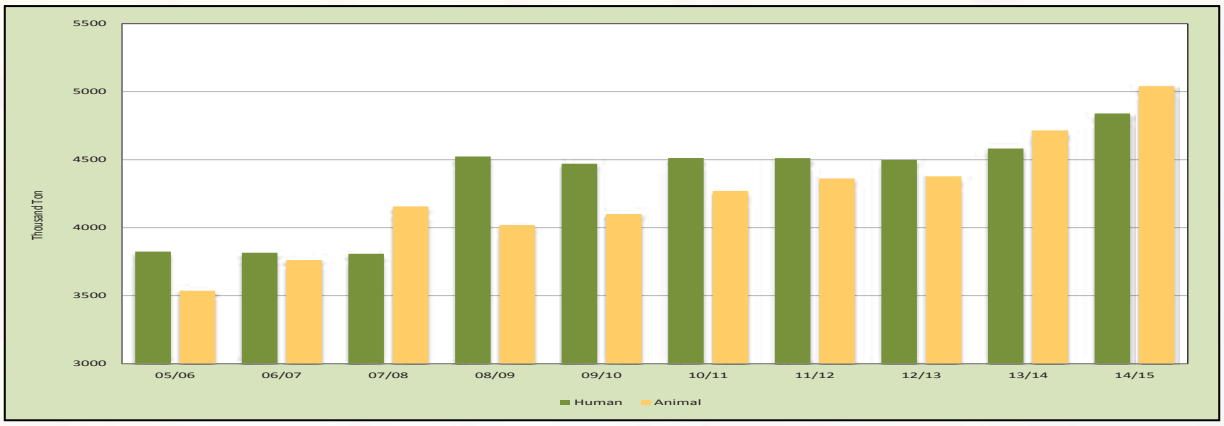
Graph 15: Maize: CEC Estimate, Retentions and SAGIS deliveries over 10 marketing seasons



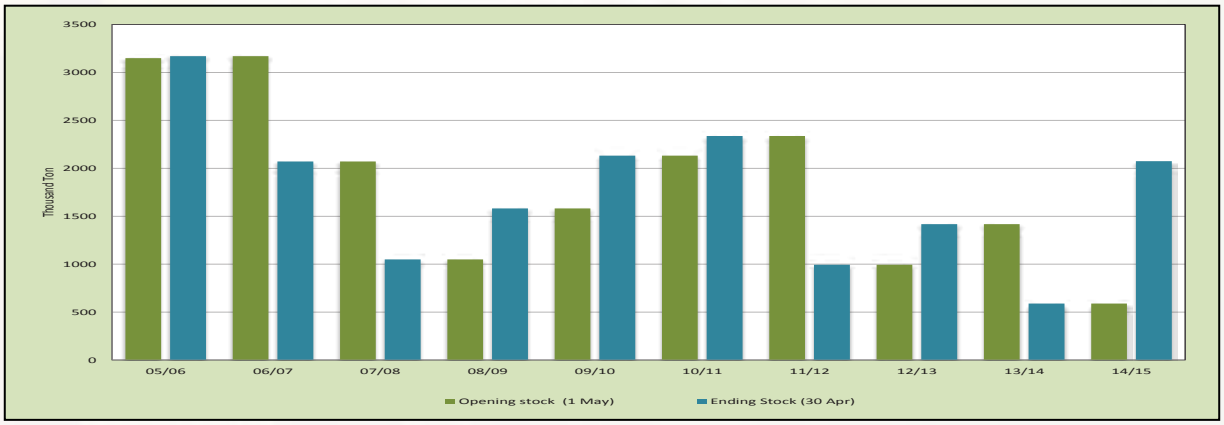
Graph 16: Maize: Imports and exports over 10 marketing seasons



Graph 17: Maize: RSA consumption over 10 marketing seasons



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



Information provided by SAGIS.

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

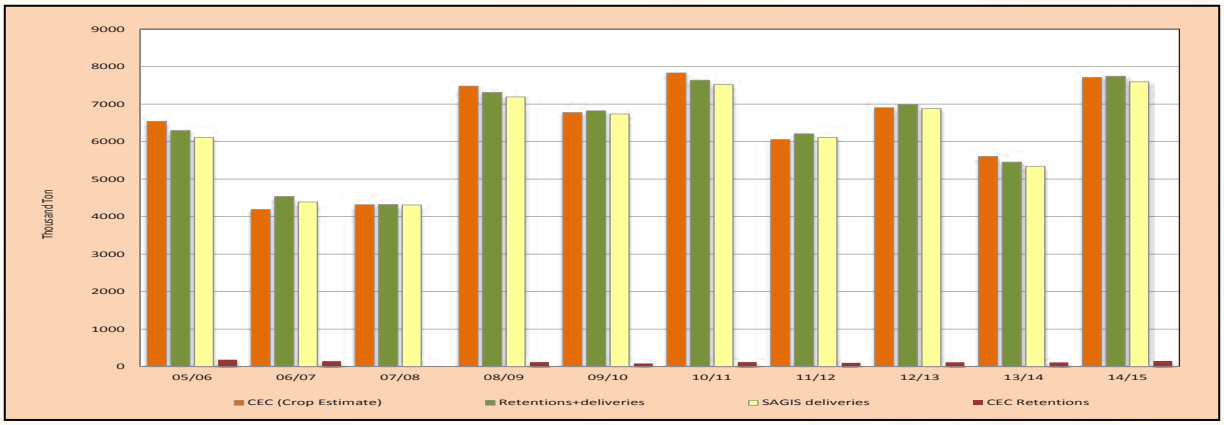
WHITE MAIZE: SUPPLY AND DEMAND TABLE BASED ON SAGIS' INFO (TON)

Publication date: 2016-03-29

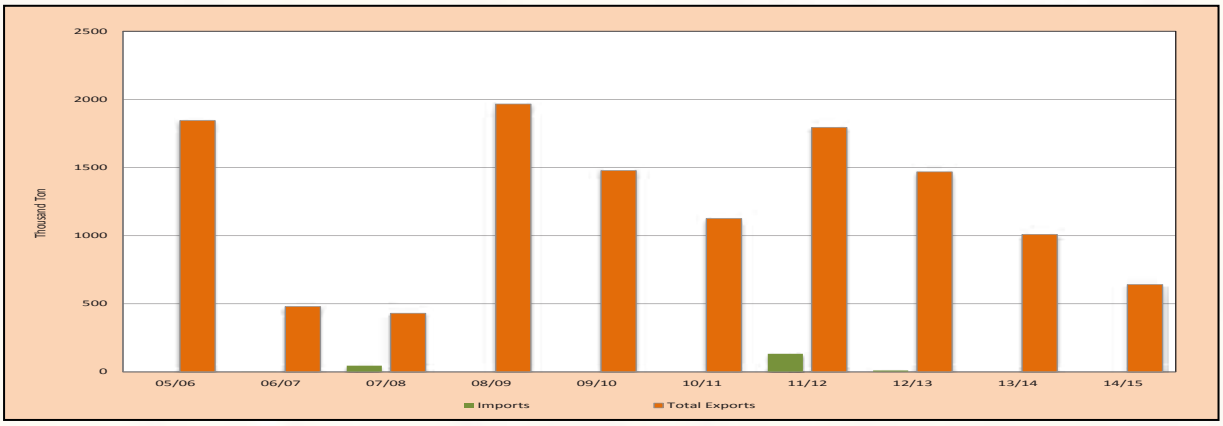
Marketing Season (May - Apr)																			Current Season May-Feb	10 Year average
Season	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	2005/06-2014/15
																			***	
																			10	
CEC (Crop Estimate)	4,614,000	4,383,000	4,141,000	6,155,000	4,110,000	5,538,000	6,366,000	5,805,000	6,541,000	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	6,340,046
CEC (Retention)		119,000	124,000	189,000	105,000	139,000	116,000	113,000	184,000	144,000	11,000	120,000	83,000	119,000	100,000	114,000	110,910	150,000	0	113,591
SUPPLY																				
Opening stock (1 May)	838,000	947,000	513,000	609,000	1,273,000	559,000	1,718,000	2,123,000	2,402,000	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	1,223,353
Prod deliveries*	5,183,000	4,412,000	4,652,000	6,440,000	4,636,000	5,576,000	5,845,000	5,647,000	6,108,000	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	4,518,660	6,217,410
Imports	5,000	0	0	0	47,000	274,000	33,000	0	0	1,000	46,000	0	0	0	133,000	11,000	0	0	72,531	19,100
Surplus	0	17,000	0	0	0	0	40,000	0	4,000	20,000	19,000	25,000	48,000	45,000	18,000	22,000	69,859	8,808	10,761	27,967
Total Supply	**6,026,000**	**5,376,000**	**5,165,000**	**7,049,000**	**5,956,000**	**6,409,000**	**7,636,000**	**7,770,000**	**8,514,000**	**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**	**5,884,533**	**7,487,830**
DEMAND																				
Processed	3,584,000	3,586,000	3,687,000	4,342,000	4,202,000	3,679,000	4,212,000	4,313,000	4,186,000	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	3,646,299	4,976,211
-human	3,316,000	3,255,000	3,235,000	3,377,000	3,630,000	3,459,000	3,467,000	3,478,000	3,559,000	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	3,520,350	3,981,074
-animal/industrial	268,000	331,000	452,000	783,000	446,000	105,000	641,000	733,000	543,000	787,000	1,142,000	662,000	362,000	1,658,000	1,202,000	904,000	651,925	1,469,002	110,678	938,093
-gristing	n/a	n/a	n/a	182,000	126,000	115,000	104,000	102,000	84,000	72,000	57,000	62,000	68,000	56,000	53,000	48,000	38,301	32,141	15,271	57,044
-bio-fuel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Withdrawn by producers	87,000	0	0	349,000	164,000	144,000	144,000	107,000	101,000	112,000	107,000	111,000	81,000	108,000	46,000	36,000	32,409	36,940	11,297	77,135
Released to end-consumers	0	0	222,000	96,000	64,000	40,000	76,000	181,000	71,000	80,000	69,000	45,000	62,000	189,000	126,000	95,000	43,000	38,934	12,086	81,893
Net receipts(-)/disp(+)	0	0	0	7,000	43,000	11,000	12,000	17,000	11,000	27,000	28,000	27,000	10,000	22,000	7,000	28,000	1,953	14,319	342	17,627
Deficit	0	0	58,000	121,000	112,000	0	0	38,000	0	0	0	0	0	0	0	0	0	0	0	0
Total Exports	1,119,000	1,108,000	594,000	861,000	812,000	817,000	1,069,000	712,000	1,844,000	480,000	431,000	1,966,000	1,477,000	1,126,000	1,794,000	1,468,000	1,008,923	640,807	448,300	1,223,573
Products	**0**	**0**	**0**	**54,000**	**52,000**	**73,000**	**65,000**	**44,000**	**58,000**	**20,000**	**31,000**	**69,000**	**69,000**	**77,000**	**60,000**	**68,000**	**82,877**	**93,307**	**68,697**	**62,818**
African Countries				**17,000**	**37,000**	**37,000**	**22,000**	**23,000**	**51,000**	**14,000**	**24,000**	**57,000**	**58,000**	**62,000**	**47,000**	**56,000**	**72,032**	**77,930**	**60,834**	**51,896**
Other Countries				**37,000**	**15,000**	**36,000**	**43,000**	**21,000**	**7,000**	**6,000**	**7,000**	**12,000**	**11,000**	**15,000**	**13,000**	**12,000**	**10,845**	**15,377**	**7,863**	**10,922**
Whole maize	**0**	**0**	**0**	**807,000**	**760,000**	**744,000**	**1,004,000**	**668,000**	**1,786,000**	**460,000**	**400,000**	**1,897,000**	**1,408,000**	**1,049,000**	**1,734,000**	**1,400,000**	**926,046**	**547,500**	**379,603**	**1,160,755**
Border Posts				**319,000**	**671,000**	**737,000**	**881,000**	**527,000**	**1,210,000**	**400,000**	**400,000**	**1,241,000**	**566,000**	**509,000**	**439,000**	**462,000**	**727,989**	**538,128**	**379,603**	**649,312**
Harbours				**488,000**	**89,000**	**7,000**	**123,000**	**141,000**	**576,000**	**60,000**	**0**	**656,000**	**842,000**	**540,000**	**1,295,000**	**938,000**	**198,057**	**9,372**	**0**	**511,443**
Total Demand	**4,790,000**	**4,694,000**	**4,561,000**	**5,776,000**	**5,397,000**	**4,691,000**	**5,513,000**	**5,368,000**	**6,213,000**	**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**	**4,118,324**	**6,376,440**
Ending Stock (30 Apr)	**1,236,000**	**682,000**	**604,000**	**1,273,000**	**559,000**	**1,718,000**	**2,123,000**	**2,402,000**	**2,301,000**	**1,630,000**	**618,000**	**762,000**	**1,362,000**	**1,609,000**	**518,000**	**757,000**	**274,318**	**1,282,581**	**1,766,209**	**1,111,390**
- processed p/month	298,700	298,800	307,300	361,800	350,200	306,600	351,000	359,400	348,800	365,400	395,900	410,200	379,600	489,300	447,800	420,583	400,723	488,537	364,630	414,684
- months' stock	4.1	2.3	2.0	3.5	1.6	5.6	6.0	6.7	6.6	4.5	1.6	1.9	3.6	3.3	1.2	1.8	0.7	2.6	4.8	3

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

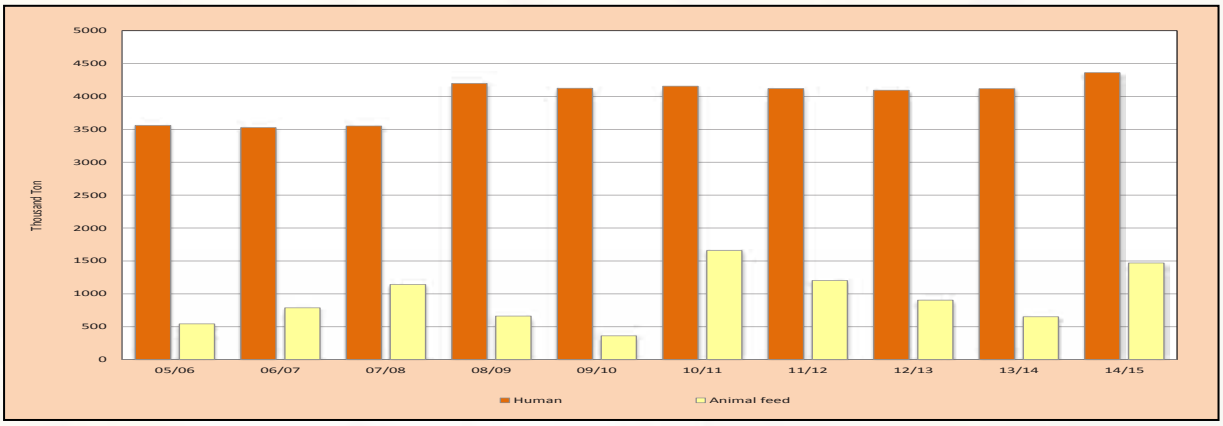
Graph 19: White Maize: CEC Estimate, Retentions and SAGIS deliveries over 10 marketing seasons



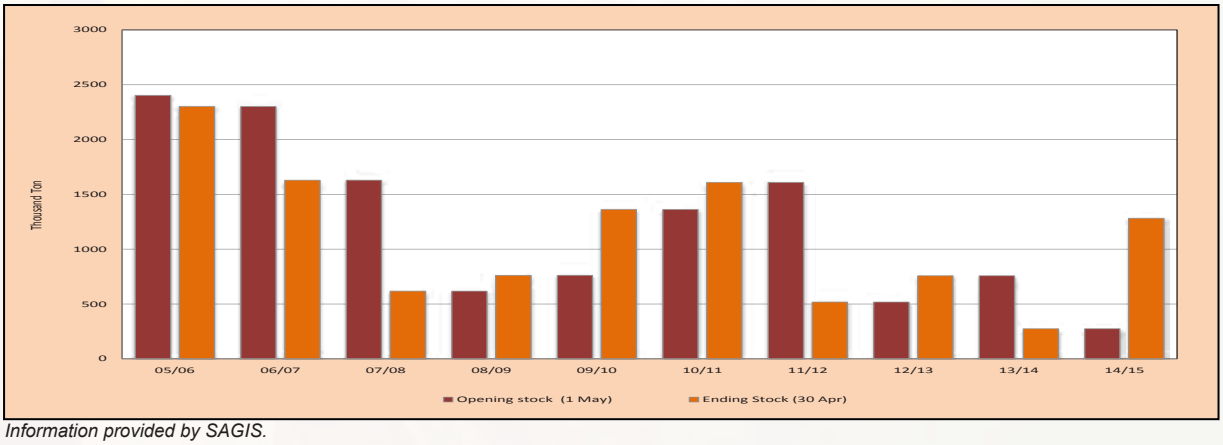
Graph 20: White Maize: Imports and exports over 10 marketing seasons



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.

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

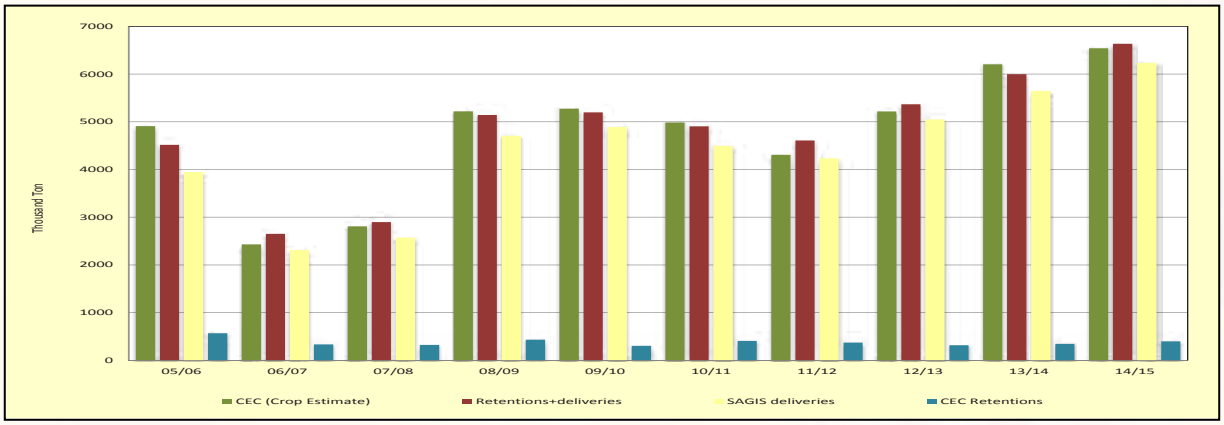
YELLOW MAIZE: SUPPLY AND DEMAND TABLE BASED ON SAGIS' INFO (TON)

Publication date: 2016-03-29

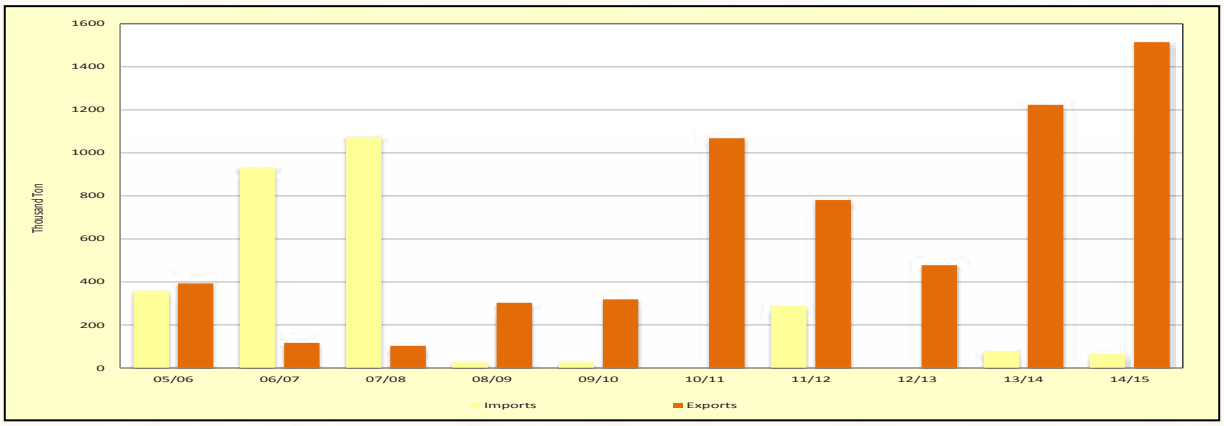
Marketing Season (May - Apr)																			Current Season May-Feb	10 Year average
Season	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	2005/06-2014/15
																			***	
																			10	
CEC (Crop Estimate)	3,874,000	2,699,000	2,575,000	3,986,000	3,115,000	4,194,000	3,026,000	3,677,000	4,909,000	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	4,789,880
CEC (Retention)		350,000	378,000	425,000	309,000	323,000	250,000	297,000	570,000	336,000	326,000	434,000	306,000	408,000	374,000	319,000	346,900	400,000	0	381,990
SUPPLY																				
Opening stock (1 May)	445,000	1,002,000	334,000	374,000	842,000	643,000	992,000	501,000	746,000	868,000	440,000	431,000	819,000	769,000	727,000	476,000	660,179	314,710	791,054	625,089
Prod deliveries*	4,549,000	2,442,000	2,423,000	3,969,000	3,300,000	3,734,000	2,564,000	3,446,000	3,947,000	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	4,540,265	4,410,253
Imports	104,000	98,000	569,000	0	348,000	651,000	408,000	219,000	360,000	930,000	1,074,000	27,000	27,000	0	288,000	0	79,682	65,250	1,182,270	285,093
Surplus	0	0	0	0	0	0	0	0	0	12,000	10,000	5,000	20,000	32,000	36,000	20,000	52,749	17,345	22,789	20,509
Total Supply	**5,098,000**	**3,542,000**	**3,326,000**	**4,343,000**	**4,490,000**	**5,028,000**	**3,964,000**	**4,166,000**	**5,053,000**	**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**	**6,536,378**	**5,340,945**
DEMAND																				
Processed	2,799,000	2,755,000	2,675,000	2,510,000	2,949,000	3,304,000	3,031,000	2,970,000	3,276,000	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	4,944,972	3,666,808
-human	94,000	126,000	191,000	212,000	247,000	249,000	245,000	262,000	266,000	290,000	257,000	326,000	346,000	356,000	393,000	404,000	463,862	478,726	420,764	358,059
-animal/industrial	2,705,000	2,629,000	2,484,000	2,285,000	2,700,000	3,050,000	2,775,000	2,694,000	2,994,000	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	4,513,621	3,296,402
-gristing	n/a	n/a	n/a	13,000	2,000	5,000	11,000	14,000	16,000	9,000	6,000	7,000	18,000	17,000	14,000	10,000	12,764	13,710	10,587	12,347
-bio-fuel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Withdrawn by producers	124,000	0	0	151,000	161,000	157,000	155,000	148,000	214,000	129,000	110,000	162,000	210,000	159,000	96,000	102,000	116,500	87,568	55,206	138,607
Released to end-consumers	0	0	201,000	171,000	150,000	166,000	148,000	170,000	269,000	155,000	161,000	175,000	316,000	337,000	358,000	383,000	237,432	166,643	142,128	255,808
Net receipts(-)/disp(+)	0	0	0	-5,000	20,000	24,000	13,000	1,000	17,000	9,000	14,000	22,000	41,000	22,000	8,000	34,000	10,090	7,781	27,877	18,487
Deficit	0	115,000	21,000	47,000	44,000	14,000	0	11,000	16,000	0	0	0	0	0	0	0	0	0	0	1,600
Total Exports	802,000	280,000	58,000	627,000	523,000	371,000	116,000	120,000	393,000	117,000	103,000	303,000	319,000	1,068,000	781,000	478,000	1,223,673	1,514,917	275,359	630,059
Products	**0**	**0**	**0**	**11,000**	**2,000**	**45,000**	**24,000**	**56,000**	**36,000**	**29,000**	**31,000**	**38,000**	**57,000**	**51,000**	**69,000**	**65,000**	**94,101**	**105,012**	**86,528**	**57,511**
African Countries				**11,000**	**1,000**	**24,000**	**12,000**	**25,000**	**5,000**	**14,000**	**11,000**	**10,000**	**29,000**	**22,000**	**39,000**	**39,000**	**51,008**	**59,812**	**49,308**	**27,982**
Other Countries					**1,000**	**21,000**	**12,000**	**31,000**	**31,000**	**15,000**	**20,000**	**28,000**	**28,000**	**29,000**	**30,000**	**26,000**	**43,093**	**45,200**	**37,220**	**29,529**
Whole maize	**0**	**0**	**0**	**616,000**	**521,000**	**326,000**	**92,000**	**64,000**	**357,000**	**88,000**	**72,000**	**265,000**	**262,000**	**1,017,000**	**712,000**	**413,000**	**1,129,572**	**1,409,905**	**188,831**	**572,548**
Border Posts				**33,000**	**81,000**	**296,000**	**69,000**	**64,000**	**101,000**	**88,000**	**72,000**	**91,000**	**137,000**	**120,000**	**145,000**	**151,000**	**193,465**	**153,531**	**182,376**	**125,200**
Harbours				**583,000**	**440,000**	**30,000**	**23,000**	**0**	**256,000**	**0**	**0**	**174,000**	**125,000**	**897,000**	**567,000**	**262,000**	**936,107**	**1,254,954**	**6,455**	**447,206**
Total Demand	**3,725,000**	**3,150,000**	**2,955,000**	**3,501,000**	**3,847,000**	**4,036,000**	**3,463,000**	**3,420,000**	**4,185,000**	**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**	**5,445,542**	**4,711,368**
Ending Stock (30 Apr)	**1,373,000**	**392,000**	**371,000**	**842,000**	**643,000**	**992,000**	**501,000**	**746,000**	**868,000**	**440,000**	**431,000**	**819,000**	**769,000**	**727,000**	**476,000**	**660,000**	**314,710**	**791,054**	**1,090,836**	**629,576**
- processed p/month	233,300	229,600	222,900	209,200	245,800	275,300	252,600	247,500	273,000	272,900	273,200	307,600	341,900	248,800	297,300	324,000	378,333	338,673	494,497	305,571
- months' stock	5.9	1.7	1.7	4.0	2.6	3.6	2.0	3.0	3.2	1.6	1.6	2.7	2.2	2.9	1.6	2.0	0.8	2.3	2.2	2

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

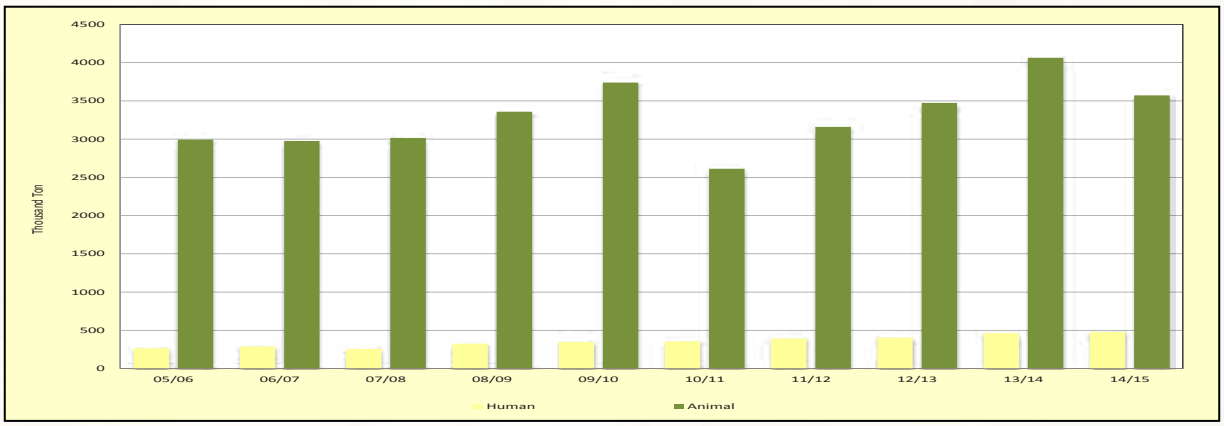
Graph 23: Yellow Maize: CEC Estimate, Retentions and SAGIS deliveries over 10 marketing seasons



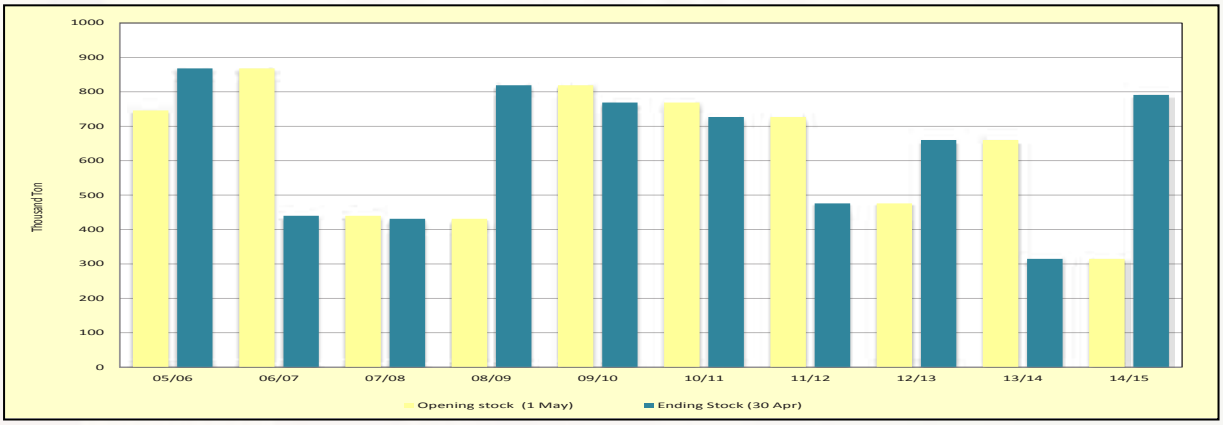
Graph 24: Yellow Maize: Imports and exports over 10 marketing seasons



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.

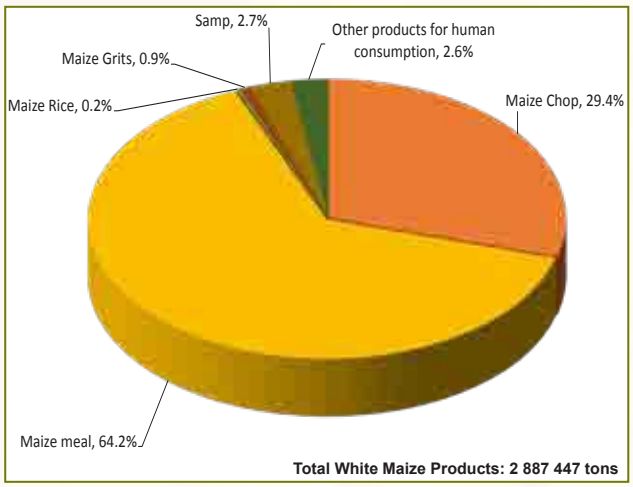
Maize Product Information

On 14 November 2014, the Minister of Agriculture, Forestry & Fisheries announced new statutory measures for the manufacturing of maize & wheaten products.

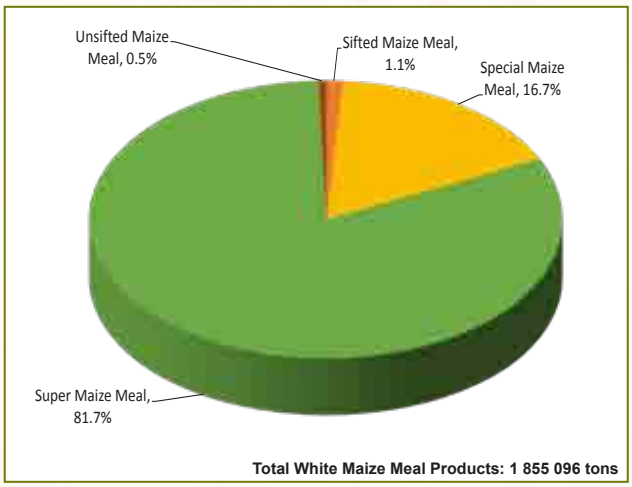
To comply with the abovementioned statutory measures, manufacturers of these products have to register with SAGIS and submit information with regards to the manufacture, import and export of maize products.

Please see graphs 27 to 30 below as well as the tables on pages 15 and 16 for maize product figures received by SAGIS from July 2015 to February 2016.

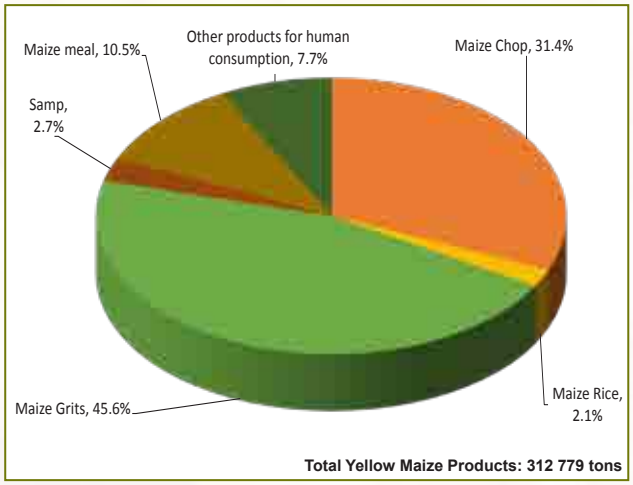
Graph 27: White maize products manufactured from July 2015 - February 2016



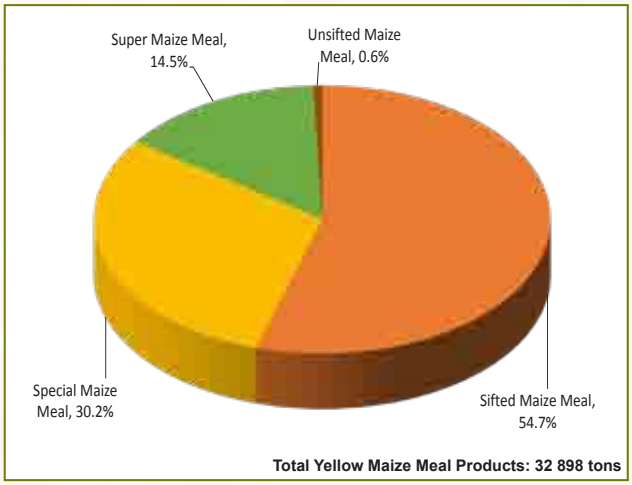
Graph 28: White maize meal manufactured from July 2015 - February 2016



Graph 29: Yellow maize products manufactured from July 2015 - February 2016



Graph 30: Yellow maize meal manufactured from July 2015 - February 2016



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

MAIZE PRODUCTS PER MONTH MANUFACTURED															
	Nov 2015			Dec 2015			Jan 2016			Feb 2016			Progressive: Jul 2015 - Feb 2016		
	Manufactured			Manufactured			Manufactured			Manufactured			Manufactured		
	Tons			Tons			Tons			Tons			Tons		
	White Maize	Yellow Maize	Total Maize	White Maize	Yellow Maize	Total Maize	White Maize	Yellow Maize	Total Maize	White Maize	Yellow Maize	Total Maize	White Maize	Yellow Maize	Total Maize
Maize Chop	107 051	11 106	118 157	102 593	8 257	110 850	101 533	11 257	112 790	106 655	12 226	118 881	850 209	98 204	948 413
Maize Rice	838	199	1 037	763	226	989	538	236	774	659	0	659	5 867	6 531	12 398
Maize Grits	2 933	15 411	18 344	2 519	13 246	15 765	3 629	17 173	20 802	2 780	18 409	21 189	24 639	142 674	167 313
Samp	11 535	1 174	12 709	10 762	523	11 285	8 245	1 066	9 311	7 660	1 302	8 962	77 615	8 542	86 157
Sifted Maize Meal	**2 542**	**2 881**	**5 423**	**2 893**	**1 706**	**4 599**	**2 543**	**2 107**	**4 650**	**2 425**	**2 256**	**4 681**	**20 617**	**17 990**	**38 607**
Special Maize Meal	36 408	840	37 248	40 769	1 009	41 778	36 760	1 403	38 163	38 684	1 202	39 886	309 970	9 919	319 889
Super Maize Meal	192 627	577	193 204	179 926	355	180 281	182 876	392	183 268	186 339	876	187 215	1 514 661	4 780	1 519 441
Unsifted Maize Meal	2 174	39	2 213	1 336	1	1 337	1 052	1	1 053	802	6	808	9 848	209	10 057
Other maize products intended for Human consumption	9 832	3 520	13 352	7 467	1 466	8 933	7 840	3 214	11 054	8 240	3 542	11 782	74 021	23 930	97 951
Total	**365 940**	**35 747**	**401 687**	**349 028**	**26 789**	**375 817**	**345 016**	**36 849**	**381 865**	**354 244**	**39 819**	**394 063**	**2 887 447**	**312 779**	**3 200 226**

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

MAIZE PRODUCTS PER MONTH IMPORTED															
	Nov 2015			Dec 2015			Jan 2016			Feb 2016			Progressive: Jul 2015 - Feb 2016		
	Manufactured			Manufactured			Manufactured			Manufactured			Manufactured		
	Tons			Tons			Tons			Tons			Tons		
	White Maize	Yellow Maize	Total Maize	White Maize	Yellow Maize	Total Maize	White Maize	Yellow Maize	Total Maize	White Maize	Yellow Maize	Total Maize	White Maize	Yellow Maize	Total Maize
Maize Chop	0	187	187	0	282	282	0	222	222	0	0	0	352	2 049	2 401
Maize Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maize Grits	0	0	0	0	0	0	0	0	0	0	0	0	32	0	32
Samp	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sifted Maize Meal	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Special Maize Meal	560	0	560	738	0	738	720	0	720	644	0	644	4 315	0	4 315
Super Maize Meal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unsifted Maize Meal	0	0	0	0	0	0	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	0	0	0	0	0	0
Total	**560**	**187**	**747**	**738**	**282**	**1 020**	**720**	**222**	**942**	**644**	**0**	**644**	**4 699**	**2 049**	**6 748**

MAIZE PRODUCTS PER MONTH EXPORTED															
	Nov 2015			Dec 2015			Jan 2016			Feb 2016			Progressive: Jul 2015 - Feb 2016		
	Manufactured			Manufactured			Manufactured			Manufactured			Manufactured		
	Tons			Tons			Tons			Tons			Tons		
	White Maize	Yellow Maize	Total Maize	White Maize	Yellow Maize	Total Maize	White Maize	Yellow Maize	Total Maize	White Maize	Yellow Maize	Total Maize	White Maize	Yellow Maize	Total Maize
Maize Chop	7	0	7	12	0	12	0	14	14	0	350	350	41	364	405
Maize Rice	0	0	0	0	0	0	0	0	0	0	0	0	0	203	203
Maize Grits	0	618	618	0	879	879	0	1 339	1 339	0	1 336	1 336	31	9 255	9 286
Samp	143	0	143	488	0	488	87	0	87	107	0	107	1 349	0	1 349
Sifted Maize Meal	**538**	**720**	**1 258**	**616**	**1 080**	**1 696**	**757**	**1 015**	**1 772**	**480**	**0**	**480**	**4 975**	**7 015**	**11 990**
Special Maize Meal	2 164	0	2 164	2 791	0	2 791	1 190	0	1 190	2 781	0	2 781	17 604	0	17 604
Super Maize Meal	836	0	836	137	0	137	908	0	908	858	163	1 021	5 354	163	5 517
Unsifted Maize Meal	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6
Other maize products intended for Human consumption	7	0	7	169	0	169	1	0	1	4	0	4	229	4	233
Total	**3 695**	**1 338**	**5 033**	**4 213**	**1 959**	**6 172**	**2 943**	**2 368**	**5 311**	**4 230**	**1 849**	**6 079**	**29 589**	**17 004**	**46 593**

Maize Crop Quality 2014/2015 - summary of results

RSA Grading

The maize crop was of good quality, with 83% of white and 76% yellow maize, graded as maize grade one. The percentage total defective kernels above and below the 6.35 mm sieve, 5.3% for white and 5.8% for yellow maize was respectively 1.0% and 0.3% lower than the previous season. The percentage defective kernels above the sieve decreased compared to 2013/2014, but the percentage defective kernels below the sieve increased. The percentages Diplodia as well as Fusarium infected kernels were 0.3% and 0.6% lower than the previous season's 1.0% and 1.5% respectively.

Foreign matter (0.1%) and other colour maize (0.3%) did not pose significant problems, with only two white and one yellow maize sample downgraded to class other due to foreign matter and eight yellow maize samples downgraded as a result of other colour maize exceeding 5%. The average percentage combined deviations of white maize was 5.8% compared to the 6.8% of the 2013/2014 season, that of yellow maize was also slightly lower, 6.2% compared to 6.4%.

Please refer to Table 5 on page 33.

USA Grading

Of the 1 000 maize samples graded according to USA grading regulations, 64% were graded US1, 23% US2, 6% US3, 2% for both US4 and US5, while sample and mixed grades represented 1% and 2% respectively. The percentage samples graded as US1 was significantly higher than the 42% of the previous season but lower than the 79% of the 2012/2013 season. The percentage samples graded as US2 was also lower than the 31% of the previous season. The main reason for downgrading the samples were the percentage total damaged kernels exceeding the maximum limit per grade followed by broken corn and foreign material.

Physical Quality factors

Bushel weight/Test weight is applied as a grading factor in the USA grading regulations, but also routinely done at most intake points locally. White maize had an average test weight of 78.3 kg/hl compared to the 76.3 kg/hl of yellow maize. The test weight in total varied from 67.3 kg/hl to 83.1 kg/hl and averaged 77.3 kg/hl, slightly higher than the ten year average. Only 29 samples reported values below the minimum requirement (56.0 lbs or 72.1 kg/hl) for USA grade 1 maize, 22 of these samples were from Mpumalanga, four from North West, two from Gauteng and one from the Free State.

The 100 kernel mass averaged 29.8 g which is 3.1 g lower than the previous season and also 2.0 g lower than the ten year average. As in previous seasons, white maize (31.1 g) averaged higher than yellow maize (28.6 g). The kernel sizes of both white and yellow maize were smaller than the previous season. The percentage yellow maize kernels above the 10 mm sieve were on average 6.6% lower than white kernels and the percentage kernels below the 8 mm sieve 9.4% higher than that of white maize. The kernel sizes observed this season were some of the smallest the past ten seasons.

Both white and yellow maize were less susceptible to breakage than during the previous season, the largest difference (< 6.35 mm) of 0.6% between the two seasons were observed on yellow maize. The percentage stress cracks observed varied from 0 – 61%, averaged 6% and was a percent lower than in the previous season. White maize averaged 6% and yellow maize 5%.

Please refer to Table 15 on page 51.

The milling index varied from 50.2 to 123.5 and averaged 97.6, 6.7 higher than the previous season. The average milling index for white maize is higher (100.4) than that of yellow maize (95.0).

Roff milling and whiteness index (WI)

The average % extraction of total meal in white maize obtained with the Roff mill averaged 78.7% (0.3% lower than the previous season) and varied from 69.0% to 84.3%.

The whiteness index averaged 22.9 for unsifted and 14.9 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 25.3 for unsifted maize meal. Sifted maize meal averaged 15.6.

The higher the WI value obtained, 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. The sample with the lowest sifted whiteness index of -27.9 this season also had the second highest percentage of other colour maize namely 9.6%. The sample with the highest occurrence of other colour maize was a yellow maize sample.

Nutritional Values

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

In general, white maize tends to have a higher fat content than yellow maize, but a lower starch content. No clear trend can be observed with regards to the protein content.

The average fat content of the 2014/2015 crop samples was 4.1%, 0.2% higher than in the previous season as well as the weighted ten year average. The average protein content of 9.4% was the highest since the 2006/2007 season and 0.8% higher than last season. The ten year weighted average is 8.7%. The starch content this season decreased on average with 0.2% compared to the previous season and is 0.2% higher than the ten year weighted average of 72.6%.

The fat content of white maize was 0.2% higher than both the previous season and the average of yellow maize (4.0%). The protein content of yellow maize was 0.1% higher than that of white maize (9.4%) and almost a percent higher than in 2013/2014, white maize's protein content increased 0.8% year on year. The ten year weighted average of both white and yellow maize is 8.7%. The starch contents of white and yellow maize are 0.3% and 0.2% respectively lower than the previous season.

Please refer to Table 20 on page 64.

Genetic Modification (GM)

The SAGL screened 100 of the crop samples to test for the presence of the Cry1Ab, Cry2Ab and/or CP4 EPSPS traits. Important to remember is that the crop quality samples received by the SAGL are composite samples per class and grade, made up of individual deliveries to grain silos.

SAGL used the EnviroLogix QuickComb kit for bulk grain to quantitatively determine the presence of genetically modified maize.

The detection range for the Cry1Ab trait is 0.4% to 5%. 94% of the samples tested positive for Cry1Ab with values larger than 0.4% (Limit of quantification (LOQ)).

The detection range for the Cry2Ab trait is 0.5% to 5%. 81% of the samples gave values larger than the LOQ of 0.5% (positive results).

The detection range for the CP4 EPSPS trait is 0.25% to 5%. 98% of the samples tested positive for CP4 EPSPS with values larger than 0.25% (LOQ).

Values higher than 5%, the highest value of the detection range for all three traits, are reported as > 5%. This methodology has a precision coefficient of variation of 20%.

Please see Table 21 on page 66 for the results obtained as well as page 91 for a summary of the Events and Trade names/Brands represented by these three traits.

Mycotoxins

Aflatoxin (G_1, B_1, G_2, B_2) residues were found on one sample and B_1 residues on two more samples. This is the first season that Aflatoxin residues were detected on maize crop samples analysed by SAGL since the implementation of the UPLC-MS/MS technique in 2010.

The average Fumonisin level (Sum of B_1, B_2 and B_3) on all 350 samples tested was 224 µg/kg (ppb) and ranged from 0 (not detected (ND)) to 3 382 µg/kg. This average is higher than the previous season's 186 µg/kg. Of the 350 samples tested, 197 samples (56%) tested positive for fumonisin levels and the average of these positive results was 397 µg/kg. The previous season, 41% of the samples tested positive, with an average of 456 µg/kg.

The highest Deoxynivalenol (DON) level detected was 9 736 µg/kg compared to the 6 134 µg/kg of last season. The average level of all samples tested this season was 183 µg/kg, 289 µg/kg the previous season. Sixty nine percent of the samples tested positive for DON last season compared to 41% this season. The average of the positive results increased from 417 µg/kg in 2013/2014 to 447 µg/kg in 2014/2015.

Eleven percent of the samples tested positive for 15-acetyl-deoxynivalenol (15-ADON) residues. The average of the positive results was 251 µg/kg compared to 182 µg/kg in the previous season.

Zearalenone residues were found in 11% of the samples and values ranged from 0 (ND) to 337 µg/kg. The average of the positive samples was 60 µg/kg compared to the 78 µg/kg of the previous season when 12% of the samples tested positive.

None of the 350 samples tested positive for Ochratoxin A, HT-2 or T-2 toxin residues.

Mycotoxin levels lower than the limit of quantitation (< LOQ) as well as limit of detection (< LOD) were seen as having tested negative for calculation purposes. Please see mycotoxin results in Table 22 on pages 74 to 85.

TABLE2: SOUTH AFRICAN MAIZE CROP QUALITY 2014/2015 (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, %	2.3	5.3	11.1	11.6	2.5	4.5	10.5	6.0	3.1
Defective kernels below 6.35 mm sieve, %	1.7	3.5	5.3	9.8	2.0	4.7	8.9	4.7	2.5
Total defective kernels, %	4.0	8.7	16.4	21.3	4.5	9.2	19.5	10.6	5.6
Other colour maize kernels, %	0.3	0.7	1.2	1.9	0.1	0.4	0.0	5.7	0.3
Foreign matter, %	0.1	0.2	0.2	0.6	0.1	0.2	0.3	0.4	0.1
Combined deviation, %	4.4	9.6	17.8	23.9	4.7	9.7	19.7	16.7	6.0
Pinked maize kernels, %	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Physical Factors									
Test weight, kg/hl	78.5	78.2	74.7	75.6	76.6	75.5	74.3	73.5	77.3
100 Kernel mass, g	30.9	31.2	32.7	32.6	29.4	25.9	22.9	28.7	29.8
Stress cracks, %	6	7	10	20	5	5	5	10	6
Milling Index	100.6	103.0	90.5	93.8	95.4	93.9	89.4	96.6	97.6
Kernel Size									
% on top 10 mm	14.6	17.7	25.2	22.5	9.5	6.3	2.7	12.5	12.0
% on top 8 mm	66.6	65.0	59.8	64.3	65.5	57.4	43.6	61.5	64.7
% through 8 mm	18.8	17.3	15.0	13.2	25.0	36.2	53.6	26.0	23.2
Breakage susceptibility									
% Below 6.35 mm sieve	0.9	1.3	2.6	4.0	1.2	1.5	1.9	2.4	1.2
% Below 4.75 mm sieve	0.7	1.0	1.7	2.2	0.9	1.0	1.1	1.3	0.8
Nutritional Values									
Protein, % (db)	9.4	9.6	9.2	9.1	9.4	9.6	10.1	9.7	9.4
Fat, % (db)	4.2	4.2	4	4.1	4	3.9	3.8	3.9	4.1
Starch, % (db)	72.6	72.4	72.7	72.4	72.9	73.1	73.2	72.9	72.8
Number of samples	***402***	***59***	***19***	***5***	***392***	***103***	***9***	***11***	***1 000***
Mycotoxins									
Total Aflatoxin, µg/kg (ppb) [max. value]	0 [48]	0 [0]	4 [39]	0 [0]	0 [0]	0 [0]	0 [0]	0 [0]	0 [48]
Total Fumonisin, µg/kg (ppb) [max. value]	183 [1810]	356 [1600]	221 [1157]	78 [255]	257 [3382]	196 [1997]	224 [662]	61 [179]	224 [3382]
Deoxynivalenol, µg/kg (ppb) [max. value]	137 [1285]	416 [3167]	1443 [9736]	277 [748]	80 [851]	117 [593]	23 [164]	65 [253]	183 [9736]
15-ADON, µg/kg (ppb) [max. value]	21 [307]	64 [890]	268 [1768]	57 [227]	9 [228]	5 [238]	0 [<100]	0 [0]	27 [1768]
Ochratoxin A, µg/kg (ppb) [max. value]	0 [0]	0 [0]	0 [0]	0 [0]	0 [<5]	0 [0]	0 [0]	0 [0]	0 [0]
Zearalenone, µg/kg (ppb) [max. value]	3 [71]	23 [212]	51 [337]	0 [0]	2 [71]	7 [124]	4 [25]	0 [0]	6 [337]
HT-2 Toxin, µg/kg (ppb) [max.value]	0 [0]	0 [0]	0 [0]	0 [0]	0 [0]	0 [0]	0 [0]	0 [0]	0 [0]
T - 2 Toxin, µg/kg (ppb) [max. value]	0 [0]	0 [0]	0 [0]	0 [0]	0 [0]	0 [0]	0 [0]	0 [0]	0 [0]
Number of samples	***122***	***30***	***12***	***4***	***121***	***48***	***7***	***6***	***350***
GMO									
Cry1Ab, % Samples positive (>LOQ of 0.4%)	92	100	100	100	95	78	100	100	94
Cry2Ab, % Samples positive (>LOQ of 0.5%)	84	87	80	100	85	56	0	67	81
CP4 EPSPS, % Samples positive (>LOQ of 0.25%)	92	100	100	100	100	100	100	100	98
Number of samples	***25***	***15***	***5***	***1***	***41***	***9***	***1***	***3***	***100***

Note: Not detected mycotoxin results are reported as 0, see LOQ in Table 22 page 74.

RSA Production Regions

The RSA is divided into 9 provinces as illustrated in Figure 1.

Figure 1: RSA Provinces

Provincial map with gratitude to SiQ.

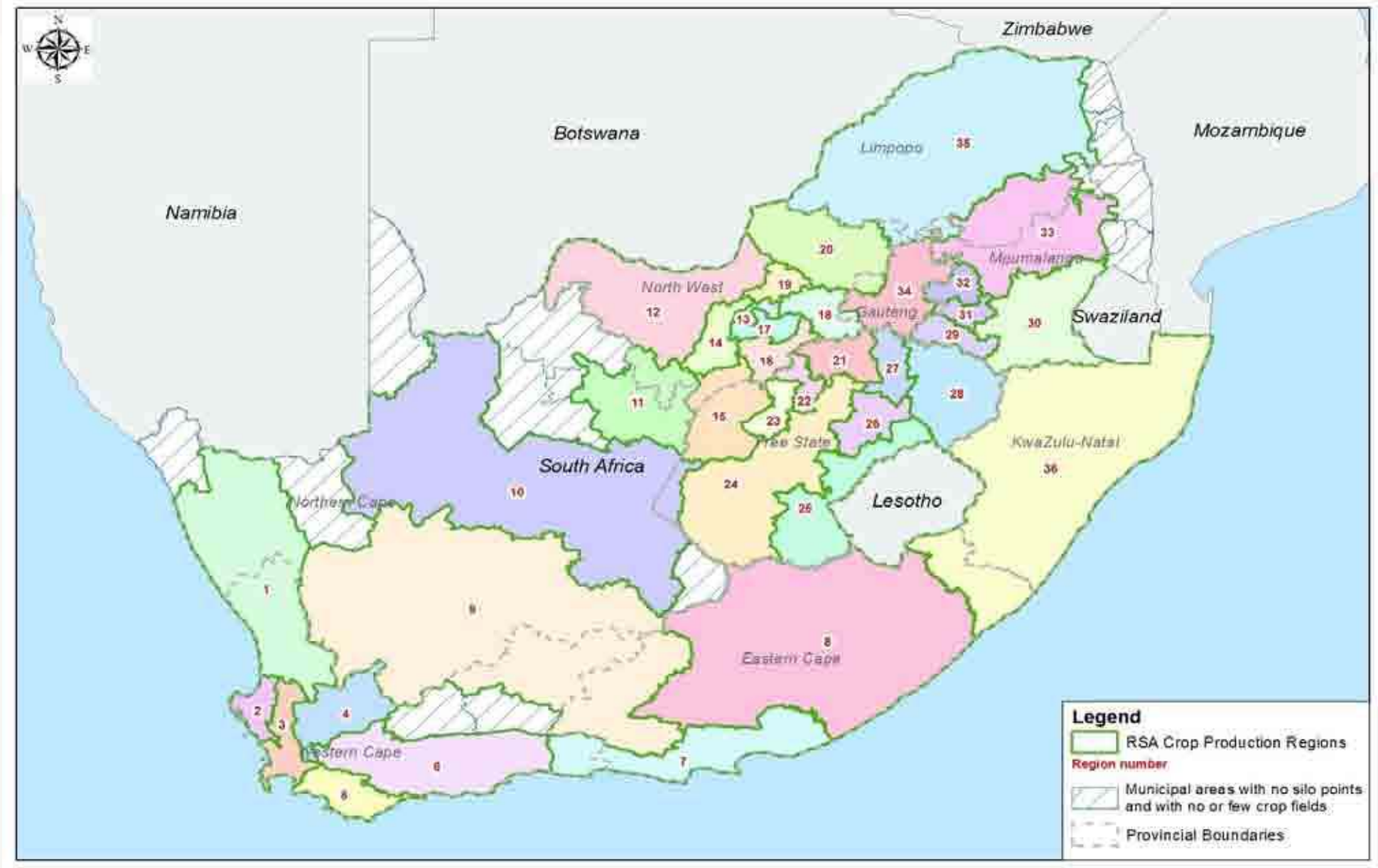
The 9 provinces are divided into 36 grain production regions.

The regions are distributed as follows:
Region 1: Namakwaland
Regions 2 and 3: Swartland
Regions 4 to 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 2014/2015 production season, are named and described on pages 22 to 25. The silo/intake stands as well as the type of storage structure are provided.

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 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	Modderrivier (Bags/Bins/Bulk)	OVK	Oranjerivier (Bins/Bunkers)
GWK	Prieska (Bins/Dams)	OVK	Prieska (Bins/Bunkers)
GWK	Rietrivier (Bins)	OVK	Rietrivier (Bins)

Region 11: Vaalharts Region

GWK	Barkly-Wes (Bins/Bulk)	Senwes	Jan Kempdorp (Bins)
GWK	Jan Kempdorp (Bags/Bunkers)	Senwes	Magogong (Bins)
Senwes	Hartswater (Bins)		

Region 12: North West Western Region

NWK	Blaauwbank (Bins)	NWK	Mareetsane (Bins)
NWK	Bührmannsdrif (Bins)	Suidwes Landbou	Kameel (Bins)
NWK	Kameel (Bins)	Suidwes Landbou	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)	Suidwes Landbou	Amalia (Bins)
NWK	Excelsior (Bins)	Suidwes Landbou	Hallatshope (Bins)
NWK	Geysdorp (Bins)	Suidwes Landbou	Migdol (Bins)
NWK	Migdol (Bins)	Suidwes Landbou	Schweizer-Reneke (Bins)
NWK	Nooitgedacht (Bins)		

Region 15: North West South Eastern Region

Suidwes Landbou	Bloemhof (Bins)	Suidwes Landbou	Kingswood (Bins)
Suidwes Landbou	Christiana (Bins)	Suidwes Landbou	Kruising (Bunkers)
Suidwes Landbou	Hertzogville (Bins)	Suidwes Landbou	Poppieland (Bunkers)
Suidwes Landbou	Hoopstad (Bins)		

Region 16: North West Central Eastern Region

Senwes	Regina (Bins)	Suidwes Landbou	Makwassie (Bins)
Suidwes Landbou	Bamboesspruit (Bins)	Suidwes Landbou	Strydpoort (Bins)
Suidwes Landbou	Leeudoringstad (Bins)	Suidwes Landbou	Wolmaranstad (Bins)

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)

Grain Production Regions (continue)

Silo/Intake stands per region indicating type of storage structure

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	Lottie Halte (Bins)
NWK	Grootpan (Bins)	NWK	Lusthof (Bins)
NWK	Halfpad (Bins)	NWK	Lichtenburg Silo 3 (Bins)
NWK	Hibernia (Bins)	NWK	Lichtenburg Silo 5 (Bins)

Region 20: North West Eastern Region

Afgri	Battery (Bins)	NWK	Koster (Bins)
Afgri	Brits (Bins)	NWK	Swartruggens (Bins)
NWK	Boons (Bins)	NWK	Syferbult (Bins)
NWK	Derby (Bins)		

Region 21: Free State North Western Region (Viljoenskroon)

Senwes	Attie (Bins)	Senwes	Vierfontein (Bins)
Senwes	Groenebloem (Bins)	Senwes	Viljoenskroon (Bins)
Senwes	Heuningspruit (Bins)	Senwes	Vredefort (Bins)
Senwes	Koppies (Bins)	Senwes	Weiveld (Bins)
Senwes	Rooiwal (Bins)		

Region 22: Free State North Western Region (Bothaville)

Senwes	Allanrigde (Bins)	Senwes	Schoonspruit (Bins)
Senwes	Bothaville (Bins)	Senwes	Schuttesdraai (Bins)
Senwes	Mirage (Bins)	Suidwes Landbou	Misgunst (Bunkers)
Senwes	Odendaalsrus (Bins)		

Region 23: Free state North Western Region (Bultfontein)

Senwes	Bultfontein (Bins)	Senwes	Tierfontein (Bins)
Senwes	Losdoorns (Bins)	Senwes	Wesselsbron (Bins)
Senwes	Protespan (Bins)	Senwes	Willemsrus (Bins)

Region 24: Free State Central Region

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)
Senwes	Kroonstad (Bins)		

Grain Production Regions (continue)

Silo/Intake stands per region indicating type of storage structure

Region 25: Free State South Western Region

Afgri	Bethlehem (Bins)	OVK	Marseilles (Bins)
Afgri	Slabberts (Bins)	OVK	Modderpoort (Bins)
OVK	Clocolan (Bins)	OVK	Tweespruit (Bins)
OVK	Ficksburg (Bins)	OVK	Westminster (Bins)
OVK	Fouriesburg (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	Mooigeleë (Bins)
Senwes	Heilbron (Bins)	Senwes	Wolwehoek (Bins)
Senwes	Hoogte (Bins)	VKB	Petrus Steyn (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	Val (Bins)
Afgri	Holmdene (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	Eerstelingsfontein (Bunkers)	Afgri	Sandspruit (Bunkers)
Afgri	Ermelo (Bins)	TWK	Mkondo (Bins)
Afgri	Estancia (Bins)	TWK	Panbult (Bins)
Afgri	Lothair (Bins)		

Grain Production Regions (continue)

Silo/Intake stands per region indicating type of storage structure

Region 31: Mpumalanga Central Region

Afgri	Bakenlaagte (Bunkers)	Afgri	Klipfontein (Bunkers)
Afgri	Bethal (Bins)	Afgri	Leslie (Bins)
Afgri	Brakfontein (Bunkers)	Afgri	Palmietfontein (Bunkers)
Afgri	Devon (Bins)	Afgri	Trichardt (Bins)
Afgri	Kinross (Bins/Bunkers)	Afgri	Vaalkrantz (Bunkers)

Region 32: Mpumalanga Western Region

Afgri	Argent (Bins/Bunkers)	Afgri	Hawerklip (Bins)
Afgri	Dryden (Bins)	Afgri	Kendal (Bins)
Afgri	Eloff (Bins)	Afgri	Ogies (Bins)
Afgri	Endicott (Bins)		

Region 33: Mpumalanga Northern Region

Afgri	Arnot (Bins)	Afgri	Middelburg (Bins)
Afgri	Driefontein (Bins)	Afgri	Pan (Bins)
Afgri	Lydenburg (Bins)	Afgri	Stoffberg (Bins)
Afgri	Marble Hall (Bins)	Afgri	Wonderfontein (Bins)

Region 34: Gauteng Region

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)
Afgri	Meyerton (Bunkers)		

Region 35: Limpopo Region

Afgri	Northam (Bins)	NTK	Nylstroom (Modimolle) (Bins)
NTK	Alma (Bins)	NTK	Potgietersrus (Mokopane) (Bins)
NTK	Lehau (Bins)	NTK	Roedtan (Bins)
NTK	Naboomspruit (Mookgophong) (Bins)	NTK	Settlers (Bins)
NTK	Nutfield (Bins)	NTK	Warmbad Bela-Bela (Bins)

Region 36: KwaZulu-Natal Region

Afgri	Bergville (Bins/Bunkers)	Afgri	Paulpietersburg (Bins)
Afgri	Bloedrivier (Bins)	Afgri	Pietermaritzburg (Bins)
Afgri	Dannhauser (Bins)	Afgri	Vryheid (Bins)
Afgri	Dundee (Bins)	Afgri	Winterton Silo (Bins/Bunkers)
Afgri	Mizpah (Bins)		

Main maize producing provinces – comparison of results

The quality of the maize produced in the three main maize production provinces, namely the Free State (regions 21 – 28), Mpumalanga (regions 29 – 33) and North West (regions 12 – 20) are compared below, the figures provided are all weighted averages.

The highest test weights expressed in kilogram per hectolitre were observed in the Free State and North West where both averaged 78.2 kg/hl. Mpumalanga averaged two units lower at 76.2 kg/hl. The 100 kernel mass values ranged from 28.9 g in North West to 30.9 g in the Free State. In 2013/2014, the averaged varied between 32.0 g and 33.2 g.

As already mentioned in the report, the kernel sizes were significantly reduced this season. Last season the average kernel sizes ranged between 19.4% (Free State) and 20.1% (Mpumalanga). The largest kernel size with regards to percentage of kernels above the 10 mm sieve this season was found in the Free State (13.5%). North West had the smallest kernel sizes (10.8%) and Mpumalanga averaged 12.3%.

Little variation was observed with regards to breakage susceptibility and stress cracks between the provinces. Mpumalanga, with 1.3% had the highest percentage of maize passing through the 6.35 mm sieve, the Free State and North West with 1.2% and 1.1% respectively, followed closely. The maize kernels from North West and Mpumalanga both averaged 5% stress cracks and the Free State 6%. These percentages were 1 to 2% lower than the previous season.

The percentage total defective kernels that includes amongst others, mouldy, discoloured, insect damaged and small kernels that can pass through the 6.35 mm round hole sieve, ranged from 4.0% in Mpumalanga to 6.0% in both the Free State and North West. Please see page 87 for the definition of Defective maize kernels as quoted from the Grading Regulations.

The average milling index on both white and yellow maize was higher compared to the previous season. Mpumalanga averaged 93.4 (87.8), the Free State 101.0 (92.0) and North West 102.6 (94.1). The values in brackets are the averages for the 2013/2014 season. The Free State had the highest percentage total extraction (79.0%) on the Roff laboratory mill as in the previous season, but was closely followed by North West with 78.9%. Mpumalanga had the lowest total extraction rate of 78.3%.

The meal obtained from the white maize in Mpumalanga gave an average whiteness index of 24.4 (unsifted) and 14.3 (sifted). North West had an average of 22.0 (unsifted) and 15.5 (sifted) and the Free State 21.7 (unsifted) and 14.5 (sifted). All averages were down from last season, indicating that the meal was less white. Factors that can influence meal whiteness such as the presence of defective kernels and other colour maize (yellow) were however comparable to the previous season.

The nutritional component analyses namely fat, protein and starch compared well between the three provinces. The Free State had the highest fat content of 4.2%, followed by North West with 4.1% and Mpumalanga with 4.0%. The lowest protein content was found in Mpumalanga (9.2%), the Free State and North West both averaged 9.8%. The average protein content increased between 0.7% and 1.2% for the three provinces from the 2013/2014 season. Although Mpumalanga had the lowest fat and protein contents, it had the highest starch content of 73.0%. North West and the Free State averaged 72.6% and 72.3% respectively.

TABLE 3: RSA GRADING OF WHITE MAIZE (2014/2015)

Number of samples	Region	% Defective Kernels						% Total defective			% Foreign matter			% Other Colour			% Combined Deviations			% Pinked Kernels			% 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.	ave.	min.	max.
GRADE: WM1																														
3	Region 11	1.7	1.2	2.2	1.5	1.1	2.0	3.2	2.7	4.2	0.1	0.0	0.3	0.4	0.0	1.2	3.7	3.0	4.3	0.0	0.0	0.0	0.4	0.0	0.7	0.3	0.0	0.5	0.7	0.0	1.2
11	Region 12	2.1	1.6	3.0	1.8	1.2	3.3	3.9	2.8	5.5	0.1	0.0	0.2	0.2	0.0	0.9	4.2	3.1	5.7	0.1	0.0	0.5	0.4	0.0	0.8	0.6	0.0	1.0	1.0	0.0	1.7
27	Region 13	2.1	0.6	3.6	2.3	1.3	4.2	4.4	2.3	6.7	0.1	0.0	0.3	0.4	0.0	2.6	4.9	2.5	7.4	0.1	0.0	1.1	0.4	0.0	1.1	0.6	0.0	1.3	1.0	0.0	2.1
29	Region 14	2.4	0.9	4.0	1.8	0.3	3.3	4.1	1.3	6.6	0.1	0.0	0.3	0.2	0.0	0.9	4.5	1.3	7.4	0.0	0.0	0.6	0.5	0.0	1.5	0.7	0.0	1.5	1.2	0.0	2.2
3	Region 15	1.9	0.6	3.9	0.9	0.1	2.0	2.8	0.7	5.9	0.1	0.0	0.1	0.1	0.0	0.4	3.0	0.7	6.0	0.0	0.0	0.0	0.6	0.0	1.4	0.2	0.0	0.7	0.8	0.0	2.1
5	Region 16	2.6	1.2	6.7	1.4	0.2	2.6	4.0	2.5	6.8	0.1	0.0	0.1	0.2	0.0	0.6	4.3	2.6	6.8	0.0	0.0	0.0	0.5	0.0	1.3	0.7	0.0	2.2	1.2	0.0	3.5
34	Region 17	1.7	0.9	2.6	2.1	0.8	4.6	3.7	2.0	6.8	0.1	0.0	0.2	0.2	0.0	1.2	4.1	2.2	7.0	0.0	0.0	0.0	0.3	0.0	1.0	0.5	0.0	1.1	0.8	0.0	1.5
5	Region 18	3.3	2.3	4.0	1.9	1.6	2.3	5.2	3.9	6.3	0.1	0.0	0.1	0.5	0.0	1.9	5.7	4.0	7.2	0.0	0.0	0.0	0.8	0.6	1.0	1.2	0.5	2.3	1.9	1.3	3.0
29	Region 19	2.2	1.1	3.8	1.8	0.3	4.3	4.0	2.6	6.7	0.1	0.0	0.3	0.2	0.0	1.0	4.4	3.2	7.0	0.0	0.0	0.5	0.4	0.0	1.0	0.6	0.0	1.3	1.0	0.0	1.9
19	Region 20	2.6	1.9	4.7	1.8	0.8	3.3	4.3	3.2	7.0	0.1	0.0	0.2	0.3	0.0	2.1	4.7	3.2	7.9	0.3	0.0	1.5	0.6	0.0	1.6	0.7	0.4	1.3	1.3	0.4	2.3
16	Region 21	2.0	1.0	4.0	2.0	1.2	4.8	4.0	2.4	6.6	0.1	0.0	0.3	0.2	0.0	1.2	4.3	2.5	7.3	0.0	0.0	0.0	0.4	0.0	1.0	0.3	0.0	0.8	0.7	0.0	1.8
10	Region 22	2.8	1.5	4.4	1.4	1.0	1.9	4.2	3.2	5.7	0.1	0.0	0.2	0.2	0.0	0.9	4.6	3.4	6.0	0.2	0.0	1.5	0.6	0.0	1.4	0.6	0.0	1.4	1.1	0.0	2.4
13	Region 23	3.5	2.1	5.1	1.3	1.0	1.6	4.8	3.4	6.3	0.1	0.0	0.2	0.4	0.0	1.1	5.2	3.4	7.0	0.3	0.0	1.1	0.8	0.5	1.4	0.9	0.4	1.5	1.7	0.6	2.8
6	Region 24	2.4	1.4	3.7	2.0	0.8	4.9	4.4	2.2	6.7	0.1	0.0	0.2	0.3	0.0	1.0	4.7	2.8	6.9	0.2	0.0	0.5	0.6	0.4	1.4	0.7	0.4	1.3	1.4	0.8	2.2
4	Region 25	2.0	1.6	2.8	2.1	0.6	3.3	4.1	2.2	4.9	0.1	0.0	0.1	0.3	0.0	0.9	4.4	2.2	5.4	0.3	0.0	1.3	0.3	0.0	0.8	0.3	0.0	0.6	0.6	0.0	1.3
6	Region 26	2.8	1.3	3.7	1.5	0.7	2.3	4.3	2.2	5.3	0.1	0.0	0.2	0.9	0.0	1.6	5.3	2.6	6.5	0.1	0.0	0.4	0.6	0.0	0.9	0.8	0.0	1.4	1.4	0.0	2.2
1	Region 27	2.4	-	-	0.8	-	-	3.1	-	-	0.0	-	-	0.5	-	-	3.6	-	-	0.0	-	-	0.8	-	-	0.0	-	-	0.8	-	-
13	Region 28	2.3	0.0	5.5	1.5	0.0	4.3	3.8	0.0	6.7	0.1	0.0	0.3	0.4	0.0	0.9	4.2	0.0	7.7	0.5	0.0	2.3	0.5	0.0	1.3	0.5	0.0	1.7	1.2	0.0	3.8
16	Region 29	2.5	1.3	4.8	1.2	0.0	2.5	3.7	2.2	6.0	0.1	0.0	0.1	0.4	0.0	0.9	4.1	2.2	7.0	0.0	0.0	0.0	0.5	0.0	1.0	0.6	0.0	1.9	1.0	0.0	2.9
26	Region 30	1.9	0.7	3.6	1.5	0.5	4.1	3.4	2.0	5.4	0.1	0.0	0.3	0.3	0.0	1.2	3.9	2.0	7.1	0.0	0.0	0.5	0.4	0.0	1.3	0.4	0.0	0.8	0.8	0.0	2.0
18	Region 31	2.3	1.1	3.3	1.9	0.4	3.5	4.1	3.2	4.7	0.1	0.0	0.3	0.5	0.0	1.5	4.7	3.3	6.1	0.1	0.0	1.3	0.3	0.0	0.5	0.7	0.0	1.1	1.0	0.0	1.5
13	Region 32	1.5	1.0	2.6	1.9	0.8	3.1	3.4	2.0	4.4	0.1	0.0	0.3	0.5	0.0	2.2	4.0	2.0	5.4	0.1	0.0	0.6	0.2	0.0	0.9	0.4	0.0	0.6	0.6	0.0	1.4
37	Region 33	2.3	1.0	5.0	1.5	0.3	3.2	3.8	1.6	6.8	0.1	0.0	0.3	0.4	0.0	2.0	4.3	1.6	7.5	0.3	0.0	1.6	0.6	0.0	1.3	0.6	0.0	1.7	1.2	0.0	3.0
34	Region 34	2.4	1.2	4.7	1.9	0.7	3.4	4.3	2.5	6.8	0.1	0.0	0.3	0.4	0.0	1.5	4.8	2.5	7.3	0.1	0.0	1.2	0.6	0.0	1.7	0.6	0.0	1.5	1.2	0.0	2.7
4	Region 35	2.2	0.9	3.3	2.2	1.1	3.7	4.4	2.0	6.9	0.1	0.0	0.3	0.0	0.0	0.0	4.5	2.0	7.1	0.0	0.0	0.0	0.3	0.0	0.8	0.5	0.0	0.8	0.8	0.0	1.5
20	Region 36	2.8	1.7	5.1	1.1	0.2	2.2	3.9	2.3	6.3	0.0	0.0	0.1	0.2	0.0	0.9	4.1	2.9	6.3	0.0	0.0	0.0	0.7	0.4	1.8	0.7	0.4	1.1	1.4	0.7	2.9
402	**Ave. WM1**	**2.3**			**1.7**			**4.0**			**0.1**			**0.3**			**4.4**			**0.1**			**0.5**			**0.6**			**1.1**		
	Min. WM1		**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**	
	Max. WM1			**6.7**			**4.9**			**7.0**			**0.3**			**2.6**			**7.9**			**2.3**			**1.8**			**2.3**			**3.8**

TABLE 3: RSA GRADING OF WHITE MAIZE (2014/2015) (continue)

Number of samples	Region	% Defective Kernels						% Total defective			% Foreign matter			% Other Colour			% Combined Deviations			% Pinked Kernels			% 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.	ave.	min.	max.
GRADE: WM2																														
4	Region 12	4.2	1.8	8.4	5.0	2.5	7.6	9.2	7.0	10.9	0.2	0.2	0.3	0.4	0.0	1.0	9.8	8.3	11.2	0.2	0.0	0.6	1.0	0.0	2.8	1.1	0.0	2.0	2.2	0.0	4.8
3	Region 13	3.7	3.1	4.4	4.6	3.6	5.5	8.2	7.2	9.9	0.2	0.2	0.2	0.5	0.0	0.9	9.0	7.4	10.9	0.2	0.0	0.5	1.0	0.7	1.2	1.1	0.7	1.4	2.0	1.9	2.4
1	Region 14	2.5	-	-	4.4	-	-	6.8	-	-	0.1	-	-	1.4	-	-	8.3	-	-	0.0	-	-	0.5	-	-	0.9	-	-	1.4	-	-
1	Region 17	4.7	-	-	2.7	-	-	7.4	-	-	0.2	-	-	1.0	-	-	8.6	-	-	0.0	-	-	1.5	-	-	1.0	-	-	2.4	-	-
4	Region 18	4.8	3.7	6.7	3.7	2.4	4.7	8.5	7.4	9.9	0.3	0.2	0.3	0.6	0.4	1.2	9.4	8.0	10.6	0.3	0.0	0.8	1.0	0.8	1.4	2.2	1.3	3.7	3.2	2.0	5.1
3	Region 19	4.3	2.9	5.0	4.9	3.1	6.5	9.2	8.1	10.2	0.2	0.2	0.3	1.1	0.8	1.5	10.6	9.5	11.2	0.0	0.0	0.0	0.8	0.4	1.1	1.6	0.4	2.6	2.4	0.8	3.4
3	Region 20	4.2	1.2	5.9	3.2	1.3	6.0	7.4	7.2	7.8	0.1	0.0	0.3	0.3	0.0	0.5	7.9	7.5	8.5	0.3	0.0	1.0	1.3	0.0	2.9	1.5	0.0	3.4	2.8	0.0	4.4
3	Region 21	4.9	1.8	9.3	4.5	3.2	6.2	9.4	7.8	12.5	0.3	0.2	0.5	0.4	0.0	0.8	10.2	7.9	13.6	0.4	0.0	1.1	1.0	0.5	1.9	2.1	0.5	4.7	3.2	1.0	6.6
4	Region 22	7.9	6.7	9.2	3.4	2.6	4.4	11.3	9.3	12.6	0.3	0.2	0.5	0.1	0.0	0.5	11.7	9.5	13.1	0.7	0.0	1.1	2.1	1.7	2.6	2.4	1.2	3.8	4.2	1.7	6.0
4	Region 23	5.9	4.5	6.9	3.3	1.1	5.4	9.2	7.4	11.6	0.1	0.0	0.2	0.4	0.0	0.7	9.8	7.6	12.1	0.0	0.0	0.0	1.5	1.3	1.7	2.2	1.5	2.8	3.6	2.9	4.5
1	Region 24	4.0	-	-	3.8	-	-	7.9	-	-	0.1	-	-	1.2	-	-	9.2	-	-	0.8	-	-	1.0	-	-	1.0	-	-	2.0	-	-
3	Region 25	5.2	4.6	5.9	3.3	3.0	3.5	8.5	8.1	9.2	0.1	0.0	0.2	0.3	0.0	0.5	8.9	8.6	9.4	0.0	0.0	0.0	1.3	0.8	2.0	1.4	1.2	1.7	2.7	1.9	3.3
2	Region 26	4.9	4.6	5.2	2.3	2.2	2.4	7.2	6.8	7.6	0.2	0.2	0.2	1.0	0.4	1.6	8.4	8.2	8.6	0.7	0.0	1.5	1.1	0.9	1.2	1.7	1.6	1.8	2.8	2.7	2.8
4	Region 28	7.5	5.7	9.6	1.9	1.3	3.1	9.3	7.5	10.9	0.1	0.1	0.2	0.8	0.0	1.5	10.3	8.7	12.0	0.0	0.0	0.0	1.6	1.2	2.2	2.8	1.9	3.7	2.7	1.3	5.0
4	Region 29	6.2	3.2	8.2	3.4	1.1	5.7	9.6	6.5	12.8	0.2	0.1	0.2	0.9	0.5	1.8	10.7	8.2	13.6	0.0	0.0	0.0	1.3	0.7	2.0	1.8	0.4	5.0	3.1	1.9	6.1
2	Region 30	7.5	6.5	8.5	0.5	0.5	0.6	8.0	7.1	9.0	0.1	0.0	0.2	0.2	0.0	0.5	8.4	7.7	9.0	0.0	0.0	0.0	1.8	1.5	2.0	2.2	1.7	2.8	1.8	1.5	2.0
2	Region 31	1.4	1.3	1.6	6.5	5.0	7.9	7.9	6.6	9.2	0.2	0.2	0.3	2.6	1.3	3.9	10.7	10.7	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.5	1.4	0.5	2.4
3	Region 32	8.5	7.4	10.0	1.9	1.5	2.4	10.4	9.7	11.8	0.1	0.0	0.2	0.7	0.5	0.9	11.2	10.4	12.6	0.0	0.0	0.0	1.9	1.7	2.1	3.3	3.1	3.5	5.2	4.7	5.7
2	Region 33	3.4	2.7	4.2	4.2	3.3	5.0	7.6	7.5	7.7	0.2	0.1	0.3	0.7	0.0	1.5	8.5	7.8	9.3	0.9	0.0	1.7	0.8	0.4	1.3	1.2	0.9	1.6	2.0	1.2	2.8
2	Region 34	3.2	1.6	4.8	4.5	3.0	6.1	7.7	7.7	7.7	0.1	0.1	0.1	0.6	0.5	0.6	8.4	8.3	8.5	0.0	0.0	0.0	1.0	0.5	1.5	0.7	0.0	1.4	1.7	0.5	3.0
1	Region 35	3.2	-	-	4.2	-	-	7.4	-	-	0.1	-	-	0.5	-	-	8.0	-	-	0.0	-	-	1.0	-	-	0.5	-	-	1.5	-	-
3	Region 36	5.3	4.6	5.7	1.6	1.4	2.1	7.0	6.7	7.2	0.1	0.0	0.1	0.8	0.0	1.5	7.8	7.2	8.3	0.0	0.0	0.0	1.2	1.1	1.2	2.1	1.9	2.2	3.2	3.0	3.4
59	**Ave. WM2**	**5.3**			**3.5**			**8.7**			**0.2**			**0.7**			**9.6**			**0.2**			**1.2**			**1.8**			**2.8**		
	Min. WM2		**1.2**			**0.5**			**6.5**			**0.0**			**0.0**			**7.2**			**0.0**			**0.0**			**0.0**			**0.0**	
	Max. WM2			**10.0**			**7.9**			**12.8**			**0.5**			**3.9**			**13.6**			**1.7**			**2.9**			**5.0**			**6.6**
GRADE: WM3																														
2	Region 13	11.7	11.4	12.0	4.0	3.6	4.5	15.7	14.9	16.4	0.2	0.2	0.2	0.2	0.0	0.4	16.1	15.2	17.0	0.2	0.0	0.0	1.8	1.5	2.1	6.8	5.7	8.0	8.7	7.8	9.5
1	Region 14	3.1	-	-	10.3	-	-	13.4	-	-	0.3	-	-	1.0	-	-	14.6	-	-	0.5	-	-	0.8	-	-	0.8	-	-	1.6	-	-
2	Region 17	18.6	17.8	19.4	4.3	4.1	4.6	22.9	22.4	23.5	0.3	0.2	0.3	0.2	0.0	0.4	23.4	22.7	24.0	0.0	0.0	0.0	6.3	5.9	6.7	3.1	2.0	4.2	9.5	8.0	11.0

TABLE 3: RSA GRADING OF WHITE MAIZE (2014/2015) (continue)

Number of samples	Region	% Defective Kernels						% Total defective			% Foreign matter			% Other Colour			% Combined Deviations			% Pinked Kernels			% 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.	ave.	min.	max.
GRADE: WM3																														
1	Region 18	11.5	-	-	3.4	-	-	14.8	-	-	0.1	-	-	0.4	-	-	15.3	-	-	0.0	-	-	2.7	-	-	3.7	-	-	6.3	-	-
1	Region 19	12.3	-	-	13.0	-	-	25.3	-	-	0.3	-	-	3.1	-	-	28.7	-	-	0.5	-	-	2.9	-	-	4.1	-	-	7.0	-	-
2	Region 20	13.1	12.0	14.1	2.3	1.6	3.0	15.4	13.6	17.2	0.2	0.1	0.2	0.3	0.0	0.5	15.8	14.3	17.4	0.3	0.0	0.6	1.5	0.9	2.1	2.7	2.4	3.0	4.2	3.3	5.0
1	Region 21	2.5	-	-	14.6	-	-	17.1	-	-	0.2	-	-	2.1	-	-	19.4	-	-	0.0	-	-	0.5	-	-	1.0	-	-	1.5	-	-
1	Region 24	10.1	-	-	4.5	-	-	14.6	-	-	0.1	-	-	0.6	-	-	15.3	-	-	0.0	-	-	4.0	-	-	2.1	-	-	6.1	-	-
2	Region 25	9.5	8.1	11.0	8.1	3.4	12.9	17.7	14.3	21.0	0.3	0.3	0.3	0.3	0.0	0.5	18.2	15.1	21.3	0.0	0.0	0.0	1.6	1.3	1.8	1.7	1.5	1.9	3.3	3.2	3.4
1	Region 28	20.1	-	-	2.2	-	-	22.4	-	-	0.5	-	-	1.0	-	-	23.9	-	-	1.2	-	-	2.4	-	-	12.8	-	-	15.2	-	-
1	Region 29	11.3	-	-	3.3	-	-	14.6	-	-	0.1	-	-	0.5	-	-	15.2	-	-	0.0	-	-	2.5	-	-	3.8	-	-	3.8	-	-
1	Region 30	1.2	-	-	0.2	-	-	1.5	-	-	0.0	-	-	9.6	-	-	11.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
1	Region 33	13.3	-	-	0.8	-	-	14.1	-	-	0.2	-	-	1.7	-	-	16.0	-	-	0.0	-	-	3.1	-	-	5.8	-	-	8.8	-	-
2	Region 34	9.9	9.0	10.9	5.1	4.6	5.6	15.0	13.6	16.5	0.3	0.3	0.3	0.7	0.7	0.8	16.0	14.5	17.5	0.0	0.0	0.0	2.3	1.4	3.1	4.7	2.2	7.3	7.0	5.3	8.7
19	**Ave. WM3**	**11.1**			**5.3**			**16.4**			**0.2**			**1.2**			**17.8**			**0.2**			**2.4**			**3.8**			**6.1**		
	Min. WM3		**1.2**			**0.2**			**1.5**			**0.0**			**0.0**			**11.0**			**0.0**			**0.0**			**0.0**			**0.0**	
	Max. WM3			**20.1**			**14.6**			**25.3**			**0.5**			**9.6**			**28.7**			**1.2**			**6.7**			**12.8**			**15.2**
CLASS: COM																														
1	Region 13	30.0	-	-	3.0	-	-	33.0	-	-	0.2	-	-	0.0	-	-	33.3	-	-	0.0	-	-	4.5	-	-	7.3	-	-	11.8	-	-
1	Region 19	18.2	-	-	12.6	-	-	30.8	-	-	0.5	-	-	4.0	-	-	35.3	-	-	0.0	-	-	8.4	-	-	4.9	-	-	13.3	-	-
1	Region 21	2.7	-	-	2.8	-	-	5.5	-	-	0.9	-	-	0.8	-	-	7.2	-	-	0.0	-	-	0.6	-	-	0.5	-	-	1.2	-	-
1	Region 30	2.8	-	-	25.5	-	-	28.3	-	-	0.1	-	-	4.3	-	-	32.7	-	-	0.0	-	-	0.4	-	-	0.5	-	-	0.9	-	-
1	Region 33	4.1	-	-	5.0	-	-	9.1	-	-	1.2	-	-	0.5	-	-	10.8	-	-	0.0	-	-	1.4	-	-	1.0	-	-	2.4	-	-
5	**Ave. COM**	**11.6**			**9.8**			**21.3**			**0.6**			**1.9**			**23.9**			**0.0**			**3.1**			**2.9**			**5.9**		
	Min. COM		**2.7**			**2.8**			**5.5**			**0.1**			**0.0**			**7.2**			**0.0**			**0.4**			**0.5**			**0.9**	
	Max. COM			**30.0**			**25.5**			**33.0**			**1.2**			**4.3**			**35.3**			**0.0**			**8.4**			**7.3**			**13.3**
485	**Ave. white maize**	**3.1**			**2.2**			**5.3**			**0.1**			**0.4**			**5.8**			**0.1**			**0.7**			**0.9**			**1.5**		
	Min. white maize		**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**	
	Max. white maize			**30.0**			**25.5**			**33.0**			**1.2**			**9.6**			**35.3**			**2.3**			**8.4**			**12.8**			**15.2**
1000	**Ave. maize**	**3.1**			**2.5**			**5.6**			**0.1**			**0.3**			**6.0**			**0.0**			**0.7**			**0.9**			**1.5**		
	Min. maize		**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**	
	Max. maize			**30.0**			**25.5**			**33.1**			**2.5**			**13.6**			**35.3**			**2.3**			**8.4**			**13.6**			**16.0**

TABLE 4: RSA GRADING OF YELLOW MAIZE (2014/2015)

Number of samples	Region	% Defective Kernels						% Total defective			% Foreign matter			% Other Colour			% Combined Deviations			% Pinked Kernels			% 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.	ave.	min.	max.
GRADE: YM1																														
18	Region 10	1.3	0.8	2.6	1.9	1.2	3.4	3.1	2.6	4.5	0.1	0.0	0.2	0.0	0.0	0.0	3.2	2.6	4.6	0.0	0.0	0.0	0.1	0.0	0.7	0.4	0.0	0.9	0.5	0.0	1.2
4	Region 11	1.2	1.0	1.4	1.9	1.5	2.4	3.1	2.8	3.6	0.1	0.0	0.2	0.0	0.0	0.0	3.2	3.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	Region 12	1.9	1.5	2.3	1.9	1.3	2.8	3.9	3.2	4.3	0.1	0.1	0.1	0.0	0.0	0.0	4.0	3.3	4.4	0.0	0.0	0.0	0.5	0.4	0.6	0.6	0.4	0.8	1.0	0.9	1.3
9	Region 13	2.7	1.2	4.6	2.7	1.4	4.0	5.4	3.6	6.7	0.1	0.0	0.2	0.3	0.0	1.1	5.9	3.7	7.4	0.0	0.0	0.0	0.6	0.0	1.0	0.9	0.4	1.6	1.4	0.4	2.6
15	Region 14	1.8	0.6	3.4	2.2	0.0	4.0	4.1	0.6	6.5	0.1	0.0	0.3	0.2	0.0	1.3	4.3	1.3	7.5	0.0	0.0	0.0	0.3	0.0	0.8	0.4	0.0	1.1	0.8	0.0	1.9
1	Region 15	0.6	-	-	0.1	-	-	0.8	-	-	0.0	-	-	0.0	-	-	0.8	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
3	Region 16	1.6	1.3	2.0	1.6	1.3	2.2	3.2	2.8	3.5	0.1	0.0	0.1	0.1	0.0	0.4	3.4	2.8	4.0	0.0	0.0	0.0	0.7	0.5	1.0	0.2	0.0	0.5	0.9	0.5	1.1
11	Region 17	2.0	1.0	3.3	2.5	1.5	3.7	4.5	3.0	7.0	0.1	0.0	0.3	0.4	0.0	1.1	5.0	3.6	8.3	0.0	0.0	0.0	0.4	0.0	1.1	0.5	0.0	1.4	0.9	0.0	2.0
5	Region 18	3.6	2.3	4.5	2.1	1.4	2.9	5.7	5.1	5.9	0.1	0.1	0.1	0.0	0.0	0.0	5.8	5.2	6.1	0.0	0.0	0.0	0.8	0.5	1.0	1.1	0.5	1.5	1.9	1.4	2.5
13	Region 19	2.8	1.1	4.8	1.8	1.0	3.2	4.5	2.3	7.9	0.1	0.0	0.1	0.2	0.0	1.0	4.8	2.3	8.6	0.0	0.0	0.0	0.7	0.0	1.2	0.8	0.0	2.0	1.4	0.0	3.0
10	Region 20	4.1	2.5	5.9	2.1	1.1	2.9	6.1	4.4	8.0	0.1	0.0	0.1	0.2	0.0	0.7	6.4	4.6	8.4	0.0	0.0	0.0	0.9	0.4	1.5	1.5	0.4	3.1	2.4	1.1	4.0
5	Region 21	2.9	1.7	4.7	2.0	1.0	3.0	4.9	3.0	5.8	0.1	0.0	0.1	0.2	0.0	0.5	5.2	3.1	6.4	0.0	0.0	0.0	0.8	0.4	1.0	0.9	0.5	1.6	1.6	1.0	2.7
6	Region 22	3.2	2.0	4.8	1.9	0.5	3.0	5.1	3.8	6.9	0.1	0.0	0.2	0.5	0.0	1.2	5.7	3.9	7.0	0.1	0.0	0.4	0.9	0.5	1.4	0.8	0.3	1.0	1.4	0.9	2.4
4	Region 23	2.5	1.8	3.2	1.8	1.0	3.0	4.4	4.1	4.8	0.1	0.0	0.2	0.5	0.0	1.1	4.9	4.2	5.6	0.0	0.0	0.0	0.4	0.0	0.8	0.5	0.0	1.0	0.6	0.0	1.7
5	Region 24	2.1	1.1	3.1	2.3	1.4	3.7	4.4	3.2	6.1	0.2	0.0	0.3	0.0	0.0	0.0	4.6	3.4	6.4	0.0	0.0	0.0	0.5	0.0	0.8	0.6	0.0	1.0	1.0	0.0	1.8
4	Region 25	4.1	1.4	6.7	1.6	0.4	2.3	5.7	1.9	8.3	0.0	0.0	0.1	0.0	0.0	0.0	5.7	1.9	8.3	0.0	0.0	0.0	1.2	0.0	2.6	1.1	0.0	2.5	2.4	0.0	4.0
7	Region 26	3.0	0.7	5.8	1.4	0.4	2.0	4.4	1.9	6.7	0.1	0.0	0.2	0.0	0.0	0.0	4.5	2.1	6.9	0.0	0.0	0.0	0.7	0.4	1.1	1.2	0.0	2.6	1.9	0.5	3.8
3	Region 27	3.2	2.5	3.6	2.0	0.7	3.2	5.2	3.2	6.8	0.1	0.1	0.2	0.0	0.0	0.0	5.3	3.3	7.0	0.0	0.0	0.0	0.8	0.7	1.0	1.0	0.6	1.3	1.6	0.7	2.3
26	Region 28	3.1	0.6	7.2	1.5	0.0	2.9	4.7	0.6	8.3	0.1	0.0	0.1	0.1	0.0	1.1	4.8	0.6	8.4	0.0	0.0	0.0	0.7	0.0	2.1	1.0	0.0	3.0	1.5	0.0	3.8
45	Region 29	2.6	1.3	5.0	2.2	0.7	3.9	4.8	2.5	8.7	0.1	0.0	0.2	0.0	0.0	0.5	4.8	2.5	8.8	0.0	0.0	0.0	0.5	0.0	1.6	0.4	0.0	1.8	0.8	0.0	2.9
44	Region 30	2.5	1.2	6.1	2.2	0.6	4.0	4.6	2.4	7.3	0.1	0.0	0.3	0.1	0.0	1.1	4.8	2.5	7.6	0.0	0.0	0.0	0.5	0.0	1.5	0.6	0.0	2.1	0.9	0.0	3.6
40	Region 31	2.0	0.8	3.9	2.0	0.5	3.3	4.1	1.3	6.7	0.1	0.0	0.2	0.0	0.0	0.5	4.2	1.3	6.9	0.0	0.0	0.0	0.3	0.0	0.7	0.6	0.0	1.3	0.8	0.0	1.7
31	Region 32	2.4	1.1	4.2	2.2	0.8	3.6	4.6	1.9	7.5	0.1	0.0	0.3	0.1	0.0	1.0	4.7	1.9	7.7	0.0	0.0	0.0	0.6	0.0	1.3	0.6	0.0	1.5	1.2	0.0	2.5
35	Region 33	2.5	1.2	5.1	1.9	0.3	4.0	4.4	1.9	8.4	0.1	0.0	0.3	0.0	0.0	1.0	4.5	1.9	8.4	0.0	0.0	0.0	0.6	0.0	2.0	0.7	0.0	1.5	1.3	0.0	2.9
21	Region 34	3.0	1.4	5.1	2.1	1.1	3.6	5.1	3.3	7.9	0.1	0.0	0.3	0.2	0.0	1.1	5.5	3.5	8.9	0.0	0.0	0.0	0.6	0.0	1.2	1.1	0.4	2.0	1.7	0.4	3.1
6	Region 35	2.7	1.2	3.6	3.1	1.9	3.8	5.8	4.5	7.2	0.2	0.1	0.3	0.0	0.0	0.0	5.9	4.6	7.3	0.0	0.0	0.0	0.6	0.4	0.8	0.7	0.0	1.2	1.3	0.4	1.9
18	Region 36	3.0	1.6	4.4	1.4	0.6	3.1	4.3	2.5	5.3	0.0	0.0	0.1	0.2	0.0	1.8	4.5	2.5	6.1	0.0	0.0	0.0	0.6	0.0	1.2	0.8	0.4	1.4	1.5	0.6	2.0
393	**Ave. YM1**	**2.5**			**2.0**			**4.5**			**0.1**			**0.1**			**4.7**			**0.0**			**0.5**			**0.7**			**1.2**		
	Min. YM1		**0.6**			**0.0**			**0.6**			**0.0**			**0.0**			**0.6**			**0.0**			**0.0**			**0.0**			**0.0**	
	Max. YM1			**7.2**			**4.0**			**8.7**			**0.3**			**1.8**			**8.9**			**0.4**			**2.6**			**3.1**			**4.0**

TABLE 4: RSA GRADING OF YELLOW MAIZE (2014/2015) (continue)

Number of samples	Region	% Defective Kernels						% Total defective			% Foreign matter			% Other Colour			% Combined Deviations			% Pinked Kernels			% 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.	ave.	min.	max.
GRADE: YM2																														
1	Region 10	1.5	-	-	4.5	-	-	6.0	-	-	0.1	-	-	0.0	-	-	6.1	-	-	0.0	-	-	0.7	-	-	0.5	-	-	1.2	-	-
1	Region 11	1.4	-	-	4.6	-	-	5.9	-	-	0.0	-	-	0.0	-	-	5.9	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
4	Region 12	1.8	1.6	1.9	5.5	4.2	6.8	7.3	5.8	8.8	0.2	0.0	0.3	0.4	0.0	0.5	7.8	6.3	9.0	0.0	0.0	0.0	0.4	0.0	0.5	0.3	0.0	0.8	0.6	0.0	1.3
4	Region 13	3.8	1.9	7.9	5.2	2.3	8.7	9.0	6.9	10.6	0.1	0.0	0.2	0.3	0.0	0.7	9.4	7.5	10.6	0.0	0.0	0.0	1.0	0.0	2.7	0.9	0.0	1.8	1.9	0.0	4.6
2	Region 14	1.9	1.3	2.5	7.3	7.0	7.5	9.2	8.9	9.5	0.3	0.3	0.3	0.6	0.0	1.1	10.0	9.1	10.9	0.0	0.0	0.0	0.3	0.0	0.5	0.2	0.0	0.4	0.4	0.4	0.5
5	Region 17	2.0	1.6	2.5	5.3	4.5	6.1	7.3	6.4	8.1	0.1	0.0	0.3	0.4	0.0	0.8	7.8	7.0	8.6	0.0	0.0	0.0	0.5	0.4	0.5	0.7	0.4	1.3	1.2	0.8	1.8
2	Region 18	10.7	10.3	11.1	5.0	4.6	5.5	15.8	15.7	15.8	0.2	0.2	0.2	0.0	0.0	0.0	16.0	16.0	16.0	0.0	0.0	0.0	1.9	1.2	2.5	6.3	5.2	7.4	8.2	7.8	8.6
6	Region 19	4.2	1.5	6.8	4.2	2.3	5.1	8.4	6.5	10.2	0.1	0.1	0.2	0.0	0.0	0.0	8.6	6.6	10.4	0.0	0.0	0.0	1.0	0.5	1.5	1.7	0.5	3.8	2.7	1.0	4.9
6	Region 20	7.7	3.3	14.2	2.8	1.8	3.5	10.5	6.8	16.5	0.2	0.1	0.3	1.3	0.0	3.1	12.0	9.4	16.8	0.0	0.0	0.0	1.0	0.5	1.7	4.6	1.9	9.1	5.7	2.4	10.8
3	Region 21	6.9	2.4	9.3	2.8	1.6	5.1	9.8	7.5	10.9	0.2	0.1	0.3	0.2	0.0	0.5	10.1	7.8	11.6	0.0	0.0	0.0	1.2	0.5	1.8	3.6	0.9	5.2	4.8	1.4	6.6
1	Region 22	2.9	-	-	4.8	-	-	7.7	-	-	0.2	-	-	1.6	-	-	9.5	-	-	0.0	-	-	0.7	-	-	1.1	-	-	0.7	-	-
1	Region 23	2.6	-	-	2.3	-	-	4.9	-	-	0.1	-	-	2.1	-	-	7.1	-	-	0.0	-	-	0.6	-	-	0.9	-	-	1.4	-	-
2	Region 25	1.9	1.8	2.0	5.0	4.6	5.5	6.9	6.5	7.3	0.3	0.2	0.3	0.2	0.0	0.4	7.4	7.1	7.7	0.0	0.0	0.0	0.5	0.4	0.5	0.0	0.0	0.0	0.5	0.4	0.5
1	Region 26	14.3	-	-	3.0	-	-	17.3	-	-	0.4			0.0			17.7	-	-	0.0			1.6	-	-	9.5	-	-	11.0	-	-
2	Region 27	4.5	2.7	6.2	5.5	4.2	6.9	10.0	6.9	13.1	0.2	0.1	0.2	0.2	0.0	0.5	10.4	7.0	13.8	0.0	0.0	0.0	0.9	0.6	1.2	1.4	0.9	1.9	1.4	1.2	1.5
6	Region 28	7.8	3.8	12.8	3.3	1.7	5.4	11.1	9.0	17.0	0.1	0.1	0.2	0.2	0.0	0.5	11.4	9.2	17.5	0.0	0.0	0.0	1.8	1.2	2.7	2.8	1.0	5.7	4.2	1.2	15.1
10	Region 29	4.4	1.8	7.6	5.5	3.9	9.5	10.0	6.8	16.5	0.1	0.0	0.2	0.1	0.0	0.5	10.2	6.8	16.7	0.0	0.0	0.0	0.9	0.0	1.7	0.8	0.0	3.3	1.7	0.0	4.9
14	Region 30	3.6	1.2	6.8	5.3	3.2	9.1	8.9	6.6	12.8	0.2	0.0	0.3	0.3	0.0	3.3	9.3	6.8	13.1	0.0	0.0	0.0	0.5	0.0	1.5	0.7	0.0	2.3	0.9	0.0	2.4
7	Region 31	2.4	1.7	4.3	6.1	3.6	9.1	8.5	6.4	10.8	0.2	0.1	0.3	0.6	0.0	2.6	9.4	7.5	11.0	0.0	0.0	0.0	0.4	0.0	0.9	0.8	0.0	1.7	1.2	0.5	2.6
9	Region 32	3.4	1.4	7.8	4.5	3.3	5.4	7.8	5.8	11.6	0.2	0.1	0.3	0.8	0.0	3.2	8.8	6.0	11.9	0.0	0.0	0.0	0.8	0.0	1.6	1.1	0.4	3.0	1.9	0.5	4.6
4	Region 33	7.6	3.2	17.7	3.3	1.3	5.5	10.8	5.3	19.0	0.2	0.1	0.3	1.0	0.0	2.8	12.0	8.3	19.6	0.0	0.0	0.0	1.7	0.9	3.7	2.7	1.1	6.6	4.3	2.0	10.3
6	Region 34	3.6	2.2	6.0	6.0	4.3	8.5	9.6	6.8	12.6	0.2	0.0	0.2	0.2	0.0	1.5	10.0	6.8	12.8	0.0	0.0	0.0	0.7	0.0	1.3	1.1	0.0	2.4	1.7	0.0	3.7
6	Region 36	5.9	1.4	10.6	3.0	0.5	6.1	8.9	5.7	11.3	0.2	0.0	0.3	0.2	0.0	0.8	9.2	5.7	11.6	0.0	0.0	0.0	0.8	0.0	1.7	1.8	0.0	5.1	2.6	0.0	6.8
102	**Ave. YM2**	**4.5**			**4.7**			**9.2**			**0.2**			**0.4**			**9.7**			**0.0**			**0.8**			**1.6**			**2.3**		
	Min. YM2		**1.2**			**0.5**			**4.9**			**0.0**			**0.0**			**5.7**			**0.0**			**0.0**			**0.0**			**0.0**	
	Max. YM2			**17.7**			**9.5**			**19.0**			**0.4**			**3.3**			**19.6**			**0.0**			**3.7**			**9.5**			**15.1**

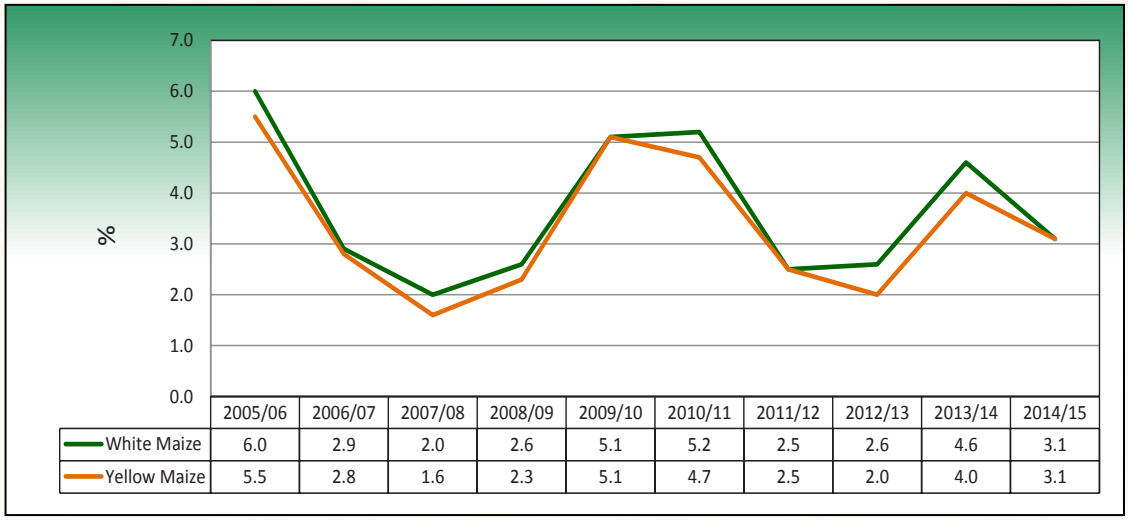
TABLE 4: RSA GRADING OF YELLOW MAIZE (2014/2015) (continue)

Number of samples	Region	% Defective Kernels						% Total defective			% Foreign matter			% Other Colour			% Combined Deviations			% Pinked Kernels			% 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.	ave.	min.	max.
GRADE: YM3																														
1	Region 13	9.7	-	-	10.8	-	-	20.6	-	-	0.2	-	-	0.0	-	-	20.8	-	-	0.0	-	-	1.6	-	-	5.5	-	-	7.1	-	-
1	Region 18	3.7	-	-	15.3	-	-	18.9	-	-	0.2	-	-	0.0	-	-	19.2	-	-	0.0	-	-	0.7	-	-	1.5	-	-	2.2	-	-
2	Region 20	18.8	18.1	19.5	4.8	4.7	4.8	23.5	22.9	24.2	0.2	0.2	0.2	0.0	0.0	0.0	23.7	23.0	24.4	0.0	0.0	0.0	2.8	2.5	3.0	12.2	11.3	13.0	14.9	13.9	16.0
1	Region 26	5.9	-	-	3.0	-	-	8.9	-	-	0.6	-	-	0.0	-	-	9.5	-	-	0.0	-	-	1.2	-	-	3.1	-	-	4.3	-	-
2	Region 29	17.3	11.6	23.0	6.9	4.3	9.6	24.2	21.2	27.3	0.3	0.3	0.3	0.0	0.0	0.0	24.5	21.5	27.5	0.0	0.0	0.0	3.5	2.2	4.7	10.0	6.5	13.6	6.7	4.7	8.7
2	Region 31	1.7	1.6	1.9	13.9	13.2	14.6	15.6	15.1	16.2	0.2	0.1	0.2	0.0	0.0	0.0	15.8	15.3	16.3	0.0	0.0	0.0	0.2	0.0	0.5	0.4	0.4	0.5	0.9	0.4	1.4
9	**Ave. YM3**	**10.5**			**8.9**			**19.5**			**0.3**			**0.0**			**19.7**			**0.0**			**1.8**			**6.2**			**6.5**		
	Min. YM3		**1.6**			**3.0**			**8.9**			**0.1**			**0.0**			**9.5**			**0.0**			**0.0**			**0.4**			**0.4**	
	Max .YM3			**23.0**			**15.3**			**27.3**			**0.6**			**0.0**			**27.5**			**0.0**			**4.7**			**13.6**			**16.0**
CLASS: COM																														
1	Region 13	4.1	-	-	6.1	-	-	10.2	-	-	0.3	-	-	7.0	-	-	17.5	-	-	0.0	-	-	1.0	-	-	1.3	-	-	2.3	-	-
1	Region 14	1.3	-	-	1.6	-	-	2.9	-	-	0.1	-	-	13.6	-	-	16.6	-	-	0.0	-	-	0.5	-	-	0.0	-	-	0.5	-	-
1	Region 16	1.6	-	-	3.9	-	-	5.5	-	-	0.2	-	-	5.1	-	-	10.7	-	-	0.0	-	-	0.5	-	-	0.5	-	-	1.0	-	-
2	Region 19	16.5	11.7	21.3	15.4	11.8	19.0	31.9	30.7	33.1	0.1	0.0	0.1	1.3	1.1	1.5	33.3	32.2	34.4	0.0	0.0	0.0	0.3	0.0	0.6	0.6	0.0	1.1	0.9	0.0	1.7
1	Region 29	1.4	-	-	1.1	-	-	2.5	-	-	2.5	-	-	0.0	-	-	4.9	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	-	-
1	Region 30	8.7	-	-	1.7	-	-	10.4	-	-	0.3	-	-	5.2	-	-	15.9	-	-	0.0	-	-	1.3	-	-	5.1	-	-	6.4	-	-
4	Region 33	4.0	2.5	5.0	1.5	1.0	2.5	5.4	3.8	7.5	0.2	0.1	0.3	7.2	5.3	8.5	12.9	11.3	14.3	0.0	0.0	0.0	1.0	0.4	1.6	1.0	0.8	1.1	1.9	1.2	2.7
11	**Ave. COM**	**6.0**			**4.7**			**10.6**			**0.4**			**5.7**			**16.7**			**0.0**			**0.7**			**1.1**			**1.8**		
	Min. COM		**1.3**			**1.0**			**2.5**			**0.0**			**0.0**			**4.9**			**0.0**			**0.0**			**0.0**			**0.0**	
	Max. COM			**21.3**			**19.0**			**33.1**			**2.5**			**13.6**			**34.4**			**0.0**			**1.6**			**5.1**			**6.4**
515	**Ave. yellow maize**	**3.1**			**2.7**			**5.9**			**0.1**			**0.3**			**6.2**			**0.0**			**0.6**			**1.0**			**1.5**		
	Min. yellow maize		**0.6**			**0.0**			**0.6**			**0.0**			**0.0**			**0.6**			**0.0**			**0.0**			**0.0**			**0.0**	
	Max. yellow maize			**23.0**			**19.0**			**33.1**			**2.5**			**13.6**			**34.4**			**0.4**			**4.7**			**13.6**			**16.0**
1000	**Ave. maize**	**3.1**			**2.5**			**5.6**			**0.1**			**0.3**			**6.0**			**0.0**			**0.7**			**0.9**			**1.5**		
	Min. maize		**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**	
	Max. maize			**30.0**			**25.5**			**33.1**			**2.5**			**13.6**			**35.3**			**2.3**			**8.4**			**13.6**			**16.0**

TABLE 5: GRADING QUALITY OF SOUTH AFRICAN WHITE AND YELLOW MAIZE 2005/2006 - 2014/2015

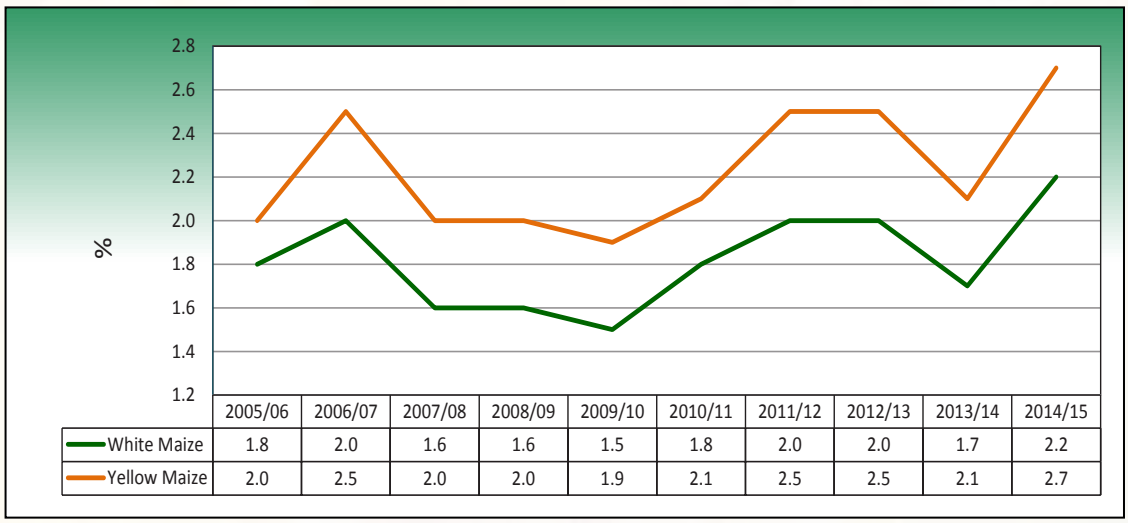
Season	Number of samples	% Defective kernels above 6.35 mm sieve			% Defective kernels below 6.35 mm sieve			% Foreign matter			% Other colour			% Combined deviations		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
White Maize																
2005/06	593	6.0	0.5	27.9	1.8	0.0	8.8	0.2	0.0	0.7	0.3	0.0	5.0	8.3	1.0	31.2
2006/07	563	2.9	0.1	34.9	2.0	0.1	11.6	0.1	0.0	0.7	0.2	0.0	13.5	5.3	0.4	38.8
2007/08	483	2.0	0.3	13.6	1.6	0.0	10.3	0.2	0.0	0.7	0.2	0.0	5.2	3.9	0.5	18.5
2008/09	483	2.6	0.4	16.9	1.6	0.0	5.5	0.2	0.0	4.0	0.2	0.0	5.0	4.5	1.0	20.2
2009/10	458	5.1	1.0	40.1	1.5	0.2	14.0	0.1	0.0	0.4	0.2	0.0	6.5	6.9	1.4	41.4
2010/11	413	5.2	0.5	67.1	1.8	0.1	13.3	0.2	0.0	0.8	0.4	0.0	23.2	7.5	0.9	95.1
2011/12	577	2.5	0.3	21.6	2.0	0.0	8.1	0.1	0.0	1.1	0.3	0.0	43.7	5.0	0.7	51.2
2012/13	508	2.6	0.0	20.8	2.0	0.2	11.4	0.1	0.0	1.5	0.3	0.0	6.5	4.9	1.0	22.4
2013/14	451	4.6	0.6	24.7	1.7	0.1	9.8	0.1	0.0	4.5	0.4	0.0	9.2	6.8	1.9	29.2
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
Weighted Average		**3.6**			**1.8**			**0.1**			**0.3**			**5.9**		
Minimum			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**	
Maximum				**67.1**			**25.5**			**4.5**			**43.7**			**95.1**
Yellow Maize																
2005/06	307	5.5	0.8	23.7	2.0	0.0	9.8	0.2	0.0	0.4	0.4	0.0	16.7	8.1	1.3	32.7
2006/07	337	2.8	0.0	67.7	2.5	0.2	17.3	0.2	0.0	1.9	0.2	0.0	4.6	5.7	0.9	70.0
2007/08	417	1.6	0.3	8.4	2.0	0.2	7.3	0.1	0.0	0.4	0.1	0.0	4.3	3.9	0.6	11.0
2008/09	327	2.3	0.5	15.1	2.0	0.0	10.6	0.2	0.0	3.1	0.2	0.0	13.3	4.7	0.9	29.6
2009/10	342	5.1	0.3	23.8	1.9	0.1	12.9	0.2	0.0	4.1	0.1	0.0	4.2	7.2	0.6	25.0
2010/11	280	4.7	0.8	30.9	2.1	0.1	9.6	0.2	0.0	0.4	0.2	0.0	6.2	7.2	1.3	36.9
2011/12	423	2.5	0.4	66.3	2.5	0.2	22.9	0.1	0.0	3.6	0.2	0.0	5.6	5.2	1.0	90.4
2012/13	492	2.0	0.2	23.1	2.5	0.1	14.0	0.1	0.0	1.8	0.2	0.0	8.4	4.8	0.8	25.0
2013/14	479	4.0	0.5	32.3	2.1	0.1	10.5	0.1	0.0	1.9	0.2	0.0	7.8	6.4	1.7	33.7
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
Weighted Average		**3.2**			**2.3**			**0.1**			**0.2**			**5.8**		
Minimum			**0.0**			**0.0**			**0.0**			**0.0**			**0.6**	
Maximum				**67.7**			**22.9**			**4.1**			**16.7**			**90.4**
White and Yellow Maize																
2005/06	900	5.9	0.5	27.9	1.9	0.0	9.8	0.2	0.0	0.7	0.3	0.0	16.7	8.2	1.0	32.7
2006/07	900	2.9	0.0	67.7	2.2	0.1	17.3	0.2	0.0	1.9	0.2	0.0	13.5	5.4	0.4	70.0
2007/08	900	1.8	0.3	13.6	1.8	0.0	10.3	0.1	0.0	0.7	0.1	0.0	5.2	3.9	0.5	18.5
2008/09	810	2.5	0.4	16.9	1.8	0.0	10.6	0.2	0.0	4.0	0.2	0.0	13.3	4.6	0.9	29.6
2009/10	800	5.1	0.3	40.1	1.7	0.1	14.0	0.1	0.0	4.1	0.2	0.0	6.5	7.1	0.6	41.4
2010/11	693	5.0	0.5	67.1	1.9	0.1	13.3	0.2	0.0	0.8	0.3	0.0	23.2	7.4	0.9	95.1
2011/12	1000	2.5	0.3	66.3	2.2	0.0	22.9	0.1	0.0	3.6	0.3	0.0	43.7	5.1	0.7	90.4
2012/13	1000	2.3	0.0	23.1	2.3	0.1	14.0	0.1	0.0	1.8	0.3	0.0	8.4	4.9	0.8	25.0
2013/14	930	4.3	0.5	32.3	1.9	0.1	10.5	0.1	0.0	4.5	0.3	0.0	9.2	6.6	1.7	33.7
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
Weighted Average		**3.4**			**2.0**			**0.1**			**0.3**			**5.9**		
Minimum			**0.0**			**0.0**			**0.0**			**0.0**			**0.0**	
Maximum				**67.7**			**25.5**			**4.5**			**43.7**			**95.1**

Graph 31: Percentage Defective Kernels above the 6.35 mm sieve over 10 seasons



	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
White Maize	6.0	2.9	2.0	2.6	5.1	5.2	2.5	2.6	4.6	3.1
Yellow Maize	5.5	2.8	1.6	2.3	5.1	4.7	2.5	2.0	4.0	3.1

Graph 32: Percentage Defective Kernels below the 6.35 mm sieve over 10 seasons



	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
White Maize	1.8	2.0	1.6	1.6	1.5	1.8	2.0	2.0	1.7	2.2
Yellow Maize	2.0	2.5	2.0	2.0	1.9	2.1	2.5	2.5	2.1	2.7

Graph 33: Percentage Combined deviations over 10 seasons

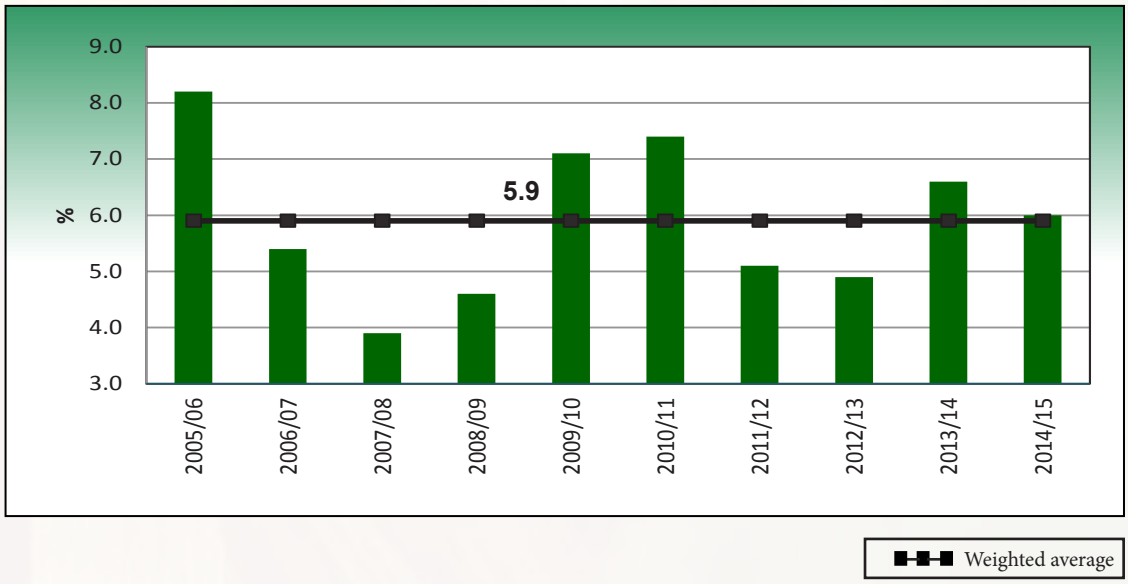


TABLE 6: USA GRADING OF WHITE MAIZE (2014/2015)

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																
3	Region 11	0.0	0.0	0.0	1.7	1.2	2.3	0.6	0.3	0.8	61.7	61.0	62.6	0.4	0.0	1.2
11	Region 12	0.0	0.0	0.0	2.1	1.6	2.4	0.6	0.0	1.9	61.1	59.4	62.4	0.2	0.0	0.9
21	Region 13	0.0	0.0	0.0	1.9	0.6	2.9	0.7	0.0	1.5	62.1	60.1	63.0	0.3	0.0	1.4
24	Region 14	0.0	0.0	0.0	2.2	0.9	3.0	0.6	0.0	1.5	61.5	60.1	63.5	0.2	0.0	1.4
2	Region 15	0.0	0.0	0.0	0.9	0.6	1.2	0.1	0.0	0.2	62.5	62.0	62.9	0.2	0.0	0.4
4	Region 16	0.0	0.0	0.0	1.7	1.3	2.4	0.4	0.3	0.7	61.5	59.0	62.9	0.3	0.0	0.6
34	Region 17	0.0	0.0	0.0	1.7	0.9	2.7	0.6	0.0	1.7	61.4	59.6	63.3	0.2	0.0	1.2
2	Region 18	0.0	0.0	0.0	2.7	2.3	3.0	0.5	0.4	0.6	61.2	61.2	61.2	0.2	0.0	0.5
23	Region 19	0.0	0.0	0.0	2.0	1.1	3.0	0.6	0.0	1.8	61.2	59.0	62.8	0.2	0.0	1.0
16	Region 20	0.0	0.0	0.0	2.2	1.2	3.0	0.5	0.0	1.8	61.4	59.8	63.6	0.2	0.0	0.8
14	Region 21	0.0	0.0	0.0	1.9	1.0	2.9	0.7	0.3	1.6	61.3	57.4	63.6	0.3	0.0	1.2
5	Region 22	0.0	0.0	0.0	2.1	1.6	2.5	0.4	0.2	0.4	62.7	62.2	63.3	0.2	0.0	0.5
4	Region 23	0.0	0.0	0.0	2.5	2.1	2.8	0.4	0.2	0.7	62.6	62.2	63.6	0.1	0.0	0.5
4	Region 24	0.0	0.0	0.0	1.9	1.4	2.7	0.6	0.0	1.7	62.0	60.0	64.1	0.4	0.0	1.0
4	Region 25	0.0	0.0	0.0	2.1	1.6	2.9	0.5	0.0	0.8	60.2	59.5	60.8	0.3	0.0	0.9
2	Region 26	0.0	0.0	0.0	1.9	1.3	2.5	0.4	0.0	0.9	58.0	57.6	58.4	1.0	0.4	1.6
1	Region 27	0.0	-	-	2.4	-	-	0.2	-	-	59.1	-	-	0.5	-	-
10	Region 28	0.0	0.0	0.0	1.9	0.0	2.6	0.4	0.0	1.6	60.7	56.9	63.3	0.2	0.0	0.6
13	Region 29	0.0	0.0	0.0	2.2	1.5	3.0	0.4	0.0	1.0	61.4	59.6	63.8	0.4	0.0	0.9
23	Region 30	0.0	0.0	0.0	1.8	0.9	3.0	0.4	0.0	1.6	61.0	57.5	63.0	0.3	0.0	1.2
16	Region 31	0.0	0.0	0.0	2.2	1.3	2.7	0.7	0.4	1.3	59.8	56.8	62.5	0.5	0.0	1.5
12	Region 32	0.0	0.0	0.0	1.5	1.0	2.6	0.6	0.0	1.0	59.7	57.0	61.5	0.4	0.0	1.1
30	Region 33	0.0	0.0	0.0	2.2	1.0	2.9	0.5	0.0	1.9	60.3	58.6	63.9	0.4	0.0	2.0
26	Region 34	0.0	0.0	0.0	2.1	1.2	2.9	0.5	0.0	1.4	60.3	56.1	63.2	0.3	0.0	1.5
3	Region 35	0.0	0.0	0.0	1.9	0.9	2.9	0.6	0.3	0.9	60.3	59.7	60.8	0.0	0.0	0.0
15	Region 36	0.0	0.0	0.0	2.3	1.8	3.0	0.2	0.0	0.7	60.2	59.0	62.2	0.2	0.0	0.9
322	**Ave. US No.1**	**0.0**			**2.0**			**0.5**			**61.0**			**0.3**		
	Min. US No.1		**0.0**			**0.0**			**0.0**			**56.1**			**0.0**	
	Max. US No.1			**0.0**			**3.0**			**1.9**			**64.1**			**2.0**
GRADE: US No.2																
3	Region 12	0.0	0.0	0.0	3.5	2.9	4.3	1.4	0.7	2.4	61.4	60.9	61.8	0.5	0.0	1.0
8	Region 13	0.0	0.0	0.0	3.6	3.1	4.5	1.0	0.5	1.8	61.4	59.4	62.9	0.5	0.0	0.9
6	Region 14	0.0	0.0	0.0	3.4	3.1	4.3	0.5	0.0	1.2	60.9	57.1	63.2	0.2	0.0	0.7
1	Region 15	0.0	-	-	4.0	-	-	0.9	-	-	62.2	-	-	0.0	-	-
1	Region 17	0.0	-	-	4.9	-	-	0.9	-	-	61.1	-	-	1.0	-	-
5	Region 18	0.0	0.0	0.0	3.9	3.1	4.2	1.0	0.4	1.7	61.4	59.7	63.1	0.7	0.0	1.9
7	Region 19	0.0	0.0	0.0	3.3	3.1	3.9	0.7	0.0	2.4	60.6	58.6	62.7	0.5	0.0	1.5
3	Region 20	0.0	0.0	0.0	3.5	3.3	3.7	0.4	0.3	0.5	61.6	61.2	62.2	0.2	0.0	0.7
5	Region 21	0.0	0.0	0.0	3.1	2.0	4.1	1.1	0.4	2.3	61.0	55.0	63.7	0.1	0.0	0.4
5	Region 22	0.0	0.0	0.0	3.7	3.2	4.4	0.4	0.0	0.8	63.4	62.4	64.4	0.3	0.0	0.9
8	Region 23	0.0	0.0	0.0	3.8	3.1	4.8	0.5	0.2	1.7	62.0	60.8	64.0	0.5	0.0	1.1
3	Region 24	0.0	0.0	0.0	3.7	3.3	4.2	0.7	0.5	1.2	62.8	62.0	63.3	0.4	0.0	1.2
1	Region 25	0.0	-	-	4.7	-	-	1.2	-	-	58.0	-	-	0.4	-	-
5	Region 26	0.0	0.0	0.0	3.7	3.2	4.7	0.5	0.0	0.9	61.3	60.8	62.3	1.0	0.0	1.6
2	Region 28	0.0	0.0	0.0	3.1	3.1	3.1	0.8	0.3	1.2	60.1	59.3	60.8	0.7	0.5	0.9
4	Region 29	0.0	0.0	0.0	3.7	3.1	4.9	0.9	0.4	1.1	60.6	54.9	63.9	0.7	0.0	1.8
3	Region 30	0.0	0.0	0.0	3.5	3.3	3.6	0.4	0.3	0.6	59.3	59.1	59.5	0.9	0.0	1.7
2	Region 31	0.0	0.0	0.0	3.3	3.2	3.4	0.1	0.1	0.1	59.7	59.6	59.8	0.7	0.5	0.9
9	Region 33	0.0	0.0	0.0	3.1	1.3	4.4	0.9	0.2	2.9	59.3	55.3	62.0	0.3	0.0	1.2
10	Region 34	0.0	0.0	0.0	3.7	1.9	4.9	0.8	0.0	2.3	59.5	56.2	61.9	0.6	0.0	1.0

TABLE 6: USA GRADING OF WHITE MAIZE (2014/2015) (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																
2	Region 35	0.0	0.0	0.0	3.4	3.4	3.4	1.2	1.0	1.4	60.5	60.3	60.6	0.2	0.0	0.5
5	Region 36	0.0	0.0	0.0	4.0	3.2	4.7	0.1	0.0	0.6	60.3	59.1	61.8	0.4	0.0	1.5
98	**Ave. US No.2**	**0.0**			**3.6**			**0.7**			**60.8**			**0.5**		
	Min. US No.2		**0.0**			**1.3**			**0.0**			**54.9**			**0.0**	
	Max. US No.2			**0.0**			**4.9**			**2.9**			**64.4**			**1.9**
GRADE: US No.3																
1	Region 16	0.0	-	-	6.7	-	-	0.0	-	-	62.8	-	-	0.0	-	-
2	Region 18	0.0	0.0	0.0	6.0	5.3	6.8	1.0	0.9	1.2	59.7	57.9	61.5	0.4	0.4	0.5
2	Region 19	0.0	0.0	0.0	5.2	5.2	5.3	1.4	1.1	1.7	60.1	59.6	60.6	1.0	0.8	1.1
2	Region 20	0.0	0.0	0.0	5.8	5.6	5.9	0.3	0.0	0.6	61.9	61.6	62.1	0.5	0.5	0.5
1	Region 22	0.0	-	-	6.9	-	-	0.9	-	-	59.6	-	-	0.0	-	-
5	Region 23	0.0	0.0	0.0	5.9	5.1	7.0	0.7	0.3	1.7	62.4	60.6	63.4	0.4	0.0	0.8
2	Region 25	0.0	0.0	0.0	5.6	5.1	6.1	1.0	0.8	1.1	59.1	59.1	59.1	0.3	0.0	0.5
1	Region 26	0.0	-	-	5.3	-	-	0.8	-	-	61.3	-	-	0.4	-	-
2	Region 28	0.0	0.0	0.0	5.7	5.6	5.8	0.5	0.2	0.7	63.2	62.7	63.7	1.0	0.9	1.1
1	Region 29	0.0	-	-	6.3	-	-	0.5	-	-	64.6	-	-	0.8	-	-
1	Region 30	0.0	-	-	6.5	-	-	0.2	-	-	60.8	-	-	0.5	-	-
1	Region 33	0.0	-	-	5.1	-	-	0.8	-	-	60.8	-	-	0.5	-	-
3	Region 36	0.0	0.0	0.0	5.6	5.1	5.8	0.2	0.0	0.3	59.1	58.6	59.8	0.3	0.0	0.8
24	**Ave. US No.3**	**0.0**			**5.8**			**0.6**			**61.1**			**0.5**		
	Min. US No.3		**0.0**			**5.1**			**0.0**			**57.9**			**0.0**	
	Max. US No.3			**0.0**			**7.0**			**1.7**			**64.6**			**1.1**
GRADE: US No.4																
1	Region 12	0.0	-	-	8.7	-	-	1.0	-	-	61.9	-	-	0.0	-	-
1	Region 21	0.0	-	-	9.5	-	-	1.2	-	-	63.4	-	-	0.8	-	-
3	Region 22	0.0	0.0	0.0	8.6	7.3	9.6	1.6	1.2	2.0	62.6	62.4	62.8	0.2	0.0	0.5
3	Region 28	0.0	0.0	0.0	8.2	7.5	9.6	0.6	0.2	1.0	60.9	60.5	61.2	0.7	0.0	1.5
2	Region 29	0.0	0.0	0.0	7.8	7.3	8.4	1.8	1.2	2.3	58.9	56.2	61.5	0.6	0.5	0.6
1	Region 30	0.0	-	-	8.5	-	-	0.0	-	-	59.8	-	-	0.0	-	-
1	Region 31	0.0	-	-	1.6	-	-	4.8	-	-	58.6	-	-	1.3	-	-
2	Region 32	0.0	0.0	0.0	7.9	7.6	8.2	0.6	0.4	0.8	59.7	59.5	59.8	0.7	0.5	0.9
1	Region 34	0.0	-	-	9.3	-	-	1.8	-	-	55.5	-	-	0.7	-	-
15	**Ave. US No.4**	**0.0**			**7.9**			**1.3**			**60.4**			**0.5**		
	Min. US No.4		**0.0**			**1.6**			**0.0**			**55.5**			**0.0**	
	Max. US No.4			**0.0**			**9.6**			**4.8**			**63.4**			**1.5**
GRADE: US No.5																
2	Region 13	0.0	0.0	0.0	11.9	11.6	12.2	1.3	1.3	1.4	63.1	62.7	63.4	0.2	0.0	0.4
1	Region 14	0.0	-	-	3.3	-	-	6.7	-	-	57.1	-	-	1.0	-	-
1	Region 18	0.0	-	-	11.6	-	-	1.0	-	-	57.7	-	-	0.4	-	-
2	Region 20	0.0	0.0	0.0	13.1	12.0	14.1	0.7	0.5	0.9	55.9	55.3	56.5	0.3	0.0	0.5
1	Region 24	0.0	-	-	10.3	-	-	1.4	-	-	62.5	-	-	0.6	-	-
1	Region 25	0.0	-	-	11.2	-	-	1.2	-	-	56.2	-	-	0.5	-	-
1	Region 29	0.0	-	-	11.6	-	-	1.4	-	-	59.4	-	-	0.5	-	-
1	Region 32	0.0	-	-	10.1	-	-	0.6	-	-	59.8	-	-	0.6	-	-
1	Region 33	0.0	-	-	13.3	-	-	0.2	-	-	58.3	-	-	1.7	-	-
1	Region 34	0.0	-	-	11.0	-	-	2.0	-	-	54.6	-	-	0.8	-	-
12	**Ave. US No.5**	**0.0**			**11.0**			**1.5**			**58.6**			**0.6**		
	Min. US No.5		**0.0**			**3.3**			**0.2**			**54.6**			**0.0**	
	Max.US No.5			**0.0**			**14.1**			**6.7**			**63.4**			**1.7**

TABLE 6: USA GRADING OF WHITE MAIZE (2014/2015) (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 13	5.0	-	-	30.2	-	-	1.0	-	-	60.0	-	-	0.0	-	-
2	Region 17	3.6	0.0	7.1	18.9	18.2	19.6	1.6	1.5	1.8	59.4	59.1	59.6	0.2	0.0	0.4
1	Region 19	0.0	-	-	18.9	-	-	4.9	-	-	55.1	-	-	4.0	-	-
1	Region 25	2.5	-	-	8.4	-	-	7.6	-	-	56.2	-	-	0.0	-	-
1	Region 28	0.0	-	-	20.3	-	-	1.1	-	-	56.4	-	-	1.0	-	-
1	Region 30	0.0	-	-	3.1	-	-	14.0	-	-	59.4	-	-	4.3	-	-
7	**Ave. Sample Grade**	**2.1**			**16.9**			**4.6**			**58.0**			**1.4**		
	Min. Sample Grade		**0.0**			**3.1**			**1.0**			**55.1**			**0.0**	
	Max. Sample Grade			**7.1**			**30.2**			**14.0**			**60.0**			**4.3**
GRADE: Mixed Grade																
1	Region 13	0.0	-	-	1.8	-	-	0.9	-	-	62.4	-	-	2.6	-	-
1	Region 19	0.0	-	-	12.7	-	-	5.1	-	-	55.0	-	-	3.1	-	-
1	Region 20	0.0	-	-	2.0	-	-	0.7	-	-	61.2	-	-	2.1	-	-
1	Region 21	0.0	-	-	3.1	-	-	5.7	-	-	57.9	-	-	2.1	-	-
1	Region 30	0.0	-	-	1.2	-	-	0.0	-	-	59.1	-	-	9.6	-	-
1	Region 31	0.0	-	-	1.7	-	-	2.0	-	-	57.3	-	-	3.9	-	-
1	Region 32	0.0	-	-	1.8	-	-	0.3	-	-	59.8	-	-	2.2	-	-
7	**Ave. Mixed Grade**	**0.0**			**3.5**			**2.1**			**59.0**			**3.7**		
	Min. Mixed Grade		**0.0**			**1.2**			**0.0**			**55.0**			**2.1**	
	Max. Mixed Grade			**0.0**			**12.7**			**5.7**			**62.4**			**9.6**
485	**Ave. white maize**	**0.0**			**3.2**			**0.7**			**60.8**			**0.4**		
	Min. white maize		**0.0**			**0.0**			**0.0**			**54.6**			**0.0**	
	Max. white maize			**7.1**			**30.2**			**14.0**			**64.6**			**9.6**
1000	**Ave. maize**	**0.2**			**3.2**			**0.9**			**60.0**			**0.9**		
	Min. maize		**0.0**			**0.6**			**0.0**			**52.3**			**0.0**	
	Max. maize			**7.1**			**30.2**			**14.0**			**64.6**			**13.6**

TABLE 7: USA GRADING OF YELLOW MAIZE (2014/2015)

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																
19	Region 10	0.0	0.0	0.0	1.3	0.8	2.6	0.4	0.0	1.7	59.9	57.7	61.9	0.0	0.0	0.0
5	Region 11	0.0	0.0	0.0	1.2	1.0	1.5	0.9	0.4	1.7	61.5	60.6	62.2	0.0	0.0	0.0
6	Region 12	0.0	0.0	0.0	1.9	1.7	2.4	1.1	0.4	1.9	59.0	58.6	59.5	0.2	0.0	0.5
7	Region 13	0.0	0.0	0.0	2.4	1.3	2.9	1.0	0.3	1.7	60.1	59.1	61.4	0.6	0.0	1.1
14	Region 14	0.0	0.0	0.0	1.8	0.6	3.0	0.6	0.0	1.2	60.0	59.1	61.7	0.1	0.0	1.3
1	Region 15	0.0	-	-	0.6	-	-	0.0	-	-	64.6	-	-	0.0	-	-
3	Region 16	0.0	0.0	0.0	1.6	1.3	2.0	0.4	0.1	0.8	61.3	60.1	62.1	0.1	0.0	0.4
14	Region 17	0.0	0.0	0.0	2.0	1.1	2.9	1.0	0.3	1.9	59.6	57.4	60.6	0.4	0.0	1.1
1	Region 18	0.0	-	-	2.4	-	-	1.2	-	-	62.5	-	-	0.0	-	-
12	Region 19	0.0	0.0	0.0	2.4	1.1	3.0	0.6	0.0	1.8	60.4	57.5	62.2	0.1	0.0	1.0
2	Region 20	0.0	0.0	0.0	2.8	2.5	3.0	0.6	0.5	0.7	60.6	60.1	61.1	0.0	0.0	0.0
3	Region 21	0.0	0.0	0.0	2.0	1.8	2.5	1.1	0.4	1.7	60.1	59.4	60.8	0.0	0.0	0.0
3	Region 22	0.0	0.0	0.0	2.2	2.1	2.3	0.6	0.4	0.8	61.9	60.1	64.0	0.5	0.0	0.9
4	Region 23	0.0	0.0	0.0	2.5	1.8	3.0	0.6	0.2	0.8	61.0	60.0	62.7	0.7	0.0	2.1
4	Region 24	0.0	0.0	0.0	2.0	1.2	2.7	0.7	0.3	1.2	62.0	60.8	63.8	0.0	0.0	0.0
2	Region 25	0.0	0.0	0.0	1.8	1.4	2.1	0.7	0.0	1.4	59.9	59.6	60.1	0.2	0.0	0.4
4	Region 26	0.0	0.0	0.0	1.6	0.7	2.2	0.4	0.3	0.5	60.5	57.2	61.8	0.0	0.0	0.0
2	Region 27	0.0	0.0	0.0	2.7	2.5	2.8	0.7	0.2	1.2	60.0	58.9	61.1	0.0	0.0	0.0
15	Region 28	0.0	0.0	0.0	2.2	0.6	2.9	0.5	0.0	1.1	59.5	57.6	61.3	0.0	0.0	0.6
34	Region 29	0.0	0.0	0.0	2.3	1.4	3.0	0.8	0.2	1.5	59.2	56.5	61.7	0.0	0.0	0.0
39	Region 30	0.0	0.0	0.0	2.2	1.2	3.0	0.8	0.0	2.0	59.1	57.0	62.2	0.1	0.0	1.1
40	Region 31	0.0	0.0	0.0	2.0	0.8	3.0	0.7	0.0	1.6	59.2	56.5	61.8	0.1	0.0	2.6
29	Region 32	0.0	0.0	0.0	2.2	1.2	3.0	0.7	0.0	1.7	58.6	56.2	60.6	0.2	0.0	3.1
29	Region 33	0.0	0.0	0.0	2.2	1.3	3.0	0.6	0.0	1.6	59.1	57.5	60.6	0.0	0.0	1.0
13	Region 34	0.0	0.0	0.0	2.2	1.4	2.9	0.7	0.2	1.1	59.1	57.2	63.2	0.1	0.0	0.8
3	Region 35	0.0	0.0	0.0	2.1	1.2	2.7	1.0	0.6	1.2	59.2	56.5	60.6	0.0	0.0	0.0
9	Region 36	0.0	0.0	0.0	2.2	1.6	2.7	0.4	0.0	1.1	59.7	58.1	61.2	0.2	0.0	1.8
317	**Ave. US No.1**	**0.0**			**2.2**			**0.7**			**59.5**			**0.1**		
	Min. US No.1		**0.0**			**0.6**			**0.0**			**56.2**			**0.0**	
	Max. US No.1			**0.0**			**3.0**			**2.0**			**64.6**			**3.1**
GRADE: US No.2																
1	Region 12	0.0	-	-	2.2	-	-	2.2	-	-	59.1	-	-	0.0	-	-
5	Region 13	0.0	0.0	0.0	3.3	2.2	4.7	1.3	0.6	3.0	60.6	57.8	62.3	0.1	0.0	0.5
3	Region 14	0.0	0.0	0.0	2.6	1.6	3.6	2.0	1.0	2.6	58.7	57.4	60.8	0.7	0.0	1.1
2	Region 17	0.0	0.0	0.0	2.9	2.2	3.6	1.8	1.3	2.3	59.5	59.2	59.8	0.5	0.0	1.1
4	Region 18	0.0	0.0	0.0	3.9	3.1	4.5	0.7	0.6	0.9	59.2	58.4	60.6	0.0	0.0	0.0
5	Region 19	0.0	0.0	0.0	4.1	3.5	4.9	1.1	0.5	1.8	60.0	58.9	61.8	0.2	0.0	0.5
7	Region 20	0.0	0.0	0.0	3.8	3.4	4.7	0.7	0.2	1.2	60.5	59.3	62.3	0.9	0.0	3.1
3	Region 21	0.0	0.0	0.0	3.8	3.2	4.9	0.5	0.3	0.8	61.2	57.4	64.5	0.3	0.0	0.5
4	Region 22	0.0	0.0	0.0	4.0	3.1	4.9	0.9	0.2	1.8	61.4	60.5	62.9	0.8	0.0	1.6
1	Region 23	0.0	0.0	0.0	3.2	3.2	3.2	0.3	0.3	0.3	60.8	60.8	60.8	1.1	1.1	1.1
1	Region 24	0.0	-	-	3.1	-	-	0.8	-	-	60.9	-	-	0.0	-	-
2	Region 25	0.0	0.0	0.0	2.7	2.1	3.2	1.3	0.4	2.2	58.9	57.7	60.0	0.0	0.0	0.0
2	Region 26	0.0	0.0	0.0	4.7	4.6	4.8	0.6	0.6	0.7	59.8	58.0	61.6	0.0	0.0	0.0
2	Region 27	0.0	0.0	0.0	3.6	3.5	3.7	1.0	0.8	1.1	60.4	60.2	60.6	0.0	0.0	0.0
10	Region 28	0.0	0.0	0.0	4.2	3.5	4.8	0.4	0.0	2.0	59.4	58.5	61.4	0.1	0.0	1.1
13	Region 29	0.0	0.0	0.0	3.8	1.9	5.0	1.0	0.3	1.8	58.4	54.1	61.6	0.0	0.0	0.0
14	Region 30	0.0	0.0	0.0	3.4	1.6	4.9	1.5	0.6	2.4	57.7	54.2	61.3	0.0	0.0	0.5
8	Region 31	0.0	0.0	0.0	3.1	1.6	4.4	1.3	0.5	2.7	59.1	57.1	60.5	0.1	0.0	0.7
9	Region 32	0.0	0.0	0.0	3.6	2.8	4.3	0.9	0.4	2.0	57.5	54.6	58.9	0.4	0.0	3.2
8	Region 33	0.0	0.0	0.0	4.2	3.4	5.0	1.0	0.3	1.6	58.2	56.2	60.6	0.5	0.0	2.8

TABLE 7: USA GRADING OF YELLOW MAIZE (2014/2015) (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																
12	Region 34	0.0	0.0	0.0	3.9	2.4	5.0	1.3	0.5	3.0	60.0	57.6	64.1	0.3	0.0	1.1
3	Region 35	0.0	0.0	0.0	3.5	3.3	3.7	0.9	0.9	1.0	59.4	58.4	60.0	0.0	0.0	0.0
10	Region 36	0.0	0.0	0.0	3.7	3.3	4.5	0.3	0.0	1.8	59.5	58.3	61.3	0.1	0.0	0.8
129	**Ave. US No.2**	**0.0**			**3.7**			**1.0**			**59.2**			**0.2**		
	Min. US No.2		**0.0**			**1.6**			**0.0**			**54.1**			**0.0**	
	Max. US No.2			**0.0**			**5.0**			**3.0**			**64.5**			**3.2**
GRADE: US No.3																
1	Region 19	0.0	-	-	6.8	-	-	1.3	-	-	60.1	-	-	0.0	-	-
5	Region 20	0.0	0.0	0.0	6.0	5.2	6.8	0.7	0.5	0.9	60.6	58.6	62.1	0.7	0.0	2.7
2	Region 25	0.0	0.0	0.0	5.9	5.1	6.7	0.5	0.3	0.7	59.5	59.3	59.7	0.0	0.0	0.0
2	Region 26	0.0	0.0	0.0	5.9	5.8	6.1	0.7	0.0	1.4	59.3	56.8	61.7	0.0	0.0	0.0
1	Region 27	0.0	-	-	6.4	-	-	3.1	-	-	58.6	-	-	0.5	-	-
4	Region 28	0.0	0.0	0.0	6.0	5.2	6.7	1.0	0.7	1.4	59.1	57.9	60.0	0.1	0.0	0.5
7	Region 29	0.0	0.0	0.0	3.5	1.4	5.2	2.2	0.8	3.6	56.5	52.3	61.1	0.1	0.0	0.5
5	Region 30	0.0	0.0	0.0	6.2	5.2	7.0	1.3	0.2	1.6	56.8	53.4	58.4	0.7	0.0	3.3
1	Region 31	0.0	-	-	2.0	-	-	3.1	-	-	60.1	-	-	0.0	-	-
1	Region 32	0.0	-	-	5.1	-	-	0.8	-	-	58.1	-	-	1.0	-	-
1	Region 33	0.0	-	-	5.1	-	-	0.2	-	-	59.8	-	-	0.0	-	-
2	Region 34	0.0	0.0	0.0	5.6	5.1	6.1	1.3	0.8	1.8	58.5	56.7	60.3	1.0	0.6	1.5
1	Region 36	0.0	-	-	1.6	-	-	3.4	-	-	58.7	-	-	0.4	-	-
33	**Ave. US No.3**	**0.0**			**5.2**			**1.4**			**58.4**			**0.4**		
	Min. US No.3		**0.0**			**1.4**			**0.0**			**52.3**			**0.0**	
	Max. US No.3			**0.0**			**7.0**			**3.6**			**62.1**			**3.3**
GRADE: US No.4																
1	Region 13	0.0	-	-	8.0	-	-	0.8	-	-	56.9	-	-	0.0	-	-
1	Region 18	0.0	-	-	4.0	-	-	4.3	-	-	59.3	-	-	0.0	-	-
1	Region 19	0.0	-	-	7.1	-	-	0.8	-	-	59.9	-	-	0.0	-	-
2	Region 21	0.0	0.0	0.0	9.2	9.0	9.5	0.6	0.6	0.6	58.9	57.3	60.4	0.3	0.0	0.5
2	Region 29	0.0	0.0	0.0	7.6	7.4	7.8	2.4	1.5	3.3	60.3	57.9	62.7	0.0	0.0	0.0
1	Region 32	0.0	-	-	8.0	-	-	1.6	-	-	57.4	-	-	0.0	-	-
1	Region 36	0.9	-	-	2.9	-	-	0.3	-	-	61.5	-	-	0.0	-	-
9	**Ave. US No.4**	**0.1**			**7.1**			**1.5**			**59.3**			**0.1**		
	Min. US No.4		**0.0**			**2.9**			**0.3**			**56.9**			**0.0**	
	Max. US No.4			**0.9**			**9.5**			**4.3**			**62.7**			**0.5**
GRADE: US No.5																
1	Region 13	0.0	-	-	10.3	-	-	2.8	-	-	59.2	-	-	0.0	-	-
2	Region 18	0.0	0.0	0.0	11.0	10.6	11.4	1.6	1.5	1.8	60.5	60.3	60.6	0.0	0.0	0.0
1	Region 19	0.0	-	-	12.0	-	-	6.8	-	-	60.9	-	-	0.0	-	-
2	Region 20	0.0	0.0	0.0	13.1	11.9	14.4	0.9	0.8	0.9	57.8	57.7	57.8	0.0	0.0	0.0
1	Region 26	0.0	-	-	14.4	-	-	1.2	-	-	56.5	-	-	0.0	-	-
3	Region 28	0.4	0.0	1.2	10.6	7.2	13.0	0.8	0.3	1.7	59.5	58.4	60.7	0.2	0.0	0.5
1	Region 29	0.0	-	-	12.0	-	-	3.8	-	-	54.0	-	-	0.0	-	-
1	Region 36	2.3	-	-	10.1	-	-	0.3	-	-	59.1	-	-	0.8	-	-
12	**Ave. US No.5**	**0.3**			**11.6**			**1.8**			**58.7**			**0.1**		
	Min. US No.5		**0.0**			**7.2**			**0.3**			**54.0**			**0.0**	
	Max. US No.5			**2.3**			**14.4**			**6.8**			**60.9**			**0.8**

TABLE 7: USA GRADING OF YELLOW MAIZE (2014/2015) (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 19	0.0	-	-	22.1	-	-	4.3	-	-	60.7	-	-	1.1	-	-
2	Region 20	0.0	0.0	0.0	19.0	18.3	19.7	1.8	1.7	1.9	59.0	59.0	59.0	0.0	0.0	0.0
1	Region 29	0.0	-	-	23.7	-	-	1.7	-	-	54.6	-	-	0.0	-	-
1	Region 33	0.0	-	-	17.8	-	-	0.5	-	-	57.3	-	-	0.5	-	-
2	Region 36	4.5	4.3	4.7	9.5	8.5	10.6	0.1	0.0	0.1	59.3	58.8	59.7	0.0	0.0	0.0
7	**Ave. Sample Grade**	**1.3**			**17.2**			**1.5**			**58.4**			**0.2**		
	Min. Sample Grade		**0.0**			**8.5**			**0.0**			**54.6**			**0.0**	
	Max. Sample Grade			**4.7**			**23.7**			**4.3**			**60.7**			**1.1**
GRADE: Mixed Grade																
1	Region 13	0.0	-	-	4.4	-	-	3.2	-	-	54.5	-	-	7.0	-	-
1	Region 14	0.0	-	-	1.4	-	-	0.4	-	-	58.9	-	-	13.6	-	-
1	Region 16	0.0	-	-	1.7	-	-	1.5	-	-	59.9	-	-	5.1	-	-
1	Region 30	0.0	-	-	9.0	-	-	0.8	-	-	57.1	-	-	5.2	-	-
4	Region 33	0.2	0.0	0.6	3.9	2.5	4.8	0.6	0.3	1.5	54.4	53.1	55.4	7.2	5.3	8.5
8	**Ave. Mixed Grade**	**0.1**			**4.0**			**1.0**			**56.0**			**7.5**		
	Min. Mixed Grade		**0.0**			**1.4**			**0.3**			**53.1**			**5.1**	
	Max. Mixed Grade			**0.6**			**9.0**			**3.2**			**59.9**			**13.6**
515	**Ave. yellow maize**	**0.0**			**3.2**			**0.9**			**59.3**			**0.3**		
	Min. yellow maize		**0.0**			**0.6**			**0.0**			**52.3**			**0.0**	
	Max. yellow maize			**4.7**			**23.7**			**6.8**			**64.6**			**13.6**
1000	**Ave. maize**	**0.2**			**3.2**			**0.9**			**60.0**			**0.9**		
	Min. maize		**0.0**			**0.6**			**0.0**			**52.3**			**0.0**	
	Max. maize			**7.1**			**30.2**			**14.0**			**64.6**			**13.6**

TABLE 8: 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	0.3%	0.5%	0.75%	0.3%	0.5%	0.75%
2	Defective maize kernels, above and below the 6.35 mm round-hole sieve	7%	13%	30%	*	*	*
3	Defective maize kernels that can pass through the 6.35 mm round-hole sieve	*	*	*	4%	10%	30%
4	Defective maize kernels that can not pass through the 6.35 mm round-hole sieve	*	*	*	9%	20%	30%
5	Other colour maize kernels	3%	6%	10%	2%	5%	5%
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%
7	Pinked maize kernels	12%	12%	12%	*	*	*

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.
* Not spesified
Regulations relating to the Grading, Packing and Marking of Maize intended for sale in the Republic of South Africa as published in the Government Gazette No. 32190, Regulation No. R. 473 of 8 May 2009.

TABLE 9: GRADES AND GRADE REQUIREMENTS FOR 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 meaterial (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. Mix Grade	When % other colour in yellow maize samples >5 % and white maize samples >2 %				

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.

Source: Offical United States Standard of Grain (excluding metric conversions).

TABLE 10: PHYSICAL QUALITY FACTORS OF WHITE MAIZE ACCORDING TO GRADE (2014/2015)

Number of samples	Region	Test weight (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)			Milling index		
								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.
GRADE: WM1																												
3	Region 11	79.5	78.5	80.6	32.0	27.1	36.3	5.4	4.9	6.0	73.4	63.6	81.8	21.2	13.3	31.0	1.5	0.6	2.8	1.1	0.4	1.9	14	8	24	102.5	101.2	105.1
11	Region 12	78.6	76.5	80.3	32.7	28.1	41.5	16.3	6.2	31.1	66.9	55.9	81.0	16.8	9.2	28.1	1.2	0.2	3.4	0.9	0.1	2.9	5	2	14	103.4	94.3	110.9
27	Region 13	79.8	76.5	81.1	28.5	24.5	38.2	8.7	2.8	26.1	66.5	54.4	78.5	24.8	9.2	40.1	0.7	0.0	1.8	0.4	0.0	1.3	4	0	29	110.2	92.1	118.8
29	Region 14	79.0	73.5	81.8	29.9	21.0	34.3	17.1	3.6	28.8	66.7	59.3	72.3	16.2	7.6	31.5	0.8	0.2	2.3	0.5	0.1	2.0	5	0	24	104.5	84.3	117.0
3	Region 15	80.3	79.9	81.0	32.2	29.5	34.6	20.0	16.6	25.8	67.8	63.7	72.8	12.2	9.7	16.5	0.7	0.3	0.9	0.5	0.2	0.8	4	1	6	110.7	109.4	111.3
5	Region 16	79.5	75.9	80.9	31.4	27.5	33.5	12.3	4.1	20.4	68.0	57.4	73.6	19.7	8.9	38.5	1.1	0.4	1.7	0.8	0.4	1.3	4	1	9	107.2	102.8	109.2
34	Region 17	79.0	76.8	81.5	29.6	23.6	32.7	11.1	2.7	27.4	65.5	58.3	74.3	23.4	12.2	33.2	0.8	0.2	1.9	0.5	0.1	1.3	4	1	10	102.3	95.7	113.4
5	Region 18	79.4	78.8	81.2	28.2	24.9	32.2	9.1	5.4	13.9	69.9	68.1	73.3	21.1	17.7	26.5	0.8	0.4	1.8	0.6	0.3	1.1	3	1	7	103.1	99.4	107.7
29	Region 19	78.7	75.5	80.9	31.4	24.7	39.7	13.0	3.5	29.8	66.6	53.7	72.8	20.4	4.7	38.5	0.7	0.0	2.0	0.6	0.0	1.4	4	0	12	102.2	81.4	119.0
19	Region 20	79.2	77.0	81.9	31.3	26.8	38.3	11.2	1.4	24.3	65.9	53.6	76.4	22.9	8.5	38.0	0.9	0.2	2.5	0.7	0.1	2.0	5	0	12	100.8	90.2	110.5
16	Region 21	78.8	70.8	81.9	31.6	25.5	33.9	17.4	1.9	28.1	67.7	49.3	73.5	14.9	7.6	48.6	1.0	0.3	2.5	0.8	0.2	1.5	6	1	15	105.3	85.8	117.9
10	Region 22	81.2	80.0	82.8	32.1	28.1	34.8	18.9	10.7	23.1	69.2	66.3	76.0	12.0	10.3	15.8	0.8	0.2	1.9	0.6	0.2	1.5	6	0	18	108.4	101.1	113.8
13	Region 23	80.4	78.6	82.4	31.6	26.2	34.9	17.2	7.1	36.0	70.1	53.9	77.9	12.7	5.7	20.8	1.1	0.6	2.2	0.9	0.4	2.2	6	2	15	107.5	98.9	115.4
6	Region 24	80.3	77.2	82.5	31.7	29.2	33.1	15.9	7.5	26.2	65.2	60.3	71.7	18.9	7.5	32.2	1.2	0.5	2.2	1.0	0.4	2.2	6	2	12	104.3	89.2	113.5
4	Region 25	77.5	76.6	78.3	31.3	27.9	38.1	11.0	2.6	28.7	66.5	61.6	70.1	22.5	9.7	29.6	1.0	0.5	1.6	0.7	0.4	1.0	5	3	10	93.0	87.2	95.5
6	Region 26	77.2	74.1	79.0	30.0	27.1	32.0	8.4	4.8	11.1	68.4	65.6	71.5	23.3	17.7	27.9	1.1	0.3	2.9	0.9	0.2	2.5	5	2	10	99.5	83.7	110.6
1	Region 27	76.1	-	-	31.0	-	-	17.9	-	-	67.2	-	-	14.9	-	-	3.5	-	-	3.1	-	-	14	-	-	96.2	-	-
13	Region 28	78.3	73.2	82.0	30.8	20.3	36.7	18.4	6.1	33.1	64.2	56.0	72.4	17.4	7.6	37.9	1.6	0.4	9.9	1.0	0.2	5.3	11	1	56	99.3	90.0	117.4
16	Region 29	78.6	70.7	82.2	31.1	22.5	36.1	14.6	1.9	30.0	65.8	46.6	73.1	19.6	9.3	51.5	0.9	0.2	1.5	0.6	0.2	1.1	5	1	16	103.1	84.6	117.9
26	Region 30	78.2	74.0	81.1	31.8	22.8	39.7	17.5	0.3	39.7	62.7	49.4	77.1	19.8	4.1	50.3	1.2	0.2	2.7	0.8	0.1	2.6	7	0	29	98.9	85.2	111.1
18	Region 31	76.9	73.1	80.4	29.6	23.9	37.8	14.3	0.4	24.3	67.0	58.6	78.5	18.7	5.4	41.0	1.1	0.3	3.4	0.9	0.3	2.8	4	0	13	94.4	78.2	106.7
13	Region 32	76.9	73.4	79.1	29.6	24.8	33.4	11.9	1.6	24.3	66.1	54.3	78.6	22.0	8.4	42.8	0.7	0.2	1.6	0.6	0.2	1.4	2	0	9	87.9	63.9	98.0
37	Region 33	77.3	71.2	82.3	31.8	25.2	35.7	17.9	6.1	41.3	67.0	53.3	74.6	15.1	5.4	34.6	0.9	0.2	3.5	0.7	0.1	3.0	7	0	37	90.7	59.0	113.0
34	Region 34	77.3	72.2	81.3	31.4	24.6	37.7	16.2	1.8	34.1	67.2	53.9	76.0	16.6	9.1	35.8	1.0	0.2	2.9	0.8	0.2	1.7	6	1	21	97.7	79.1	117.9
4	Region 35	77.6	76.9	78.3	32.4	27.2	36.7	21.1	10.0	37.5	64.7	57.4	75.0	14.2	5.1	21.6	1.1	0.6	2.2	0.9	0.4	2.0	8	4	13	100.5	95.4	105.9
20	Region 36	77.5	75.9	80.0	33.3	29.2	39.0	12.6	1.8	38.0	68.3	60.6	76.2	19.1	1.2	31.4	0.9	0.1	1.9	0.8	0.0	1.7	8	1	20	98.4	84.1	108.3
402	**Ave. WM1**	**78.5**			**30.9**			**14.6**			**66.6**			**18.8**			**0.9**			**0.7**			**6**			**100.6**		
	Min. WM1		**70.7**			**20.3**			**0.3**			**46.6**			**1.2**			**0.0**			**0.0**			**0**			**59.0**	
	Max. WM1			**82.8**			**41.5**			**41.3**			**81.8**			**51.5**			**9.9**			**5.3**			**56**			**119.0**

TABLE 10: PHYSICAL QUALITY FACTORS OF WHITE MAIZE ACCORDING TO GRADE (2014/2015)
(continue)

Number of samples	Region	Test weight (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)			Milling index		
								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.
GRADE: WM2																												
4	Region 12	79.2	78.2	79.7	30.6	28.1	32.2	20.4	13.4	27.6	63.4	54.8	71.0	16.3	12.1	19.8	1.1	0.5	2.3	0.8	0.4	1.3	6	4	8	104.2	97.9	111.7
3	Region 13	78.7	77.9	80.2	26.6	24.4	28.5	9.5	5.8	15.3	59.6	53.2	63.2	30.9	22.4	41.0	0.8	0.5	1.0	0.5	0.4	0.5	4	3	5	105.0	99.1	110.3
1	Region 14	79.4	-	-	28.9	-	-	16.0	-	-	69.7	-	-	14.3	-	-	0.7	-	-	0.7	-	-	2	-	-	108.2	-	-
1	Region 17	78.7	-	-	25.5	-	-	6.7	-	-	64.6	-	-	28.7	-	-	0.6	-	-	0.5	-	-	0	-	-	106.1	-	-
4	Region 18	77.3	74.6	79.1	29.2	26.6	32.4	17.7	6.3	34.6	65.1	59.4	68.4	17.2	6.0	25.6	1.1	0.5	1.7	0.8	0.4	1.3	2	1	3	101.7	96.2	106.0
3	Region 19	77.1	76.7	77.9	30.0	25.5	35.4	30.6	14.8	40.3	58.3	53.1	65.8	11.1	6.6	19.4	1.8	1.4	2.0	1.1	0.5	1.5	9	6	13	104.1	100.8	106.6
3	Region 20	79.2	78.3	79.9	29.7	27.7	31.1	6.2	2.0	12.7	65.0	59.7	72.1	28.8	24.1	36.3	0.6	0.4	0.9	0.5	0.3	0.8	6	4	9	100.0	91.7	107.0
3	Region 21	80.2	77.0	82.0	31.2	30.8	31.6	16.0	11.9	19.1	66.0	62.4	71.1	18.0	12.0	23.5	1.4	1.0	1.6	0.7	0.5	1.2	12	8	16	115.2	103.5	123.5
4	Region 22	79.7	76.7	80.9	30.7	25.6	34.2	21.9	18.3	25.4	65.8	64.1	67.2	12.3	9.2	17.6	1.3	0.7	1.7	1.0	0.7	1.3	5	2	8	110.4	102.5	115.7
4	Region 23	79.4	77.9	81.1	32.9	30.6	35.1	18.5	12.9	21.5	67.7	63.9	72.0	13.9	11.4	16.9	1.2	0.9	1.6	1.1	0.8	1.5	5	3	9	106.2	97.1	112.9
1	Region 24	79.8	-	-	31.4	-	-	7.6	-	-	70.0	-	-	22.4	-	-	1.1	-	-	0.9	-	-	7	-	-	105.3	-	-
3	Region 25	75.6	74.7	76.1	28.8	23.9	34.4	15.9	5.2	35.2	64.0	59.0	73.3	20.2	5.2	35.8	1.7	0.9	2.9	1.1	0.8	1.6	6	2	9	94.8	85.8	102.0
2	Region 26	79.6	78.9	80.2	32.6	32.3	32.8	11.8	4.4	19.2	70.1	69.9	70.3	18.1	10.5	25.7	1.6	1.4	1.8	1.2	0.9	1.5	5	5	5	108.1	102.7	113.5
4	Region 28	79.0	77.9	80.8	33.9	29.8	36.7	28.9	14.5	35.6	62.3	57.6	69.7	8.8	5.6	15.8	1.3	0.5	2.5	1.0	0.5	2.0	5	1	8	99.4	93.2	104.4
4	Region 29	78.9	72.4	83.1	31.2	23.3	34.9	12.6	2.6	19.8	63.8	57.9	68.5	23.6	16.6	39.5	0.8	0.2	1.4	0.5	0.2	0.8	8	0	16	106.5	84.9	115.5
2	Region 30	77.6	76.9	78.2	32.8	31.6	34.0	25.4	11.2	39.6	57.3	48.1	66.5	17.3	12.3	22.3	1.2	0.6	1.8	0.9	0.6	1.2	8	2	13	99.6	91.9	107.2
2	Region 31	74.6	73.8	75.4	28.5	23.4	33.5	7.5	2.3	12.6	70.7	64.4	76.9	21.9	10.5	33.3	2.6	1.3	3.8	2.0	0.9	3.1	15	1	28	88.8	77.6	100.0
3	Region 32	76.9	76.6	77.0	35.7	35.2	36.6	20.2	17.5	22.0	68.0	67.8	68.1	11.8	10.0	14.4	2.3	1.5	2.8	1.8	1.4	2.2	9	3	13	98.5	98.0	98.9
2	Region 33	78.2	77.5	78.9	33.3	32.8	33.7	20.8	14.9	26.7	67.2	64.6	69.8	12.0	8.7	15.3	1.5	0.7	2.2	1.0	0.5	1.5	9	4	13	97.8	94.2	101.3
2	Region 34	76.6	74.0	79.1	33.1	33.0	33.1	21.8	18.5	25.0	68.1	65.5	70.7	10.2	9.5	10.8	2.1	0.6	3.6	1.4	0.5	2.3	10	6	14	104.6	102.5	106.6
1	Region 35	77.9	-	-	29.9	-	-	21.2	-	-	67.2	-	-	11.6	-	-	1.2	-	-	0.6	-	-	5	-	-	96.7	-	-
3	Region 36	76.4	75.5	78.0	35.2	33.7	36.6	14.7	4.5	21.9	66.9	65.5	69.3	18.4	12.6	26.2	1.7	0.6	3.1	1.2	0.5	1.9	11	6	14	98.2	93.9	101.2
59	**Ave. WM2**	**78.2**			**31.2**			**17.7**			**65.0**			**17.3**			**1.3**			**1.0**			**7**			**103.0**		
	Min. WM2		**72.4**			**23.3**			**2.0**			**48.1**			**5.2**			**0.2**			**0.2**			**0**			**77.6**	
	Max. WM2			**83.1**			**36.7**			**40.3**			**76.9**			**41.0**			**3.8**			**3.1**			**28**			**123.5**

TABLE 10: PHYSICAL QUALITY FACTORS OF WHITE MAIZE ACCORDING TO GRADE (2014/2015)
(continue)

Number of samples	Region	Test weight (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)			Milling index		
								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.
GRADE: WM3																												
2	Region 13	81.3	80.8	81.7	30.1	28.2	32.0	6.4	5.8	7.0	61.4	61.0	61.8	32.2	31.2	33.2	0.9	0.8	0.9	0.6	0.4	0.7	8	6	10	112.6	112.1	113.0
1	Region 14	73.5	-	-	24.9	-	-	5.3	-	-	65.6	-	-	29.1	-	-	0.4	-	-	0.3	-	-	0	-	-	87.5	-	-
2	Region 17	76.4	76.1	76.7	34.2	33.6	34.7	23.3	23.3	23.3	68.1	67.3	68.9	8.6	7.8	9.4	4.1	3.5	4.6	2.1	2.0	2.2	13	12	14	79.9	79.1	80.6
1	Region 18	74.2	-	-	33.9	-	-	31.3	-	-	63.2	-	-	5.5	-	-	2.1	-	-	1.8	-	-	6	-	-	94.2	-	-
1	Region 19	70.9	-	-	23.9	-	-	12.6	-	-	64.1	-	-	23.3	-	-	10.9	-	-	5.6	-	-	26	-	-	81.3	-	-
2	Region 20	72.0	71.1	72.8	47.4	46.4	48.3	86.3	85.9	86.7	13.6	13.1	14.1	0.1	0.0	0.2	2.9	2.7	3.0	2.1	2.0	2.2	15	9	20	93.4	90.7	96.0
1	Region 21	74.5	-	-	30.3	-	-	16.6	-	-	71.6	-	-	11.8	-	-	1.4	-	-	1.1	-	-	5	-	-	101.3	-	-
1	Region 24	80.4	-	-	32.4	-	-	12.0	-	-	73.4	-	-	14.6	-	-	0.6	-	-	0.5	-	-	6	-	-	106.3	-	-
2	Region 25	72.4	72.3	72.4	26.6	24.6	28.5	6.8	2.1	11.4	64.3	56.9	71.6	29.0	17.0	41.0	2.3	2.1	2.5	2.0	1.9	2.0	3	0	6	81.3	74.5	88.0
1	Region 28	72.6	-	-	29.6	-	-	10.8	-	-	67.1	-	-	22.1	-	-	0.8	-	-	0.6	-	-	8	-	-	87.8	-	-
1	Region 29	76.4	-	-	37.9	-	-	36.6	-	-	60.2	-	-	3.2	-	-	2.1	-	-	1.6	-	-	9	-	-	83.6	-	-
1	Region 30	76.0	-	-	36.1	-	-	31.5	-	-	63.4	-	-	5.1	-	-	1.4	-	-	1.1	-	-	20	-	-	89.1	-	-
1	Region 33	75.0	-	-	32.7	-	-	25.6	-	-	59.4	-	-	15.0	-	-	1.3	-	-	1.0	-	-	4	-	-	90.4	-	-
2	Region 34	70.9	70.2	71.5	31.4	28.7	34.1	25.4	10.5	40.3	67.2	55.8	78.6	7.4	3.9	10.9	3.8	2.6	5.0	2.4	1.6	3.1	18	2	34	82.2	71.4	92.9
19	**Ave. WM3**	**74.7**			**32.7**			**25.2**			**59.8**			**15.0**			**2.6**			**1.7**			**10**			**90.5**		
	Min. WM3		**70.2**			**23.9**			**2.1**			**13.1**			**0.0**			**0.4**			**0.3**			**0**			**71.4**	
	Max. WM3			**81.7**			**48.3**			**86.7**			**78.6**			**41.0**			**10.9**			**5.6**			**34**			**113.0**
CLASS: COM																												
1	Region 13	77.2	-	-	33.7	-	-	19.7	-	-	71.4	-	-	8.9	-	-	1.3	-	-	0.9	-	-	5	-	-	79.4	-	-
1	Region 19	70.9	-	-	25.5	-	-	6.2	-	-	64.6	-	-	29.2	-	-	12.1	-	-	4.5	-	-	61	-	-	81.0	-	-
1	Region 21	77.3	-	-	33.7	-	-	31.3	-	-	60.9	-	-	7.8	-	-	1.4	-	-	1.0	-	-	2	-	-	104.8	-	-
1	Region 30	76.5	-	-	39.0	-	-	34.5	-	-	58.6	-	-	6.9	-	-	1.9	-	-	1.9	-	-	22	-	-	110.9	-	-
1	Region 33	75.9	-	-	31.1	-	-	20.8	-	-	65.8	-	-	13.4	-	-	3.2	-	-	2.8	-	-	9	-	-	92.9	-	-
5	**Ave. COM**	**75.6**			**32.6**			**22.5**			**64.3**			**13.2**			**4.0**			**2.2**			**20**			**93.8**		
	Min. COM		**70.9**			**25.5**			**6.2**			**58.6**			**6.9**			**1.3**			**0.9**			**2**			**79.4**	
	Max. COM			**77.3**			**39.0**			**34.5**			**71.4**			**29.2**			**12.1**			**4.5**			**61**			**110.9**
485	**Ave. white maize**	**78.3**			**31.1**			**15.4**			**66.1**			**18.4**			**1.1**			**0.8**			**6**			**100.4**		
	Min. white maize		**70.2**			**20.3**			**0.3**			**13.1**			**0.0**			**0.0**			**0.0**			**0**			**59.0**	
	Max. white maize			**83.1**			**48.3**			**86.7**			**81.8**			**51.5**			**12.1**			**5.6**			**61**			**123.5**
	Ave. maize	**77.3**			**29.8**			**12.0**			**64.7**			**23.2**			**1.2**			**0.8**			**6**			**97.6**		
	Min. maize		**67.3**			**17.8**			**0.0**			**9.2**			**0.0**			**0.0**			**0.0**			**0**			**50.2**	
	Max. maize			**83.1**			**48.3**			**86.7**			**81.8**			**90.4**			**12.1**			**5.6**			**61**			**123.5**

TABLE 11: PHYSICAL QUALITY FACTORS OF YELLOW MAIZE ACCORDING TO GRADE (2014/2015)

Number of samples	Region	Test weight (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)			Milling index		
								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.
GRADE: YM1																												
18	Region 10	77.2	74.3	79.7	33.6	28.3	36.6	6.8	3.3	12.3	71.3	63.9	78.9	21.9	13.9	32.8	0.9	0.2	1.6	0.7	0.1	1.2	5	1	10	86.0	70.2	97.8
4	Region 11	79.3	77.9	80.0	34.2	33.3	35.8	7.2	5.1	8.6	68.9	62.7	75.5	24.0	15.9	32.2	1.1	0.8	1.4	1.0	0.7	1.4	5	2	8	98.9	90.2	103.8
3	Region 12	76.2	75.6	76.6	27.9	27.2	29.1	6.4	5.0	7.2	63.5	58.0	70.3	30.1	22.8	34.8	1.3	0.4	1.7	0.8	0.4	1.1	8	4	10	97.5	97.2	97.9
9	Region 13	77.9	76.1	80.2	25.1	22.9	26.7	3.7	0.6	8.0	57.4	48.2	66.5	38.9	25.5	50.1	1.1	0.8	1.4	0.8	0.5	1.0	4	1	7	107.0	98.1	113.4
15	Region 14	77.3	76.0	79.4	27.3	24.5	30.7	4.7	2.6	8.0	61.8	52.9	69.9	33.6	23.8	42.9	1.1	0.4	2.2	0.9	0.4	2.0	5	1	24	103.9	96.0	112.6
1	Region 15	83.1	-	-	28.9	-	-	1.0	-	-	64.2	-	-	34.8	-	-	1.4	-	-	1.1	-	-	2	-	-	115.6	-	-
3	Region 16	78.9	77.4	79.9	26.2	23.7	27.9	3.9	2.1	7.0	55.7	47.0	64.8	40.5	33.1	50.5	1.4	0.8	2.2	0.8	0.6	1.2	4	2	5	110.1	108.2	113.1
11	Region 17	76.5	73.9	77.9	25.4	22.5	33.2	4.9	0.7	23.7	59.6	53.1	67.5	35.5	8.8	46.2	1.8	0.7	4.3	1.3	0.3	3.5	4	0	7	99.7	92.7	107.7
5	Region 18	77.0	75.1	80.5	30.5	25.8	36.1	13.2	4.0	27.8	62.5	54.3	67.0	24.2	8.8	40.6	0.7	0.2	1.0	0.4	0.1	0.7	10	1	22	99.7	94.9	104.8
13	Region 19	77.7	74.0	80.0	26.6	23.2	33.9	4.8	2.0	10.3	60.6	52.6	75.2	34.5	14.5	44.9	0.9	0.3	1.6	0.7	0.3	1.2	4	1	7	100.6	92.0	109.7
10	Region 20	78.4	76.3	80.2	29.1	25.8	33.6	9.3	3.2	16.7	61.9	53.9	66.4	28.8	21.8	38.8	1.4	0.5	3.9	1.1	0.4	2.8	6	1	17	100.8	82.6	114.1
5	Region 21	78.4	73.9	83.0	31.7	26.5	37.7	9.3	0.8	24.1	68.2	64.6	74.7	22.6	9.7	31.6	1.0	0.3	2.2	0.8	0.1	1.4	9	3	15	100.0	81.2	110.1
6	Region 22	79.5	77.3	82.4	29.6	24.9	32.7	5.8	0.0	12.0	60.2	38.6	68.9	34.0	20.7	61.4	1.3	0.8	1.7	0.9	0.5	1.3	5	3	9	108.3	104.3	119.1
4	Region 23	78.8	77.9	80.7	30.4	28.9	31.9	5.1	2.8	6.9	65.6	61.9	69.0	29.4	24.1	33.3	1.4	0.7	2.2	1.1	0.6	1.6	8	2	17	108.6	105.5	112.4
5	Region 24	79.5	78.2	82.1	30.0	26.7	32.6	6.3	1.9	8.4	63.2	55.6	70.4	30.5	21.2	39.5	0.9	0.1	1.2	0.6	0.0	1.0	8	4	11	103.6	95.0	110.9
4	Region 25	77.0	76.3	77.4	32.6	30.3	36.0	8.5	5.6	12.1	68.5	62.9	71.5	23.0	21.1	25.0	1.3	0.9	1.9	1.1	0.8	1.3	5	2	10	90.2	85.9	92.4
7	Region 26	77.8	73.7	79.6	31.0	27.8	33.7	9.1	3.4	22.7	66.1	58.0	73.1	24.7	9.5	36.8	0.8	0.5	1.1	0.6	0.5	0.9	6	1	12	104.2	97.4	110.8
3	Region 27	77.1	75.9	78.0	29.6	25.9	32.5	9.7	5.7	14.4	64.5	60.6	69.6	25.8	21.4	33.7	1.5	1.2	1.9	1.0	0.9	1.2	13	10	15	95.5	92.8	100.5
26	Region 28	76.5	74.1	79.0	31.4	25.8	36.4	12.5	4.6	23.3	67.7	61.5	73.4	19.7	9.3	29.6	1.1	0.4	3.5	0.8	0.3	2.3	5	0	13	93.8	81.2	102.4
45	Region 29	75.9	67.3	79.4	28.6	20.3	35.6	9.7	0.8	25.3	66.6	56.2	76.6	23.7	10.4	41.7	1.3	0.3	3.6	0.8	0.2	1.9	4	0	14	97.4	86.7	112.6
44	Region 30	75.6	69.9	79.2	28.7	20.5	36.0	11.4	1.8	23.2	66.7	45.3	76.7	21.9	4.2	52.9	1.4	0.5	2.6	1.0	0.3	2.2	5	0	23	95.7	80.4	111.8
40	Region 31	76.4	72.8	79.5	28.2	23.4	34.1	9.0	3.7	20.1	66.6	56.3	72.4	24.4	10.9	37.1	1.1	0.3	2.5	0.7	0.2	1.8	4	0	14	93.9	79.4	105.5
31	Region 32	75.5	71.8	78.0	28.9	21.4	34.8	11.8	5.1	22.2	68.5	62.1	76.1	19.7	8.5	32.8	1.5	0.3	5.6	1.0	0.3	4.8	4	0	14	86.4	72.5	101.2
35	Region 33	76.0	73.0	77.9	30.2	24.2	38.2	13.0	1.0	30.2	64.9	41.8	73.5	22.0	7.5	57.2	1.1	0.2	2.6	0.8	0.2	1.9	5	0	12	89.1	73.6	98.6
21	Region 34	76.8	73.6	82.6	29.1	24.9	37.4	9.9	1.1	27.7	66.5	57.1	74.1	23.6	5.7	41.8	1.1	0.2	2.3	0.8	0.2	1.6	4	1	12	99.1	83.2	118.0
6	Region 35	76.3	72.7	77.9	31.1	28.4	34.3	3.6	1.3	5.3	62.3	53.9	73.3	34.1	21.4	44.8	1.3	0.3	1.9	1.2	0.3	1.7	6	1	23	79.0	68.9	93.9
18	Region 36	76.9	74.8	79.2	33.1	26.3	37.1	11.7	2.9	18.6	64.1	49.1	72.9	24.2	12.1	41.3	1.3	0.2	4.3	1.0	0.2	3.4	7	2	15	92.1	78.4	102.9
392	**Ave. YM1**	**76.6**			**29.4**			**9.5**			**65.5**			**25.0**			**1.2**			**0.9**			**5**			**95.4**		
	Min. YM1		**67.3**			**20.3**			**0.0**			**38.6**			**4.2**			**0.1**			**0.0**			**0**			**68.9**	
	Max. YM1			**83.1**			**38.2**			**30.2**			**78.9**			**61.4**			**5.6**			**4.8**			**24**			**119.1**

TABLE 11: PHYSICAL QUALITY FACTORS OF YELLOW MAIZE ACCORDING TO GRADE (2014/2015)
(continue)

Number of samples	Region	Test weight (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)			Milling index		
								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.
GRADE: YM2																												
1	Region 10	74.8	-	-	31.2	-	-	5.3	-	-	66.9	-	-	27.8	-	-	2.7	-	-	1.8	-	-	3	-	-	75.1	-	-
1	Region 11	78.9	-	-	34.3	-	-	15.3	-	-	67.5	-	-	17.2	-	-	1.2	-	-	0.9	-	-	3	-	-	104.7	-	-
4	Region 12	75.9	75.5	76.4	25.9	23.1	29.1	4.7	2.1	8.6	62.8	59.5	68.6	32.6	22.8	38.4	1.8	1.1	2.6	1.1	0.8	1.4	3	1	7	95.7	88.8	100.3
4	Region 13	76.1	73.2	79.0	23.9	21.7	26.4	9.2	1.5	27.7	52.3	44.2	58.8	38.5	18.1	54.3	2.0	1.1	4.3	1.3	0.6	2.8	5	4	6	107.9	102.8	113.7
2	Region 14	74.3	73.9	74.7	20.7	19.7	21.6	1.1	1.1	1.1	46.4	45.2	47.6	52.5	51.3	53.7	1.5	1.2	1.8	0.8	0.6	1.0	1	0	2	82.6	80.7	84.5
5	Region 17	77.0	76.2	77.7	23.2	21.3	25.7	2.5	0.7	5.2	51.9	44.3	58.9	45.6	35.9	54.0	1.7	1.2	2.6	1.0	0.6	1.5	5	1	9	102.0	97.0	107.0
2	Region 18	77.8	77.7	77.9	25.2	25.0	25.4	3.7	3.0	4.3	55.5	54.6	56.4	40.9	39.3	42.4	1.5	1.1	1.8	1.2	1.1	1.2	3	2	3	108.5	108.2	108.7
6	Region 19	77.1	76.3	77.4	25.1	23.2	26.8	3.3	0.8	5.6	53.9	46.9	60.4	42.8	34.3	50.9	1.7	0.9	3.5	1.2	0.4	2.8	4	1	12	101.6	98.8	103.2
6	Region 20	76.1	74.2	77.8	29.6	25.5	35.0	5.8	1.8	11.5	63.3	56.8	70.5	31.0	18.0	41.4	1.3	0.7	2.1	1.0	0.6	1.5	3	1	10	88.6	75.5	97.5
3	Region 21	76.0	73.8	77.8	30.6	29.5	32.6	5.7	3.6	8.3	64.0	60.0	67.4	30.0	27.4	33.7	1.3	1.0	1.7	1.1	0.9	1.4	6	6	7	93.5	74.7	106.5
1	Region 22	78.2	-	-	29.3	-	-	2.5	-	-	61.7	-	-	35.8	-	-	1.6	-	-	1.3	-	-	5	-	-	103.3	-	-
1	Region 23	77.2	-	-	29.3	-	-	11.5	-	-	67.8	-	-	20.7	-	-	2.1	-	-	1.5	-	-	4	-	-	110.1	-	-
2	Region 25	75.6	74.3	76.8	23.5	20.2	26.8	3.7	3.1	4.3	52.3	43.1	61.4	44.1	35.5	52.6	2.8	2.4	3.1	1.5	1.3	1.7	5	1	8	93.8	92.4	95.2
1	Region 26	72.8	-	-	29.4	-	-	6.6	-	-	70.2	-	-	23.2	-	-	0.2	-	-	0.1	-	-	1	-	-	84.6	-	-
2	Region 27	77.1	75.5	78.7	26.6	25.6	27.6	7.0	3.1	10.9	62.2	58.0	66.3	30.9	22.8	38.9	1.9	1.8	2.0	1.2	1.0	1.4	9	6	11	99.9	99.3	100.4
6	Region 28	76.3	74.6	78.1	27.4	24.3	30.9	8.7	4.8	13.2	60.8	49.7	69.1	30.5	17.7	45.5	1.2	0.8	2.1	0.8	0.6	0.9	4	2	8	95.9	92.2	99.7
10	Region 29	74.0	68.0	80.7	23.2	19.3	31.8	4.7	0.3	21.9	53.7	30.3	69.6	41.6	8.5	69.1	1.5	0.4	4.2	0.8	0.1	1.8	8	0	29	95.9	66.2	114.8
14	Region 30	74.8	68.8	80.0	23.9	19.4	28.4	4.4	0.0	10.6	51.0	16.4	69.6	44.7	21.5	83.6	1.7	0.4	3.1	1.1	0.4	2.4	6	0	28	91.1	50.2	104.5
7	Region 31	75.2	73.5	77.3	23.6	22.4	26.7	5.5	0.3	9.2	50.9	18.5	62.2	43.6	31.0	81.2	1.3	0.4	2.4	0.9	0.4	1.3	8	1	22	93.2	80.2	107.2
9	Region 32	73.8	70.3	75.7	24.5	21.8	28.3	8.8	2.4	18.2	63.8	57.2	68.6	27.3	17.3	40.4	1.5	1.0	3.9	0.9	0.7	2.1	5	0	28	85.3	73.5	101.5
4	Region 33	74.3	72.4	76.3	27.7	23.9	32.4	10.5	7.1	15.3	63.5	54.7	72.2	26.0	12.5	36.4	2.1	1.1	4.4	1.4	0.7	3.1	4	3	8	82.9	74.8	89.9
6	Region 34	75.2	73.0	77.2	27.2	24.9	29.1	9.4	4.2	15.2	58.9	43.8	68.1	31.7	16.8	50.8	1.2	0.8	2.0	0.7	0.5	1.1	5	3	7	93.7	83.4	99.3
6	Region 36	76.2	75.0	77.7	32.6	26.4	36.3	10.4	4.7	15.7	63.7	47.7	72.1	25.9	15.4	47.6	1.2	0.4	3.3	1.0	0.4	2.9	7	4	11	92.7	88.2	96.3
103	**Ave. YM2**	**75.5**			**25.9**			**6.3**			**57.4**			**36.2**			**1.5**			**1.0**			**5**			**93.9**		
	Min. YM2		**68.0**			**19.3**			**0.0**			**16.4**			**8.5**			**0.2**			**0.1**			**0**			**50.2**	
	Max. YM2			**80.7**			**36.3**			**27.7**			**72.2**			**83.6**			**4.4**			**3.1**			**29**			**114.8**

TABLE 11: PHYSICAL QUALITY FACTORS OF YELLOW MAIZE ACCORDING TO GRADE (2014/2015)
(continue)

Number of samples	Region	Test weight (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)			Milling index		
								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.
GRADE: YM3																												
1	Region 13	76.2	-	-	17.8	-	-	0.4	-	-	42.7	-	-	56.9	-	-	1.5	-	-	0.7	-	-	2	-	-	95.8	-	-
1	Region 18	76.3	-	-	24.4	-	-	4.1	-	-	53.2	-	-	42.7	-	-	1.3	-	-	0.8	-	-	5	-	-	102.2	-	-
2	Region 20	75.9	75.9	75.9	22.4	21.9	22.9	3.1	2.0	4.1	54.0	52.6	55.3	43.0	42.7	43.3	1.8	1.7	1.8	0.9	0.8	1.0	4	2	6	88.7	87.5	89.8
1	Region 26	73.1	-	-	26.6	-	-	6.6	-	-	57.7	-	-	35.7	-	-	1.2	-	-	0.9	-	-	6	-	-	89.2	-	-
2	Region 29	69.9	69.5	70.2	24.9	23.1	26.6	3.5	1.3	5.7	54.1	46.5	61.6	42.5	32.7	52.2	3.4	1.6	5.2	2.2	1.0	3.3	7	6	8	73.2	63.4	83.0
2	Region 31	76.0	75.0	77.0	21.2	19.9	22.5	0.2	0.0	0.4	11.6	9.2	13.9	88.3	86.1	90.4	1.6	1.4	1.7	0.7	0.5	0.9	7	3	10	97.0	89.4	104.6
9	**Ave. YM3**	**74.3**			**22.9**			**2.7**			**43.6**			**53.6**			**1.9**			**1.1**			**5**			**89.4**		
	Min. YM3		**69.5**			**17.8**			**0.0**			**9.2**			**32.7**			**1.2**			**0.5**			**2**			**63.4**	
	Max. YM3			**77.0**			**26.6**			**6.6**			**61.6**			**90.4**			**5.2**			**3.3**			**10**			**104.6**
CLASS: COM																												
1	Region 13	70.1	-	-	19.0	-	-	3.7	-	-	55.1	-	-	41.2	-	-	1.2	-	-	0.6	-	-	1	-	-	88.2	-	-
1	Region 14	75.9	-	-	28.7	-	-	8.7	-	-	74.3	-	-	17.0	-	-	1.5	-	-	1.2	-	-	1	-	-	95.9	-	-
1	Region 16	77.1	-	-	31.6	-	-	10.2	-	-	61.4	-	-	28.4	-	-	1.4	-	-	0.9	-	-	2	-	-	99.6	-	-
2	Region 19	78.3	78.1	78.4	25.2	22.5	27.9	1.6	0.9	2.3	41.9	38.9	44.8	56.6	54.3	58.8	6.7	6.5	6.8	2.5	2.4	2.6	35	13	56	120.7	118.4	122.9
1	Region 29	75.1	-	-	32.8	-	-	12.2	-	-	71.8	-	-	16.0	-	-	0.8	-	-	0.4	-	-	0	-	-	99.2	-	-
1	Region 30	73.5			30.0			26.3			62.2			11.5			0.9			0.6			3			78.4		
4	Region 33	70.0	68.4	71.3	30.9	30.6	31.4	18.3	14.7	21.0	67.1	64.6	69.7	14.6	11.9	16.6	1.8	1.4	2.5	1.4	1.2	1.7	8	5	12	90.1	87.4	93.0
11	**Ave. COM**	**73.5**			**28.7**			**12.5**			**61.5**			**26.0**			**2.4**			**1.3**			**10**			**96.6**		
	Min. COM		**68.4**			**19.0**			**0.9**			**38.9**			**11.5**			**0.8**			**0.4**			**0**			**78.4**	
	Max. COM			**78.4**			**32.8**			**26.3**			**74.3**			**58.8**			**6.8**			**2.6**			**56**			**122.9**
515	**Ave. yellow maize**	**76.3**			**28.6**			**8.8**			**63.4**			**27.8**			**1.3**			**0.9**			**5**			**95.0**		
	Min. yellow maize		**67.3**			**17.8**			**0.0**			**9.2**			**4.2**			**0.1**			**0.0**			**0**			**50.2**	
	Max. yellow maize			**83.1**			**38.2**			**30.2**			**78.9**			**90.4**			**6.8**			**4.8**			**56**			**122.9**
1000	**Ave. maize**	**77.3**			**29.8**			**12.0**			**64.7**			**23.2**			**1.2**			**0.8**			**6**			**97.6**		
	Min. maize		**67.3**			**17.8**			**0.0**			**9.2**			**0.0**			**0.0**			**0.0**			**0**			**50.2**	
	Max. maize			**83.1**			**48.3**			**86.7**			**81.8**			**90.4**			**12.1**			**5.6**			**61**			**123.5**

TABLE 12: PHYSICAL QUALITY FACTORS OF WHITE MAIZE (2014/2015)

Number of samples	Region	Test weight (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)			Milling index		
								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.
	WHITE																											
3	Region 11	79.5	78.5	80.6	32.0	27.1	36.3	5.4	4.9	6.0	73.4	63.6	81.8	21.2	13.3	31.0	1.5	0.6	2.8	1.1	0.4	1.9	14	8	24	102.5	101.2	105.1
15	Region 12	78.8	76.5	80.3	32.1	28.1	41.5	17.4	6.2	31.1	66.0	54.8	81.0	16.7	9.2	28.1	1.2	0.2	3.4	0.9	0.1	2.9	5	2	14	103.6	94.3	111.7
33	Region 13	79.7	76.5	81.7	28.6	24.4	38.2	9.0	2.8	26.1	65.7	53.2	78.5	25.3	8.9	41.0	0.7	0.0	1.8	0.5	0.0	1.3	4	0	29	108.9	79.4	118.8
31	Region 14	78.8	73.5	81.8	29.7	21.0	34.3	16.7	3.6	28.8	66.8	59.3	72.3	16.5	7.6	31.5	0.7	0.2	2.3	0.5	0.1	2.0	5	0	24	104.1	84.3	117.0
3	Region 15	80.3	79.9	81.0	32.2	29.5	34.6	20.0	16.6	25.8	67.8	63.7	72.8	12.2	9.7	16.5	0.7	0.3	0.9	0.5	0.2	0.8	4	1	6	110.7	109.4	111.3
5	Region 16	79.5	75.9	80.9	31.4	27.5	33.5	12.3	4.1	20.4	68.0	57.4	73.6	19.7	8.9	38.5	1.1	0.4	1.7	0.8	0.4	1.3	4	1	9	107.2	102.8	109.2
37	Region 17	78.9	76.1	81.5	29.7	23.6	34.7	11.6	2.7	27.4	65.6	58.3	74.3	22.8	7.8	33.2	0.9	0.2	4.6	0.6	0.1	2.2	4	0	14	101.2	79.1	113.4
10	Region 18	78.0	74.2	81.2	29.2	24.9	33.9	14.8	5.4	34.6	67.3	59.4	73.3	18.0	5.5	26.5	1.1	0.4	2.1	0.8	0.3	1.8	3	1	7	101.6	94.2	107.7
34	Region 19	78.1	70.9	80.9	30.9	23.9	39.7	14.3	3.5	40.3	65.7	53.1	72.8	19.9	4.7	38.5	1.4	0.0	12.1	0.9	0.0	5.6	7	0	61	101.2	81.0	119.0
24	Region 20	78.6	71.1	81.9	32.5	26.8	48.3	16.8	1.4	86.7	61.5	13.1	76.4	21.7	0.0	38.0	1.0	0.2	3.0	0.8	0.1	2.2	6	0	20	100.1	90.2	110.5
21	Region 21	78.7	70.8	82.0	31.6	25.5	33.9	17.8	1.9	31.3	67.3	49.3	73.5	14.8	7.6	48.6	1.1	0.3	2.5	0.8	0.2	1.5	6	1	16	106.5	85.8	123.5
14	Region 22	80.7	76.7	82.8	31.7	25.6	34.8	19.7	10.7	25.4	68.2	64.1	76.0	12.1	9.2	17.6	0.9	0.2	1.9	0.7	0.2	1.5	6	0	18	109.0	101.1	115.7
17	Region 23	80.1	77.9	82.4	31.9	26.2	35.1	17.5	7.1	36.0	69.5	53.9	77.9	13.0	5.7	20.8	1.1	0.6	2.2	0.9	0.4	2.2	6	2	15	107.2	97.1	115.4
8	Region 24	80.3	77.2	82.5	31.8	29.2	33.1	14.4	7.5	26.2	66.8	60.3	73.4	18.8	7.5	32.2	1.1	0.5	2.2	0.9	0.4	2.2	6	2	12	104.7	89.2	113.5
9	Region 25	75.7	72.3	78.3	29.4	23.9	38.1	11.7	2.1	35.2	65.2	56.9	73.3	23.2	5.2	41.0	1.5	0.5	2.9	1.1	0.4	2.0	5	0	10	91.0	74.5	102.0
8	Region 26	77.8	74.1	80.2	30.6	27.1	32.8	9.3	4.4	19.2	68.8	65.6	71.5	22.0	10.5	27.9	1.2	0.3	2.9	0.9	0.2	2.5	5	2	10	101.7	83.7	113.5
1	Region 27	76.1	-	-	31.0	-	-	17.9	-	-	67.2	-	-	14.9	-	-	3.5	-	-	3.1	-	-	14	-	-	96.2	-	-
18	Region 28	78.1	72.6	82.0	31.4	20.3	36.7	20.3	6.1	35.6	64.0	56.0	72.4	15.7	5.6	37.9	1.5	0.4	9.9	1.0	0.2	5.3	10	1	56	98.7	87.8	117.4
21	Region 29	78.6	70.7	83.1	31.4	22.5	37.9	15.3	1.9	36.6	65.1	46.6	73.1	19.6	3.2	51.5	0.9	0.2	2.1	0.6	0.2	1.6	6	0	16	102.8	83.6	117.9
30	Region 30	78.0	74.0	81.1	32.2	22.8	39.7	19.1	0.3	39.7	62.2	48.1	77.1	18.7	4.1	50.3	1.2	0.2	2.7	0.9	0.1	2.6	8	0	29	99.0	85.2	111.1
20	Region 31	76.7	73.1	80.4	29.4	23.4	37.8	13.6	0.4	24.3	67.3	58.6	78.5	19.0	5.4	41.0	1.2	0.3	3.8	1.0	0.3	3.1	5	0	28	93.8	77.6	106.7
16	Region 32	76.9	73.4	79.1	30.7	24.8	36.6	13.5	1.6	24.3	66.5	54.3	78.6	20.1	8.4	42.8	1.0	0.2	2.8	0.8	0.2	2.2	3	0	13	89.9	63.9	98.9
41	Region 33	77.3	71.2	82.3	31.9	25.2	35.7	18.3	6.1	41.3	66.8	53.3	74.6	14.9	5.4	34.6	1.0	0.2	3.5	0.8	0.1	3.0	7	0	37	91.1	59.0	113.0
38	Region 34	77.0	70.2	81.3	31.5	24.6	37.7	17.0	1.8	40.3	67.3	53.9	78.6	15.8	3.9	35.8	1.2	0.2	5.0	0.9	0.2	3.1	7	1	34	97.3	71.4	117.9
5	Region 35	77.7	76.9	78.3	31.9	27.2	36.7	21.1	10.0	37.5	65.2	57.4	75.0	13.7	5.1	21.6	1.1	0.6	2.2	0.8	0.4	2.0	8	4	13	99.7	95.4	105.9
23	Region 36	77.3	75.5	80.0	33.5	29.2	39.0	12.9	1.8	38.0	68.2	60.6	76.2	19.0	1.2	31.4	1.0	0.1	3.1	0.8	0.0	1.9	8	1	20	98.4	84.1	108.3
485	**Ave. white**	**78.3**			**31.1**			**15.4**			**66.1**			**18.4**			**1.1**			**0.8**			**6**			**100.4**		
	Min. white		**70.2**			**20.3**			**0.3**			**13.1**			**0.0**			**0.0**			**0.0**			**0**			**59.0**	
	Max. white			**83.1**			**48.3**			**86.7**			**81.8**			**51.5**			**12.1**			**5.6**			**61**			**123.5**

TABLE 13: PHYSICAL QUALITY FACTORS OF YELLOW MAIZE (2014/2015)

Number of samples	Region	Test weight (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)			Milling index		
								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.
YELLOW																												
19	Region 10	77.1	74.3	79.7	33.5	28.3	36.6	6.7	3.3	12.3	71.1	63.9	78.9	22.2	13.9	32.8	1.0	0.2	2.7	0.8	0.1	1.8	4	1	10	85.4	70.2	97.8
5	Region 11	79.2	77.9	80.0	34.2	33.3	35.8	8.8	5.1	15.3	68.6	62.7	75.5	22.6	15.9	32.2	1.1	0.8	1.4	1.0	0.7	1.4	5	2	8	100.1	90.2	104.7
7	Region 12	76.0	75.5	76.6	26.8	23.1	29.1	5.4	2.1	8.6	63.1	58.0	70.3	31.5	22.8	38.4	1.5	0.4	2.6	0.9	0.4	1.4	5	1	10	96.4	88.8	100.3
15	Region 13	76.8	70.1	80.2	23.9	17.8	26.7	4.9	0.4	27.7	54.9	42.7	66.5	40.2	18.1	56.9	1.4	0.8	4.3	0.9	0.5	2.8	4	1	7	105.3	88.2	113.7
18	Region 14	76.9	73.9	79.4	26.7	19.7	30.7	4.5	1.1	8.7	60.8	45.2	74.3	34.8	17.0	53.7	1.2	0.4	2.2	0.9	0.4	2.0	4	0	24	101.1	80.7	112.6
1	Region 15	83.1	-	-	28.9	-	-	1.0	-	-	64.2	-	-	34.8	-	-	1.4	-	-	1.1	-	-	2	-	-	115.6	-	-
4	Region 16	78.5	77.1	79.9	27.6	23.7	31.6	5.5	2.1	10.2	57.1	47.0	64.8	37.5	28.4	50.5	1.4	0.8	2.2	0.9	0.6	1.2	4	2	5	107.5	99.6	113.1
16	Region 17	76.7	73.9	77.9	24.7	21.3	33.2	4.2	0.7	23.7	57.2	44.3	67.5	38.7	8.8	54.0	1.8	0.7	4.3	1.2	0.3	3.5	4	0	9	100.4	92.7	107.7
8	Region 18	77.1	75.1	80.5	28.4	24.4	36.1	9.7	3.0	27.8	59.6	53.2	67.0	30.7	8.8	42.7	1.0	0.2	1.8	0.6	0.1	1.2	8	1	22	102.2	94.9	108.7
21	Region 19	77.6	74.0	80.0	26.1	22.5	33.9	4.1	0.8	10.3	56.9	38.9	75.2	39.0	14.5	58.8	1.7	0.3	6.8	1.0	0.3	2.8	7	1	56	102.8	92.0	122.9
18	Region 20	77.3	74.2	80.2	28.5	21.9	35.0	7.4	1.8	16.7	61.5	52.6	70.5	31.1	18.0	43.3	1.4	0.5	3.9	1.0	0.4	2.8	5	1	17	95.4	75.5	114.1
8	Region 21	77.5	73.8	83.0	31.3	26.5	37.7	7.9	0.8	24.1	66.6	62.0	74.7	25.5	9.7	33.7	1.1	0.3	2.2	0.9	0.1	1.4	8	3	15	97.6	74.7	110.1
7	Region 22	79.3	77.3	82.4	29.5	24.9	32.7	5.3	0.0	12.0	60.4	38.6	68.9	34.3	20.7	61.4	1.3	0.8	1.7	1.0	0.5	1.3	5	3	9	107.6	103.3	119.1
5	Region 23	78.4	77.2	80.7	30.1	28.9	31.9	6.4	2.8	11.5	66.0	61.9	69.0	27.6	20.7	33.3	1.6	0.7	2.2	1.1	0.6	1.6	7	2	17	108.9	105.5	112.4
5	Region 24	79.5	78.2	82.1	30.0	26.7	32.6	6.3	1.9	8.4	63.2	55.6	70.4	30.5	21.2	39.5	0.9	0.1	1.2	0.6	0.0	1.0	8	4	11	103.6	95.0	110.9
6	Region 25	76.5	74.3	77.4	29.6	20.2	36.0	6.9	3.1	12.1	63.1	43.1	71.5	30.0	21.1	52.6	1.8	0.9	3.1	1.2	0.8	1.7	5	1	10	91.4	85.9	95.2
9	Region 26	76.8	72.8	79.6	30.3	26.6	33.7	8.6	3.4	22.7	65.6	57.7	73.1	25.8	9.5	36.8	0.8	0.2	1.2	0.6	0.1	0.9	5	1	12	100.3	84.6	110.8
5	Region 27	77.1	75.5	78.7	28.4	25.6	32.5	8.6	3.1	14.4	63.5	58.0	69.6	27.8	21.4	38.9	1.6	1.2	2.0	1.1	0.9	1.4	11	6	15	97.3	92.8	100.5
32	Region 28	76.5	74.1	79.0	30.6	24.3	36.4	11.8	4.6	23.3	66.4	49.7	73.4	21.8	9.3	45.5	1.1	0.4	3.5	0.8	0.3	2.3	5	0	13	94.2	81.2	102.4
58	Region 29	75.3	67.3	80.7	27.6	19.3	35.6	8.7	0.3	25.3	64.0	30.3	76.6	27.3	8.5	69.1	1.4	0.3	5.2	0.8	0.1	3.3	5	0	29	96.4	63.4	114.8
59	Region 30	75.4	68.8	80.0	27.6	19.4	36.0	10.0	0.0	26.3	62.9	16.4	76.7	27.1	4.2	83.6	1.5	0.4	3.1	1.0	0.3	2.4	5	0	28	94.3	50.2	111.8
49	Region 31	76.2	72.8	79.5	27.3	19.9	34.1	8.1	0.0	20.1	62.1	9.2	72.4	29.8	10.9	90.4	1.1	0.3	2.5	0.8	0.2	1.8	5	0	22	93.9	79.4	107.2
40	Region 32	75.1	70.3	78.0	27.9	21.4	34.8	11.2	2.4	22.2	67.5	57.2	76.1	21.4	8.5	40.4	1.5	0.3	5.6	1.0	0.3	4.8	5	0	28	86.2	72.5	101.5
43	Region 33	75.3	68.4	77.9	30.0	23.9	38.2	13.3	1.0	30.2	65.0	41.8	73.5	21.7	7.5	57.2	1.3	0.2	4.4	0.9	0.2	3.1	5	0	12	88.6	73.6	98.6
27	Region 34	76.4	73.0	82.6	28.7	24.9	37.4	9.8	1.1	27.7	64.8	43.8	74.1	25.4	5.7	50.8	1.1	0.2	2.3	0.8	0.2	1.6	4	1	12	97.9	83.2	118.0
6	Region 35	76.3	72.7	77.9	31.1	28.4	34.3	3.6	1.3	5.3	62.3	53.9	73.3	34.1	21.4	44.8	1.3	0.3	1.9	1.2	0.3	1.7	6	1	23	79.0	68.9	93.9
24	Region 36	76.7	74.8	79.2	33.0	26.3	37.1	11.4	2.9	18.6	64.0	47.7	72.9	24.7	12.1	47.6	1.3	0.2	4.3	1.0	0.2	3.4	7	2	15	92.2	78.4	102.9
515	**Ave. yellow**	**76.3**			**28.6**			**8.8**			**63.4**			**27.8**			**1.3**			**0.9**			**5**			**95.0**		
	Min. yellow		**67.3**			**17.8**			**0.0**			**9.2**			**4.2**			**0.1**			**0.0**			**0**			**50.2**	
	Max. yellow			**83.1**			**38.2**			**30.2**			**78.9**			**90.4**			**6.8**			**4.8**			**56**			**122.9**

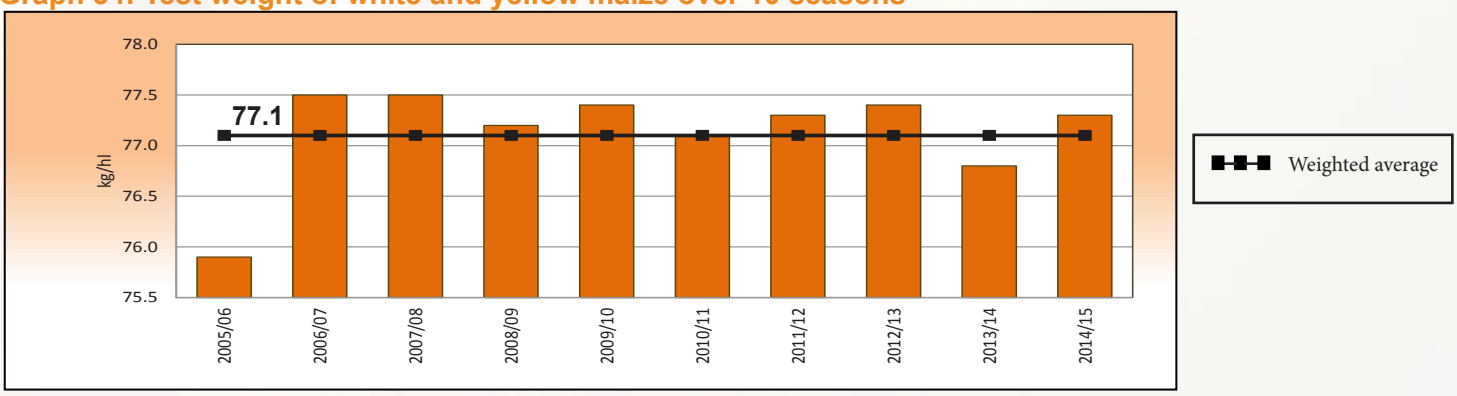
TABLE 14: PHYSICAL QUALITY FACTORS OF WHITE AND YELLOW MAIZE (2014/2015)

Number of samples	Region	Test weight (kg/hl)			100 kernel mass (g)			Kernel size (%)									Breakage susceptibility (%)						Stress cracks (%)			Milling index		
								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.
WHITE AND YELLOW																												
19	Region 10	77.1	74.3	79.7	33.5	28.3	36.6	6.7	3.3	12.3	71.1	63.9	78.9	22.2	13.9	32.8	1.0	0.2	2.7	0.8	0.1	1.8	4	1	10	85.4	70.2	97.8
8	Region 11	79.3	77.9	80.6	33.4	27.1	36.3	7.5	4.9	15.3	70.4	62.7	81.8	22.1	13.3	32.2	1.3	0.6	2.8	1.0	0.4	1.9	8	2	24	101.0	90.2	105.1
22	Region 12	77.9	75.5	80.3	30.4	23.1	41.5	13.6	2.1	31.1	65.1	54.8	81.0	21.4	9.2	38.4	1.3	0.2	3.4	0.9	0.1	2.9	5	1	14	101.3	88.8	111.7
48	Region 13	78.8	70.1	81.7	27.1	17.8	38.2	7.7	0.4	27.7	62.3	42.7	78.5	30.0	8.9	56.9	0.9	0.0	4.3	0.6	0.0	2.8	4	0	29	107.8	79.4	118.8
49	Region 14	78.1	73.5	81.8	28.6	19.7	34.3	12.2	1.1	28.8	64.6	45.2	74.3	23.2	7.6	53.7	0.9	0.2	2.3	0.7	0.1	2.0	4	0	24	103.0	80.7	117.0
4	Region 15	81.0	79.9	83.1	31.4	28.9	34.6	15.2	1.0	25.8	66.9	63.7	72.8	17.9	9.7	34.8	0.9	0.3	1.4	0.7	0.2	1.1	3	1	6	111.9	109.4	115.6
9	Region 16	79.0	75.9	80.9	29.7	23.7	33.5	9.3	2.1	20.4	63.1	47.0	73.6	27.6	8.9	50.5	1.2	0.4	2.2	0.8	0.4	1.3	4	1	9	107.3	99.6	113.1
53	Region 17	78.2	73.9	81.5	28.2	21.3	34.7	9.4	0.7	27.4	63.0	44.3	74.3	27.6	7.8	54.0	1.2	0.2	4.6	0.8	0.1	3.5	4	0	14	101.0	79.1	113.4
18	Region 18	77.6	74.2	81.2	28.8	24.4	36.1	12.5	3.0	34.6	63.9	53.2	73.3	23.6	5.5	42.7	1.0	0.2	2.1	0.7	0.1	1.8	5	1	22	101.9	94.2	108.7
55	Region 19	77.9	70.9	80.9	29.0	22.5	39.7	10.4	0.8	40.3	62.4	38.9	75.2	27.2	4.7	58.8	1.5	0.0	12.1	0.9	0.0	5.6	7	0	61	101.8	81.0	122.9
42	Region 20	78.0	71.1	81.9	30.8	21.9	48.3	12.8	1.4	86.7	61.5	13.1	76.4	25.7	0.0	43.3	1.2	0.2	3.9	0.9	0.1	2.8	5	0	20	98.1	75.5	114.1
29	Region 21	78.4	70.8	83.0	31.5	25.5	37.7	15.1	0.8	31.3	67.1	49.3	74.7	17.8	7.6	48.6	1.1	0.3	2.5	0.8	0.1	1.5	7	1	16	104.0	74.7	123.5
21	Region 22	80.3	76.7	82.8	31.0	24.9	34.8	14.9	0.0	25.4	65.6	38.6	76.0	19.5	9.2	61.4	1.1	0.2	1.9	0.8	0.2	1.5	5	0	18	108.5	101.1	119.1
22	Region 23	79.7	77.2	82.4	31.5	26.2	35.1	15.0	2.8	36.0	68.7	53.9	77.9	16.3	5.7	33.3	1.2	0.6	2.2	1.0	0.4	2.2	6	2	17	107.6	97.1	115.4
13	Region 24	80.0	77.2	82.5	31.1	26.7	33.1	11.3	1.9	26.2	65.4	55.6	73.4	23.3	7.5	39.5	1.0	0.1	2.2	0.8	0.0	2.2	7	2	12	104.3	89.2	113.5
15	Region 25	76.0	72.3	78.3	29.5	20.2	38.1	9.8	2.1	35.2	64.3	43.1	73.3	25.9	5.2	52.6	1.6	0.5	3.1	1.2	0.4	2.0	5	0	10	91.1	74.5	102.0
17	Region 26	77.2	72.8	80.2	30.5	26.6	33.7	8.9	3.4	22.7	67.1	57.7	73.1	24.0	9.5	36.8	1.0	0.2	2.9	0.8	0.1	2.5	5	1	12	101.0	83.7	113.5
6	Region 27	77.0	75.5	78.7	28.9	25.6	32.5	10.2	3.1	17.9	64.2	58.0	69.6	25.7	14.9	38.9	2.0	1.2	3.5	1.4	0.9	3.1	12	6	15	97.1	92.8	100.5
50	Region 28	77.1	72.6	82.0	30.9	20.3	36.7	14.9	4.6	35.6	65.5	49.7	73.4	19.6	5.6	45.5	1.2	0.4	9.9	0.8	0.2	5.3	6	0	56	95.8	81.2	117.4
79	Region 29	76.2	67.3	83.1	28.6	19.3	37.9	10.4	0.3	36.6	64.3	30.3	76.6	25.2	3.2	69.1	1.3	0.2	5.2	0.8	0.1	3.3	5	0	29	98.1	63.4	117.9
89	Region 30	76.3	68.8	81.1	29.1	19.4	39.7	13.0	0.0	39.7	62.7	16.4	77.1	24.3	4.1	83.6	1.4	0.2	3.1	1.0	0.1	2.6	6	0	29	95.9	50.2	111.8
69	Region 31	76.4	72.8	80.4	27.9	19.9	37.8	9.7	0.0	24.3	63.6	9.2	78.5	26.7	5.4	90.4	1.1	0.3	3.8	0.8	0.2	3.1	5	0	28	93.9	77.6	107.2
56	Region 32	75.6	70.3	79.1	28.7	21.4	36.6	11.8	1.6	24.3	67.2	54.3	78.6	21.0	8.4	42.8	1.4	0.2	5.6	0.9	0.2	4.8	4	0	28	87.3	63.9	101.5
84	Region 33	76.2	68.4	82.3	30.9	23.9	38.2	15.7	1.0	41.3	65.9	41.8	74.6	18.4	5.4	57.2	1.2	0.2	4.4	0.9	0.1	3.1	6	0	37	89.8	59.0	113.0
65	Region 34	76.7	70.2	82.6	30.3	24.6	37.7	14.0	1.1	40.3	66.2	43.8	78.6	19.8	3.9	50.8	1.2	0.2	5.0	0.8	0.2	3.1	6	1	34	97.5	71.4	118.0
11	Region 35	76.9	72.7	78.3	31.4	27.2	36.7	11.6	1.3	37.5	63.6	53.9	75.0	24.8	5.1	44.8	1.2	0.3	2.2	1.0	0.3	2.0	7	1	23	88.4	68.9	105.9
47	Region 36	77.0	74.8	80.0	33.2	26.3	39.0	12.1	1.8	38.0	66.0	47.7	76.2	21.9	1.2	47.6	1.2	0.1	4.3	0.9	0.0	3.4	7	1	20	95.3	78.4	108.3
1000	**Ave. w & y**	**77.3**			**29.8**			**12.0**			**64.7**			**23.2**			**1.2**			**0.8**			**6**			**97.6**		
	Min. w & y		**67.3**			**17.8**			**0.0**			**9.2**			**0.0**			**0.0**			**0.0**			**0**			**50.2**	
	Max. w & y			**83.1**			**48.3**			**86.7**			**81.8**			**90.4**			**12.1**			**5.6**			**61**			**123.5**

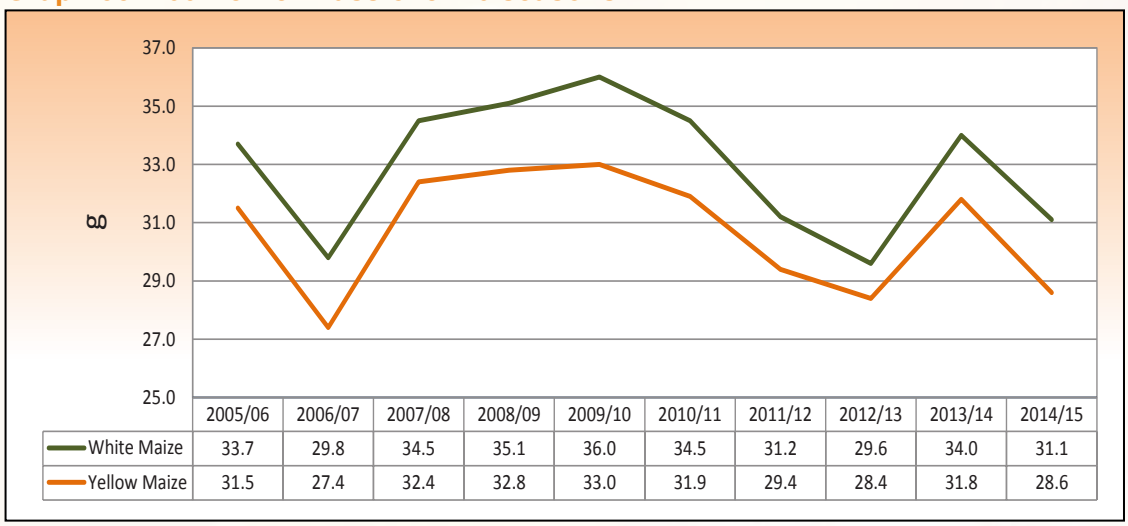
TABLE 15: PHYSICAL QUALITY FACTORS OF WHITE AND YELLOW MAIZE 2005/2006 - 2014/2015

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																									
2005/06	593	76.2	58.3	81.6	33.7	18.0	44.7	30.1	0.0	73.9	59.4	24.2	75.0	10.5	1.2	75.8	2.1	0.2	12.6	1.6	0.1	10.4	4	0	36
2006/07	563	78.1	68.1	82.8	29.8	19.4	40.1	17.1	0.2	51.7	63.3	16.7	78.2	19.6	0.8	81.6	1.5	0.0	12.1	1.0	0.0	11.5	3	0	27
2007/08	483	78.2	65.3	81.6	34.5	17.0	45.6	24.5	0.4	69.7	63.8	23.3	84.2	11.7	1.0	76.2	1.2	0.1	9.7	0.9	0.0	7.3	4	0	44
2008/09	483	77.6	61.6	82.8	35.1	27.1	44.0	26.2	0.5	46.4	63.3	43.1	84.0	10.5	2.1	51.0	1.5	0.2	11.7	1.1	0.1	8.7	5	0	50
2009/10	458	77.9	60.2	84.4	36.0	24.1	59.1	26.3	1.2	90.7	62.6	9.2	82.0	11.2	0.1	53.5	1.5	0.2	24.3	1.2	0.1	23.1	4	0	36
2010/11	413	77.7	71.3	81.8	34.5	25.0	44.0	24.9	1.4	55.8	63.5	33.5	83.9	11.6	1.7	65.1	1.6	0.0	8.4	1.2	0.0	5.9	5	0	31
2011/12	577	78.2	71.8	82.0	31.2	71.4	44.4	18.8	0.8	63.3	64.9	26.2	79.7	16.3	2.8	72.4	0.8	0.0	8.6	0.6	0.0	4.9	5	0	25
2012/13	508	78.2	69.7	82.9	29.6	17.7	46.0	15.1	0.0	59.9	65.0	16.2	80.5	20.0	3.1	83.5	1.0	0.0	6.6	0.7	0.0	4.6	4	0	37
2013/14	451	77.6	68.7	81.9	34.0	26.0	46.5	24.7	0.7	71.3	64.7	23.4	82.7	10.6	1.1	37.7	1.3	0.0	7.2	1.0	0.0	4.2	7	0	37
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
Weighted Average		**77.8**			**32.8**			**22.2**			**63.6**			**14.2**			**1.4**			**1.0**			**5**		
Minimum			**58.3**			**17.0**			**0.0**			**9.2**			**0.0**			**0.0**			**0.0**			**0**	
Maximum				**84.4**			**59.1**			**90.7**			**84.2**			**83.5**			**24.3**			**23.1**			**61**
Yellow Maize																									
2005/06	307	75.4	53.4	81.9	31.5	22.0	40.1	19.0	1.1	53.1	65.4	43.3	80.1	15.7	3.2	50.8	2.5	0.1	17.6	1.7	0.0	11.7	5	0	24
2006/07	337	76.4	70.2	81.2	27.4	16.6	38.6	8.5	0.0	34.2	61.7	17.1	79.5	29.8	6.4	82.9	2.1	0.2	10.9	1.3	0.0	6.0	4	0	24
2007/08	417	76.7	69.3	79.9	32.4	24.4	42.9	15.2	0.3	50.9	66.0	39.6	78.6	18.8	2.8	60.1	1.9	0.3	15.2	1.3	0.1	8.3	5	0	58
2008/09	327	76.6	69.9	81.2	32.9	24.2	45.4	15.7	1.3	52.8	66.5	44.3	79.9	17.8	1.6	44.6	1.8	0.1	10.3	1.3	0.0	9.9	6	0	32
2009/10	342	76.6	69.0	81.6	33.0	23.3	42.5	14.3	0.0	41.7	68.5	50.9	79.9	17.2	4.0	47.7	2.1	0.4	10.3	1.6	0.3	8.4	5	0	27
2010/11	280	76.2	69.0	81.5	31.9	22.0	40.4	14.4	1.1	43.7	68.6	39.5	79.6	16.9	1.9	58.7	2.1	0.5	8.1	1.6	0.0	5.0	5	0	24
2011/12	423	76.1	68.1	81.0	29.4	14.5	40.9	11.3	0.0	38.3	63.9	13.7	79.4	24.8	6.5	86.3	1.3	0.2	15.6	1.0	0.0	8.3	6	0	27
2012/13	492	76.6	67.8	81.6	28.4	15.2	41.3	9.8	0.0	42.6	61.7	10.1	80.9	28.5	3.4	89.9	1.7	0.1	8.2	1.1	0.0	5.4	5	0	31
2013/14	479	76.0	56.6	80.9	31.8	18.6	43.1	14.9	0.3	52.7	67.1	21.4	79.7	18.0	2.6	64.8	1.9	0.1	14.5	1.4	0.0	9.9	7	0	53
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
Weighted Average		**76.3**			**30.6**			**12.9**			**65.1**			**22.1**			**1.8**			**1.3**			**5.4**		
Minimum			**53.4**			**14.5**			**0.0**			**9.2**			**1.6**			**0.1**			**0.0**			**0**	
Maximum				**83.1**			**45.4**			**53.1**			**80.9**			**90.4**			**17.6**			**11.7**			**58**
White & Yellow Maize																									
2005/06	900	75.9	53.4	81.9	32.9	18.0	44.7	26.3	0.0	73.9	61.4	24.2	80.1	12.3	1.2	75.8	2.3	0.1	17.6	1.6	0.0	11.7	4	0	36
2006/07	900	77.5	68.1	82.8	28.9	16.6	40.1	13.9	0.0	51.7	62.7	16.7	79.5	23.4	0.8	82.9	1.7	0.0	12.1	1.1	0.0	11.5	3	0	27
2007/08	900	77.5	65.3	81.6	33.5	17.0	45.6	20.2	0.3	69.7	64.8	23.3	84.2	15.0	1.0	76.2	1.5	0.1	15.2	1.1	0.0	8.3	4	0	58
2008/09	810	77.2	61.6	82.8	34.2	24.2	45.4	21.9	0.5	52.8	64.6	43.1	84.0	13.4	1.6	51.0	1.6	0.1	11.7	1.2	0.0	9.9	5	0	50
2009/10	800	77.4	60.2	84.4	34.7	23.3	59.1	21.1	0.0	90.7	65.1	9.2	82.0	13.7	0.1	53.5	1.8	0.2	24.3	1.4	0.1	23.1	4	0	36
2010/11	693	77.1	69.0	81.8	33.5	22.0	44.0	20.7	1.1	55.8	65.6	33.5	83.9	13.8	1.7	65.1	1.8	0.0	8.4	1.3	0.0	5.9	5	0	31
2011/12	1000	77.3	68.1	82.0	30.4	14.5	44.4	15.6	0.0	63.3	64.5	13.7	79.7	19.9	2.8	86.3	1.0	0.0	15.6	0.7	0.0	8.3	6	0	27
2012/13	1000	77.4	67.8	82.9	29.0	15.2	46.0	12.5	0.0	59.9	63.4	10.1	80.9	24.2	3.1	89.9	1.4	0.0	8.2	0.9	0.0	5.4	5	0	37
2013/14	930	76.8	56.6	81.9	32.9	18.6	46.5	19.6	0.3	71.3	65.9	23.4	82.7	14.4	1.1	64.8	1.6	0.0	14.5	1.2	0.0	9.9	7	0	53
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
Weighted Average		**77.1**			**31.8**			**18.1**			**64.2**			**17.7**			**1.6**			**1.1**			**5**		
Minimum			**53.4**			**14.5**			**0.0**			**9.2**			**0.0**			**0.0**			**0.0**			**0**	
Maximum				**84.4**			**59.1**			**90.7**			**84.2**			**90.4**			**24.3**			**23.1**			**61**

Graph 34: Test weight of white and yellow maize over 10 seasons

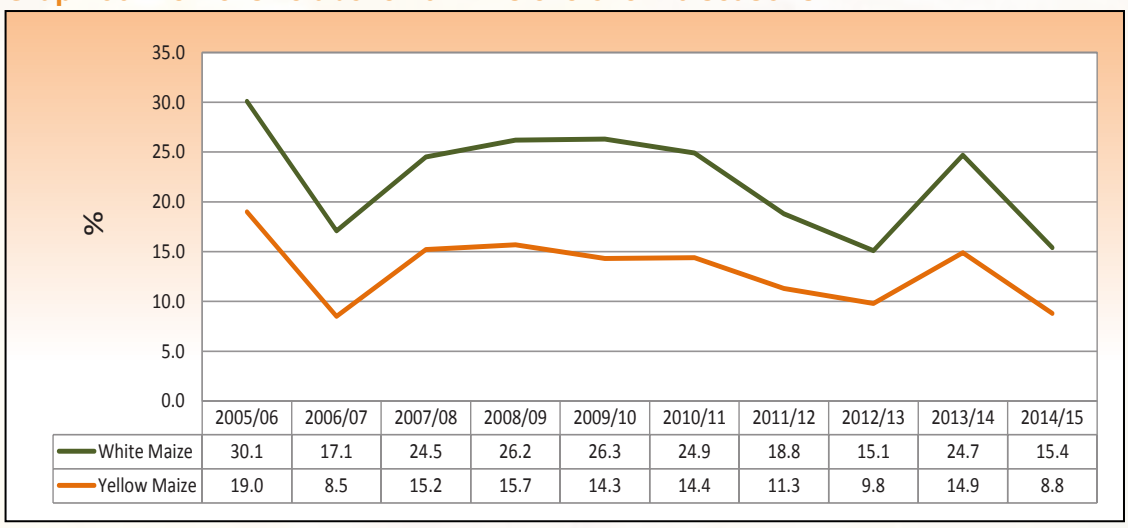


Graph 35: 100 Kernel mass over 10 seasons



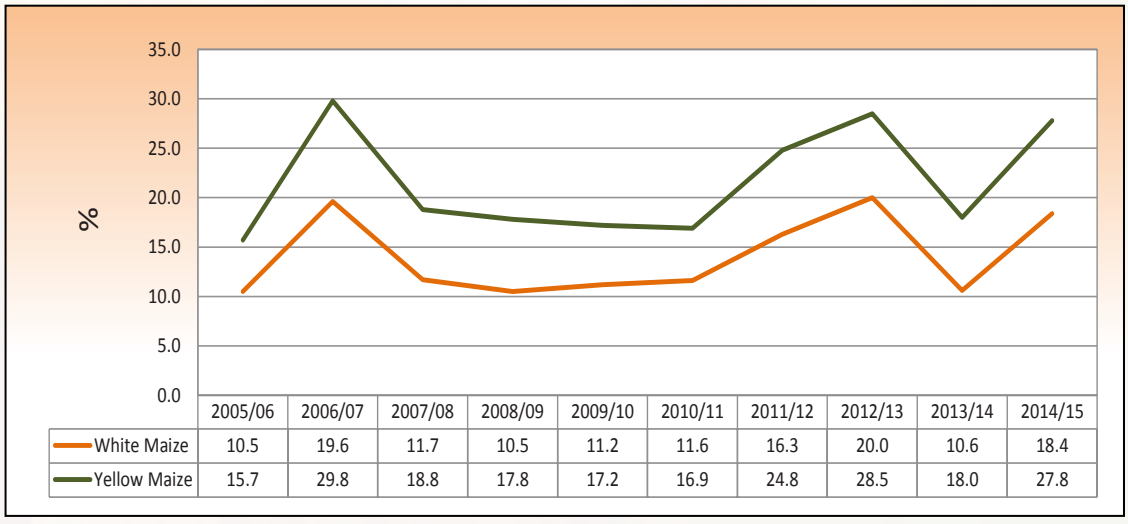
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
White Maize	33.7	29.8	34.5	35.1	36.0	34.5	31.2	29.6	34.0	31.1
Yellow Maize	31.5	27.4	32.4	32.8	33.0	31.9	29.4	28.4	31.8	28.6

Graph 36: Kernel size above 10 mm sieve over 10 seasons



	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
White Maize	30.1	17.1	24.5	26.2	26.3	24.9	18.8	15.1	24.7	15.4
Yellow Maize	19.0	8.5	15.2	15.7	14.3	14.4	11.3	9.8	14.9	8.8

Graph 37: Kernel size below 8 mm sieve over 10 seasons



	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
White Maize	10.5	19.6	11.7	10.5	11.2	11.6	16.3	20.0	10.6	18.4
Yellow Maize	15.7	29.8	18.8	17.8	17.2	16.9	24.8	28.5	18.0	27.8

TABLE 16: ROFF MILLING AND WHITENESS INDEX OF WHITE MAIZE ACCORDING TO GRADE (2014/2015)

Number of samples	Region	Roff Milling																		Whiteness index					
		Break 1, %			Break 2, %			Break 3, %			Grits, %			Bran and Germ, %			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																									
3	Region 11	14.1	12.7	15.1	11.9	11.4	12.5	23.5	22.9	24.1	29.8	28.0	31.9	20.6	19.3	21.5	79.4	78.5	80.7	24.7	20.0	33.2	14.0	9.6	20.9
11	Region 12	12.6	10.5	13.9	11.9	11.0	13.1	26.3	24.8	30.3	28.7	25.0	31.6	20.6	19.1	22.7	79.4	77.3	80.9	23.6	21.6	26.0	17.3	12.8	20.3
27	Region 13	11.5	8.8	15.5	11.3	10.4	12.3	26.1	23.5	28.3	30.7	25.9	34.0	20.3	18.7	23.3	79.7	76.7	81.3	20.9	12.3	30.0	14.7	2.6	19.6
29	Region 14	12.4	10.6	15.9	11.5	10.5	12.3	25.6	22.4	27.5	30.0	26.2	34.7	20.5	15.7	22.8	79.5	77.2	84.3	23.0	16.0	28.7	17.0	12.4	23.4
3	Region 15	12.2	11.6	13.1	11.8	11.5	12.0	24.9	23.7	25.6	31.3	30.5	31.8	19.8	19.3	20.4	80.2	79.6	80.7	23.4	21.4	25.9	14.9	12.5	16.2
5	Region 16	11.7	10.6	13.3	11.7	11.5	12.1	25.0	23.8	26.3	32.0	31.3	32.5	19.5	18.4	21.6	80.5	78.4	81.6	21.5	18.1	23.0	14.1	12.0	16.6
34	Region 17	12.3	0.0	15.5	11.5	10.1	12.5	25.5	20.8	27.1	29.2	25.4	31.9	21.3	19.3	26.7	78.4	69.0	80.7	21.4	14.1	32.4	14.7	8.9	20.9
5	Region 18	12.6	11.5	14.4	11.6	11.2	11.9	24.2	21.4	26.2	31.0	28.9	34.8	20.6	19.1	21.5	79.4	78.5	80.9	22.4	20.0	24.3	14.4	12.6	16.4
24	Region 19	12.6	10.7	15.3	11.7	10.9	12.5	25.7	24.1	27.0	29.1	25.6	32.4	20.8	18.9	23.2	79.2	76.8	81.1	24.4	17.2	33.5	16.9	9.2	23.0
19	Region 20	13.1	11.3	15.2	11.8	11.1	12.5	25.6	22.2	27.2	28.3	25.9	30.7	21.2	20.0	24.7	78.8	75.3	80.0	20.7	15.3	28.3	13.9	8.3	19.4
16	Region 21	12.8	11.4	15.4	11.8	11.0	12.5	26.2	25.3	27.3	29.5	26.0	31.5	19.7	17.8	21.0	80.3	79.0	82.2	20.2	14.7	28.0	15.7	9.6	21.9
10	Region 22	12.0	9.8	13.2	11.7	11.4	12.3	25.6	23.5	26.8	30.9	28.6	34.3	19.8	18.0	20.9	80.2	79.1	82.0	22.6	19.6	25.4	15.8	9.5	21.5
13	Region 23	12.2	10.9	13.1	12.0	10.7	18.4	26.0	23.1	27.5	29.3	26.1	33.5	20.5	19.2	22.2	79.5	77.8	80.8	22.8	16.7	26.3	16.6	11.5	20.2
6	Region 24	13.0	10.3	17.6	12.0	10.6	13.2	26.0	24.3	28.2	28.6	24.9	33.2	20.4	17.5	22.2	79.6	77.8	82.5	20.3	15.1	29.1	11.5	7.3	16.4
4	Region 25	12.9	11.6	14.0	11.9	11.5	12.2	24.7	24.2	25.8	27.0	25.9	27.6	23.4	22.8	24.3	76.6	75.7	77.2	22.2	20.8	24.6	16.7	15.8	17.5
6	Region 26	12.5	9.1	16.4	10.8	7.6	12.9	25.4	24.3	27.0	28.7	24.4	32.4	22.6	21.2	24.8	77.4	75.2	78.8	19.2	11.7	28.7	10.4	3.7	14.6
1	Region 27	16.7	-	-	12.5	-	-	21.9	-	-	27.3	-	-	21.6	-	-	78.4	-	-	25.2	-	-	15.1	-	-
13	Region 28	13.3	9.1	15.2	11.7	10.7	12.8	23.8	20.9	25.3	29.8	26.8	36.8	21.4	19.3	23.6	78.6	76.4	80.7	24.5	17.1	30.2	15.7	10.4	20.2
16	Region 29	12.9	10.1	16.6	11.6	10.5	12.3	23.0	20.8	25.6	31.1	25.8	34.4	21.4	18.3	24.0	78.6	76.0	81.7	23.8	17.5	33.4	13.6	5.2	23.6
26	Region 30	13.5	11.5	14.9	12.2	10.7	20.1	24.1	21.4	27.4	29.1	26.1	32.2	21.1	18.5	23.1	78.9	76.9	81.5	24.7	20.4	34.8	15.0	11.5	19.0
18	Region 31	13.5	11.1	15.8	11.8	10.8	12.6	24.9	23.2	26.6	27.9	25.1	31.4	21.8	18.4	23.8	78.2	76.2	81.6	24.8	16.4	34.5	15.9	10.5	24.0
13	Region 32	14.0	12.7	15.5	12.1	11.6	12.6	25.0	22.8	26.9	27.2	24.2	30.5	21.7	18.7	23.6	78.3	76.4	81.3	25.7	20.1	36.0	15.4	2.2	23.4
37	Region 33	14.7	12.3	19.8	12.3	11.3	16.4	24.5	22.0	26.7	26.3	19.8	32.4	22.2	19.0	25.3	77.8	74.7	81.0	26.4	14.4	36.3	15.8	6.4	21.8
34	Region 34	13.3	9.7	15.6	11.9	10.7	13.0	23.7	20.3	27.0	29.5	24.7	35.9	21.6	18.5	24.0	78.4	76.0	81.5	26.7	19.2	33.2	16.9	7.5	24.3
4	Region 35	14.6	14.2	15.2	12.4	12.1	12.7	23.2	21.8	24.8	28.2	26.9	29.7	21.6	20.2	22.7	78.4	77.3	79.8	25.3	23.5	27.2	17.2	13.6	22.1
20	Region 36	12.0	8.2	13.6	11.5	10.5	12.2	25.5	24.3	26.8	28.4	25.7	33.5	22.5	20.2	24.8	77.5	75.2	79.8	21.3	15.5	25.1	12.4	4.8	19.8
397	**Ave. WM1**	**12.9**			**11.8**			**25.0**			**29.1**			**21.2**			**78.8**			**23.4**			**15.3**		
	Min. WM1		**0.0**			**7.6**			**20.3**			**19.8**			**15.7**			**69.0**			**11.7**			**2.2**	
	Max. WM1			**19.8**			**20.1**			**30.3**			**36.8**			**26.7**			**84.3**			**36.3**			**24.3**

TABLE 16: ROFF MILLING AND WHITENESS INDEX OF WHITE MAIZE ACCORDING TO GRADE (2014/2015) (continue)

Number of samples	Region	Roff Milling																	Whiteness index					
		Break 1, %			Break 2, %			Break 3, %			Grits, %			Bran and Germ, %			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	12.0	10.7	13.3	11.5	10.7	12.3	26.0	25.2	26.5	29.5	28.4	30.8	21.0	19.9	22.6	79.0	77.4	80.1	24.4	22.5	26.9	19.3	16.8	21.0
3	Region 13	12.2	11.6	13.3	11.3	10.7	12.4	24.6	24.0	25.3	30.0	29.1	30.9	21.9	20.6	22.9	78.1	77.1	79.4	19.6	16.4	24.4	14.1	12.8	16.1
1	Region 14	13.1	-	-	11.8	-	-	23.5	-	-	31.5	-	-	20.1	-	-	79.9	-	-	12.9	-	-	7.4	-	-
1	Region 17	12.2	-	-	11.4	-	-	25.0	-	-	30.9	-	-	20.5	-	-	79.5	-	-	23.5	-	-	18.5	-	-
4	Region 18	12.9	12.2	14.1	12.3	11.8	13.2	24.3	23.9	25.0	28.8	25.8	30.8	21.7	20.1	23.1	78.3	76.9	79.9	22.5	18.5	24.5	17.3	14.5	19.9
3	Region 19	11.3	10.4	12.2	11.2	10.5	11.7	25.3	23.9	26.1	30.2	29.6	30.6	22.0	20.6	23.8	78.0	76.2	79.4	21.9	19.7	25.1	14.0	11.7	15.9
3	Region 20	12.4	10.5	14.1	11.4	10.9	12.0	24.6	24.2	24.9	28.5	26.1	31.1	23.0	22.6	23.6	77.0	76.4	77.4	20.4	14.9	28.3	17.5	12.2	21.6
3	Region 21	11.0	9.5	13.5	11.2	10.6	11.7	25.6	25.1	26.2	31.2	28.8	33.1	21.1	20.8	21.4	78.9	78.6	79.2	19.0	15.8	22.4	12.9	10.7	14.5
4	Region 22	11.8	9.9	14.1	11.6	10.7	12.2	25.6	23.1	28.0	30.8	27.4	33.6	20.2	18.7	21.4	79.8	78.6	81.3	21.5	18.8	23.9	9.0	5.6	13.0
4	Region 23	11.7	11.0	12.6	11.6	11.5	11.8	26.0	25.8	26.2	29.2	28.2	30.7	21.5	20.8	22.3	78.5	77.7	79.2	23.4	19.8	24.7	15.7	12.8	19.0
1	Region 24	11.9	-	-	11.5	-	-	27.5	-	-	28.3	-	-	20.8	-	-	79.2	-	-	24.7	-	-	19.4	-	-
3	Region 25	11.7	9.9	13.5	12.0	11.6	12.7	25.1	22.7	26.6	26.8	23.5	30.7	24.4	21.7	27.5	75.6	72.5	78.3	21.7	19.5	25.3	15.7	12.9	19.2
2	Region 26	12.2	10.4	14.0	11.6	11.2	12.0	26.2	25.2	27.3	29.4	27.1	31.7	20.6	19.5	21.7	79.4	78.3	80.5	13.4	10.0	16.7	9.7	2.3	17.2
4	Region 28	13.7	12.3	15.0	11.7	11.2	12.2	23.2	21.6	25.0	30.4	28.4	32.2	21.0	19.7	23.1	79.0	76.9	80.3	20.5	17.1	23.0	10.5	9.0	12.1
4	Region 29	12.0	9.7	16.3	11.3	10.8	11.9	23.8	21.3	26.1	31.7	27.8	35.3	21.2	20.1	22.8	78.8	77.2	79.9	19.6	18.9	20.5	9.7	7.5	12.4
2	Region 30	13.9	12.7	15.1	12.1	11.8	12.4	22.3	22.1	22.4	29.5	28.1	31.0	22.2	21.6	22.9	77.8	77.1	78.4	23.2	20.3	26.0	13.8	11.8	15.9
2	Region 31	14.0	12.2	15.9	11.9	11.8	12.0	23.9	23.1	24.6	29.8	29.1	30.4	20.4	18.8	22.1	79.6	77.9	81.2	17.7	16.7	18.7	1.3	-9.9	12.4
3	Region 32	14.4	13.8	15.0	12.2	11.9	12.4	21.6	20.6	22.5	29.7	29.0	30.5	22.1	21.5	23.1	77.9	76.9	78.5	22.3	21.1	23.8	13.8	11.7	16.1
2	Region 33	13.8	13.7	13.8	11.8	11.7	11.9	24.7	24.5	25.0	28.7	27.1	30.3	21.0	19.3	22.8	79.0	77.2	80.7	21.9	20.3	23.6	14.4	14.1	14.6
2	Region 34	12.6	12.5	12.8	12.0	11.7	12.2	22.1	21.6	22.6	32.6	32.4	32.7	20.8	20.1	21.5	79.2	78.5	79.9	23.4	20.6	26.1	14.3	12.5	16.2
1	Region 35	14.8	-	-	12.5	-	-	22.7	-	-	30.7	-	-	19.4	-	-	80.6	-	-	25.4	-	-	17.2	-	-
3	Region 36	12.8	11.8	13.5	11.5	10.5	12.1	26.1	25.0	27.3	27.5	26.5	28.2	22.0	19.5	24.4	78.0	75.6	80.5	20.8	10.5	31.5	10.7	6.1	16.7
59	**Ave. WM2**	**12.5**			**11.7**			**24.6**			**29.7**			**21.5**			**78.5**			**21.2**			**13.4**		
	Min. WM2		**9.5**			**10.5**			**20.6**			**23.5**			**18.7**			**72.5**			**10.0**			**-9.9**	
	Max. WM2			**16.3**			**13.2**			**28.0**			**35.3**			**27.5**			**81.3**			**31.5**			**21.6**

TABLE 16: ROFF MILLING AND WHITENESS INDEX OF WHITE MAIZE ACCORDING TO GRADE (2014/2015) (continue)

Number of samples	Region	Roff Milling																	Whiteness index					
		Break 1, %			Break 2, %			Break 3, %			Grits, %			Bran and Germ, %			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: WM3																									
2	Region 13	10.3	10.1	10.6	11.3	11.2	11.5	26.0	25.7	26.3	31.3	31.2	31.4	21.0	20.7	21.3	79.0	78.7	79.3	17.3	17.0	17.7	10.0	7.9	12.1
1	Region 14	14.8	-	-	11.9	-	-	24.5	-	-	25.6	-	-	23.2	-	-	76.8	-	-	32.9	-	-	26.2	-	-
2	Region 17	14.2	14.1	14.4	12.2	11.6	12.8	24.8	24.5	25.1	26.0	25.9	26.2	22.7	22.7	22.8	77.3	77.2	77.3	17.6	17.3	17.9	11.5	11.5	11.6
1	Region 18	14.5	-	-	12.5	-	-	25.3	-	-	24.9	-	-	22.8	-	-	77.2	-	-	19.8	-	-	11.2	-	-
1	Region 19	12.2	-	-	12.0	-	-	25.0	-	-	27.6	-	-	23.1	-	-	76.9	-	-	16.6	-	-	14.9	-	-
2	Region 20	10.7	10.6	10.8	10.9	10.6	11.3	21.9	21.3	22.6	26.3	25.7	26.9	30.1	29.6	30.7	69.9	69.3	70.4	26.6	26.2	27.0	20.7	18.4	23.0
1	Region 21	15.5	-	-	12.3	-	-	25.3	-	-	25.4	-	-	21.4	-	-	78.6	-	-	33.1	-	-	14.7	-	-
1	Region 24	12.2	-	-	11.8	-	-	26.5	-	-	29.9	-	-	19.5	-	-	80.5	-	-	20.2	-	-	12.1	-	-
2	Region 25	15.6	13.5	17.6	12.7	12.6	12.8	23.6	22.8	24.4	22.8	20.7	25.0	25.4	24.6	26.1	74.6	73.9	75.4	24.7	21.6	27.9	21.0	19.5	22.4
1	Region 28	13.4	-	-	11.5	-	-	24.0	-	-	26.0	-	-	25.0	-	-	75.0	-	-	2.7	-	-	-2.4	-	-
1	Region 29	16.3	-	-	12.3	-	-	20.6	-	-	27.6	-	-	23.2	-	-	76.8	-	-	25.5	-	-	18.1	-	-
1	Region 30	14.8	-	-	20.8	-	-	18.6	-	-	27.0	-	-	18.7	-	-	81.3	-	-	-16.5	-	-	-27.9	-	-
1	Region 33	15.2	-	-	12.9	-	-	25.2	-	-	24.9	-	-	21.8	-	-	78.2	-	-	18.2	-	-	7.2	-	-
2	Region 34	15.3	15.0	15.5	12.7	12.3	13.2	23.9	23.9	23.9	25.6	23.4	27.8	22.5	21.0	24.1	77.5	75.9	79.0	22.5	17.4	27.6	9.3	2.9	15.7
19	**Ave. WM3**	**13.8**			**12.5**			**24.0**			**26.5**			**23.3**			**76.7**			**19.5**			**11.5**		
	Min. WM3		**10.1**			**10.6**			**18.6**			**20.7**			**18.7**			**69.3**			**-16.5**			**-27.9**	
	Max. WM3			**17.6**			**20.8**			**26.5**			**31.4**			**30.7**			**81.3**			**33.1**			**26.2**
CLASS: COM																									
1	Region 13	14.7	-	-	11.6	-	-	26.2	-	-	24.6	-	-	22.9	-	-	77.1	-	-	14.7	-	-	9.4	-	-
1	Region 19	12.7	-	-	12.1	-	-	25.3	-	-	27.5	-	-	22.4	-	-	77.6	-	-	16.9	-	-	9.4	-	-
1	Region 21	13.9	-	-	11.5	-	-	25.6	-	-	27.0	-	-	22.0	-	-	78.0	-	-	24.8	-	-	19.8	-	-
1	Region 30	10.4	-	-	12.0	-	-	26.1	-	-	29.5	-	-	22.1	-	-	77.9	-	-	15.2	-	-	1.2	-	-
1	Region 33	15.9	-	-	13.6	-	-	23.2	-	-	25.4	-	-	21.9	-	-	78.1	-	-	26.6	-	-	14.4	-	-
5	**Ave. COM**	**13.5**			**12.2**			**25.3**			**26.8**			**22.2**			**77.8**			**19.7**			**10.8**		
	Min. COM		**10.4**			**11.5**			**23.2**			**24.6**			**21.9**			**77.1**			**14.7**			**1.2**	
	Max. COM			**15.9**			**13.6**			**26.2**			**29.5**			**22.9**			**78.1**			**26.6**			**19.8**
480	**Ave. white maize**	**12.9**			**11.8**			**24.9**			**29.0**			**21.3**			**78.7**			**22.9**			**14.9**		
	Min. white maize		**0.0**			**7.6**			**18.6**			**19.8**			**15.7**			**69.0**			**-1.6**			**-27.9**	
	Max. white maize			**19.8**			**20.8**			**30.3**			**36.8**			**30.7**			**84.3**			**36.3**			**26.2**

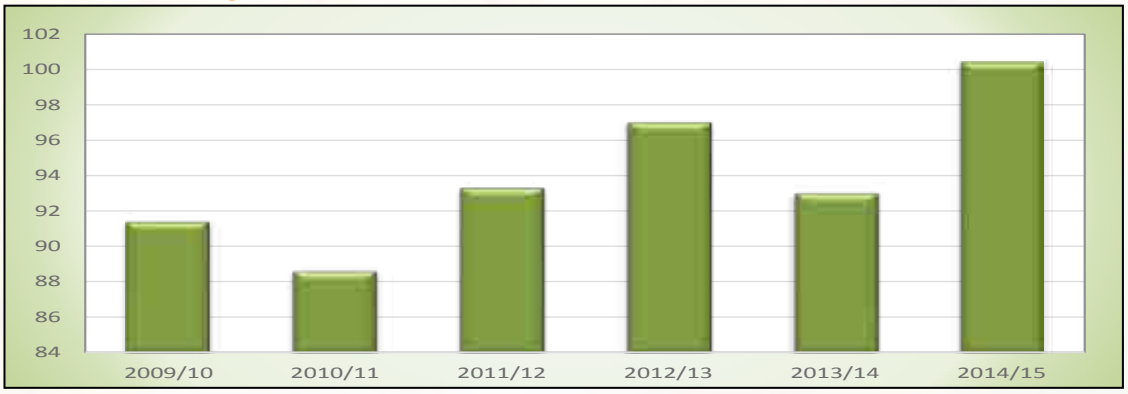
TABLE 17: ROFF MILLING AND WHITENESS INDEX OF WHITE MAIZE (2014/2015)

Number of samples	Region	Roff Milling																		Whiteness index					
		Break 1, %			Break 2, %			Break 3, %			Grits, %			Bran and Germ, %			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																									
3	Region 11	14.1	12.7	15.1	11.9	11.4	12.5	23.5	22.9	24.1	29.8	28.0	31.9	20.6	19.3	21.5	79.4	78.5	80.7	24.7	20.0	33.2	14.0	9.6	20.9
15	Region 12	12.4	10.5	13.9	11.8	10.7	13.1	26.2	24.8	30.3	28.9	25.0	31.6	20.7	19.1	22.7	79.3	77.3	80.9	23.8	21.6	26.9	17.8	12.8	21.0
33	Region 13	11.6	8.8	15.5	11.3	10.4	12.4	26.0	23.5	28.3	30.5	24.6	34.0	20.6	18.7	23.3	79.4	76.7	81.3	20.4	12.3	30.0	14.2	2.6	19.6
31	Region 14	12.5	10.6	15.9	11.6	10.5	12.3	25.5	22.4	27.5	29.9	25.6	34.7	20.6	15.7	23.2	79.4	76.8	84.3	23.0	12.9	32.9	17.0	7.4	26.2
3	Region 15	12.2	11.6	13.1	11.8	11.5	12.0	24.9	23.7	25.6	31.3	30.5	31.8	19.8	19.3	20.4	80.2	79.6	80.7	23.4	21.4	25.9	14.9	12.5	16.2
5	Region 16	11.7	10.6	13.3	11.7	11.5	12.1	25.0	23.8	26.3	32.0	31.3	32.5	19.5	18.4	21.6	80.5	78.4	81.6	21.5	18.1	23.0	14.1	12.0	16.6
37	Region 17	12.4	0.0	15.5	11.5	10.1	12.8	25.4	20.8	27.1	29.1	25.4	31.9	21.3	19.3	26.7	78.4	69.0	80.7	21.2	14.1	32.4	14.7	8.9	20.9
10	Region 18	12.9	11.5	14.5	12.0	11.2	13.2	24.4	21.4	26.2	29.5	24.9	34.8	21.2	19.1	23.1	78.8	76.9	80.9	22.2	18.5	24.5	15.3	11.2	19.9
29	Region 19	12.5	10.4	15.3	11.7	10.5	12.5	25.6	23.9	27.0	29.1	25.6	32.4	21.1	18.9	23.8	78.9	76.2	81.1	23.6	16.6	33.5	16.3	9.2	23.0
24	Region 20	12.8	10.5	15.2	11.7	10.6	12.5	25.2	21.3	27.2	28.2	25.7	31.1	22.2	20.0	30.7	77.8	69.3	80.0	21.1	14.9	28.3	14.9	8.3	23.0
21	Region 21	12.7	9.5	15.5	11.7	10.6	12.5	26.0	25.1	27.3	29.5	25.4	33.1	20.1	17.8	22.0	79.9	78.0	82.2	20.9	14.7	33.1	15.4	9.6	21.9
14	Region 22	12.0	9.8	14.1	11.7	10.7	12.3	25.6	23.1	28.0	30.9	27.4	34.3	19.9	18.0	21.4	80.1	78.6	82.0	22.3	18.8	25.4	13.9	5.6	21.5
17	Region 23	12.1	10.9	13.1	11.9	10.7	18.4	26.0	23.1	27.5	29.3	26.1	33.5	20.7	19.2	22.3	79.3	77.7	80.8	23.0	16.7	26.3	16.4	11.5	20.2
8	Region 24	12.7	10.3	17.6	11.9	10.6	13.2	26.3	24.3	28.2	28.7	24.9	33.2	20.4	17.5	22.2	79.6	77.8	82.5	20.8	15.1	29.1	12.6	7.3	19.4
9	Region 25	13.1	9.9	17.6	12.1	11.5	12.8	24.6	22.7	26.6	26.0	20.7	30.7	24.2	21.7	27.5	75.8	72.5	78.3	22.6	19.5	27.9	17.3	12.9	22.4
8	Region 26	12.4	9.1	16.4	11.0	7.6	12.9	25.6	24.3	27.3	28.9	24.4	32.4	22.1	19.5	24.8	77.9	75.2	80.5	17.8	10.0	28.7	10.2	2.3	17.2
1	Region 27	16.7	-	-	12.5	-	-	21.9	-	-	27.3	-	-	21.6	-	-	78.4	-	-	25.2	-	-	15.1	-	-
18	Region 28	13.4	9.1	15.2	11.7	10.7	12.8	23.7	20.9	25.3	29.7	26.0	36.8	21.5	19.3	25.0	78.5	75.0	80.7	22.4	2.7	30.2	13.6	-2.4	20.2
21	Region 29	12.9	9.7	16.6	11.5	10.5	12.3	23.0	20.6	26.1	31.1	25.8	35.3	21.5	18.3	24.0	78.5	76.0	81.7	23.1	17.5	33.4	13.1	5.2	23.6
30	Region 30	13.5	10.4	15.1	12.5	10.7	20.8	23.8	18.6	27.4	29.1	26.1	32.2	21.1	18.5	23.1	78.9	76.9	81.5	22.9	-16.5	34.8	13.0	-27.9	19.0
20	Region 31	13.6	11.1	15.9	11.8	10.8	12.6	24.8	23.1	26.6	28.1	25.1	31.4	21.7	18.4	23.8	78.3	76.2	81.6	24.1	16.4	34.5	14.4	-9.9	24.0
16	Region 32	14.1	12.7	15.5	12.1	11.6	12.6	24.4	20.6	26.9	27.7	24.2	30.5	21.8	18.7	23.6	78.2	76.4	81.3	25.0	20.1	36.0	15.1	2.2	23.4
41	Region 33	14.7	12.3	19.8	12.3	11.3	16.4	24.5	22.0	26.7	26.4	19.8	32.4	22.1	19.0	25.3	77.9	74.7	81.0	26.0	14.4	36.3	15.5	6.4	21.8
38	Region 34	13.4	9.7	15.6	11.9	10.7	13.2	23.7	20.3	27.0	29.4	23.4	35.9	21.6	18.5	24.1	78.4	75.9	81.5	26.3	17.4	33.2	16.4	2.9	24.3
5	Region 35	14.6	14.2	15.2	12.4	12.1	12.7	23.1	21.8	24.8	28.7	26.9	30.7	21.2	19.4	22.7	78.8	77.3	80.6	25.4	23.5	27.2	17.2	13.6	22.1
23	Region 36	12.1	8.2	13.6	11.5	10.5	12.2	25.6	24.3	27.3	28.3	25.7	33.5	22.4	19.5	24.8	77.6	75.2	80.5	21.2	10.5	31.5	12.2	4.8	19.8
480	**Ave. white**	**12.9**			**11.8**			**24.9**			**29.0**			**21.3**			**78.7**			**22.9**			**14.9**		
	Min. white		**0.0**			**7.6**			**18.6**			**19.8**			**15.7**			**69.0**			**-1.6**			**-27.9**	
	Max. white			**19.8**			**20.8**			**30.3**			**36.8**			**30.7**			**84.3**			**36.3**			**26.2**

Graph 38: Roff Mill Total Extraction percentage over the past six seasons

Graph 39: Whiteness index of white maize over the past six seasons (Sifted 87:13)

Graph 40: Milling index of white maize over the past six seasons



Graph 41: Milling index of yellow maize over the past six seasons

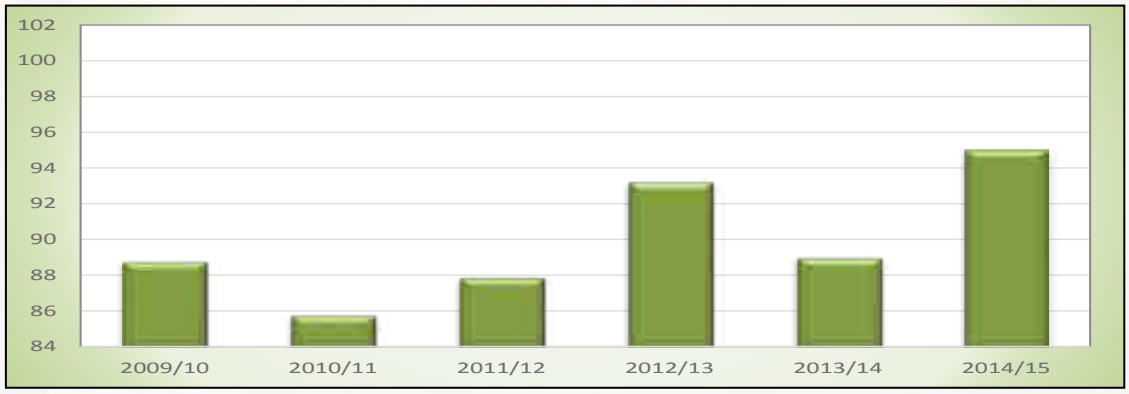


TABLE 18: NUTRITIONAL VALUES OF WHITE MAIZE ACCORDING TO GRADE (2014/2015)

Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: WM1										
-	Region 10	-	-	-	-	-	-	-	-	-
3	Region 11	4.0	3.6	4.5	8.9	8.8	9.1	72.4	72.2	72.9
11	Region 12	4.2	3.8	4.7	9.6	9.2	10.3	72.3	71.4	73.2
27	Region 13	4.3	4.1	4.8	9.8	8.3	10.9	72.4	71.1	73.3
29	Region 14	4.2	3.4	4.8	9.7	8.9	10.5	72.6	71.1	74.1
3	Region 15	4.3	4.2	4.4	9.8	9.7	9.9	72.2	71.8	72.7
5	Region 16	4.3	4.2	4.5	10.1	9.7	10.8	72.3	72.0	72.8
34	Region 17	4.2	3.9	4.5	9.7	8.5	10.3	72.6	71.6	73.9
5	Region 18	4.3	4.1	4.5	9.7	8.8	10.4	72.3	71.5	72.8
29	Region 19	4.2	3.8	4.5	9.7	8.7	10.5	72.5	71.5	73.5
19	Region 20	4.2	3.6	4.5	9.2	8.0	10.5	72.8	71.9	74.0
16	Region 21	4.3	3.8	4.8	9.7	8.5	10.8	72.0	71.2	73.4
10	Region 22	4.1	3.8	4.3	9.9	9.3	11.0	72.2	71.7	72.8
13	Region 23	4.2	3.9	4.4	9.9	9.4	10.3	72.1	71.1	73.3
6	Region 24	4.3	3.8	4.7	9.5	8.1	10.4	72.4	71.4	73.6
4	Region 25	4.2	3.8	4.5	9.3	9.0	9.5	73.0	72.3	73.9
6	Region 26	4.4	4.0	4.7	9.8	7.8	11.0	72.5	71.2	73.6
1	Region 27	4.5	-	-	8.2	-	-	72.0	-	-
13	Region 28	4.2	3.7	4.8	9.3	8.5	10.9	72.6	70.8	73.8
16	Region 29	4.3	3.3	5.0	9.5	8.1	11.2	72.3	71.3	73.3
26	Region 30	4.0	3.5	4.4	9.1	8.5	10.2	72.8	72.2	74.2
18	Region 31	4.1	3.6	4.8	9.2	7.9	10.3	73.1	71.9	74.3
13	Region 32	3.8	3.6	4.1	9.2	8.3	10.4	73.4	72.5	74.6
37	Region 33	4.1	3.6	4.7	8.4	6.3	10.1	73.3	71.6	74.9
34	Region 34	4.1	3.6	4.7	9.1	8.0	11.0	72.7	70.6	74.0
4	Region 35	4.3	4.1	4.8	8.6	8.2	9.1	72.6	71.3	73.2
20	Region 36	4.3	3.9	5.8	9.1	8.5	11.1	72.6	69.8	73.7
402	**Ave. WM1**	**4.2**			**9.4**			**72.6**		
	Min. WM1		**3.3**			**6.3**			**69.8**	
	Max. WM1			**5.8**			**11.2**			**74.9**

TABLE 18: NUTRITIONAL VALUES OF YELLOW MAIZE ACCORDING TO GRADE (2014/2015)

Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: YM1										
18	Region 10	3.5	3.3	3.6	8.0	7.5	8.3	74.0	73.6	74.6
4	Region 11	3.6	3.4	3.6	8.2	7.9	8.8	73.9	73.6	74.2
3	Region 12	3.9	3.7	4.1	9.0	8.5	9.6	73.3	72.8	74.0
9	Region 13	4.1	3.8	4.5	10.5	9.5	11.2	72.2	71.6	73.3
15	Region 14	4.0	3.8	4.4	10.1	9.3	11.0	72.7	71.3	74.2
1	Region 15	4.1	-	-	11.6	-	-	71.9	-	-
3	Region 16	4.1	4.0	4.3	10.4	9.8	10.9	72.3	71.8	72.9
11	Region 17	4.0	3.8	4.5	10.1	9.5	10.6	72.7	72.0	73.4
5	Region 18	4.1	3.7	4.5	9.6	8.9	10.4	72.8	72.4	73.3
13	Region 19	4.1	3.8	4.4	9.7	8.1	11.6	72.9	72.0	74.4
10	Region 20	4.1	3.7	4.3	9.5	8.1	10.5	72.9	72.2	73.6
5	Region 21	4.2	3.8	4.8	9.8	8.0	10.4	71.9	70.8	72.6
6	Region 22	4.3	3.8	5.1	10.5	9.2	11.9	71.8	70.8	73.2
4	Region 23	4.2	4.0	4.3	11.0	9.7	11.9	71.8	71.5	72.3
5	Region 24	3.9	3.6	4.5	10.2	8.7	11.3	72.7	71.5	73.8
4	Region 25	4.0	3.7	4.3	9.5	9.3	10.0	73.1	72.6	73.6
7	Region 26	4.3	4.1	4.5	10.5	10.0	11.5	72.0	71.7	72.4
3	Region 27	4.0	3.8	4.3	9.3	9.1	9.5	72.8	72.3	73.3
26	Region 28	4.3	3.6	4.8	9.5	8.9	10.5	72.3	71.0	73.0
45	Region 29	4.1	3.4	5.0	9.8	8.4	10.5	72.6	71.4	73.5
44	Region 30	4.0	3.1	4.6	9.3	8.2	10.6	72.8	71.6	74.4
40	Region 31	3.9	3.4	4.6	9.6	8.7	10.4	73.0	71.5	74.3
31	Region 32	3.9	3.4	4.6	9.2	8.6	10.0	73.0	71.6	74.2
35	Region 33	3.9	3.5	4.8	8.6	7.3	9.7	73.4	71.5	74.9
21	Region 34	4.1	3.6	4.7	9.3	8.5	10.1	72.8	71.3	74.1
6	Region 35	3.8	3.6	3.9	7.6	7.1	7.9	73.9	73.4	74.5
18	Region 36	4.0	3.7	4.4	8.6	7.6	9.9	73.3	72.6	74.5
392	**Ave. YM1**	**4.0**			**9.4**			**72.9**		
	Min. YM1		**3.1**			**7.1**			**70.8**	
	Max .YM1			**5.1**			**11.9**			**74.9**

TABLE 18: NUTRITIONAL VALUES OF WHITE MAIZE ACCORDING TO GRADE (2014/2015) (continue)

Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: WM2										
-	Region 10	-	-	-	-	-	-	-	-	-
-	Region 11	-	-	-	-	-	-	-	-	-
4	Region 12	4.3	3.9	4.6	10.0	9.7	10.2	72.1	71.5	72.6
3	Region 13	4.2	4.1	4.3	10.0	9.5	10.5	72.6	72.4	72.9
1	Region 14	4.1	-	-	9.6	-	-	72.7	-	-
-	Region 15	-	-	-	-	-	-	-	-	-
-	Region 16	-	-	-	-	-	-	-	-	-
1	Region 17	4.2	-	-	10.2	-	-	72.5	-	-
4	Region 18	4.1	3.8	4.3	9.5	8.7	10.1	72.5	71.7	73.1
3	Region 19	4.5	4.0	4.8	10.1	10.0	10.2	71.8	71.3	72.6
3	Region 20	4.0	3.5	4.4	9.5	9.1	10.3	72.5	72.3	72.9
3	Region 21	4.2	4.1	4.4	10.7	9.8	11.2	71.7	71.0	72.6
4	Region 22	4.2	4.0	4.3	10.1	9.0	10.8	71.9	71.6	72.1
4	Region 23	4.1	3.9	4.2	10.2	9.4	10.8	72.4	71.7	73.3
1	Region 24	4.0	-	-	9.5	-	-	72.9	-	-
3	Region 25	4.3	4.2	4.3	9.6	9.0	10.1	72.8	71.9	73.6
2	Region 26	4.3	4.0	4.5	10.0	9.4	10.6	72.3	71.7	72.8
-	Region 27	-	-	-	-	-	-	-	-	-
4	Region 28	4.1	4.0	4.2	9.2	8.7	9.5	72.2	71.8	72.5
4	Region 29	4.3	3.9	4.6	9.7	7.2	11.1	72.7	71.8	74.6
2	Region 30	3.9	3.9	4.0	8.9	8.8	9.0	73.0	72.7	73.2
2	Region 31	4.5	4.1	4.9	9.0	8.7	9.2	72.7	72.4	73.0
3	Region 32	4.0	4.0	4.1	9.1	9.0	9.2	72.2	71.9	72.5
2	Region 33	4.2	3.9	4.6	8.7	8.4	9.0	73.1	72.8	73.3
2	Region 34	4.3	4.3	4.3	9.6	9.3	9.9	72.0	71.7	72.3
1	Region 35	4.2	-	-	8.4	-	-	73.0	-	-
3	Region 36	4.2	3.9	4.4	8.8	8.7	9.0	72.9	72.5	73.4
59	**Ave. WM2**	**4.2**			**9.6**			**72.4**		
	Min. WM2		**3.5**			**7.2**			**71.0**	
	Max. WM2			**4.9**			**11.2**			**74.6**

TABLE 18: NUTRITIONAL VALUES OF YELLOW MAIZE ACCORDING TO GRADE (2014/2015) (continue)

Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: YM2										
1	Region 10	3.6	-	-	7.7	-	-	73.1	-	-
1	Region 11	3.5	-	-	9.3	-	-	73.0	-	-
4	Region 12	3.9	3.8	4.0	9.5	8.5	10.3	73.1	72.5	73.6
4	Region 13	4.0	3.8	4.2	10.3	9.3	11.0	72.4	72.1	72.6
2	Region 14	3.8	3.7	3.8	9.8	9.8	9.8	74.0	73.7	74.3
-	Region 15	-	-	-	-	-	-	-	-	-
-	Region 16	-	-	-	-	-	-	-	-	-
5	Region 17	4.1	3.8	4.5	10.4	9.8	10.9	72.6	72.3	72.9
2	Region 18	4.2	4.1	4.2	10.5	10.5	10.5	72.2	72.1	72.3
6	Region 19	3.9	3.8	4.0	9.4	9.0	10.7	73.7	72.4	74.4
6	Region 20	3.8	3.7	4.0	9.0	8.1	9.7	73.5	72.9	74.4
3	Region 21	4.0	3.5	4.5	9.9	7.8	11.5	72.1	71.0	73.7
1	Region 22	4.0	-	-	10.4	-	-	72.4	-	-
1	Region 23	4.3	-	-	10.7	-	-	71.2	-	-
-	Region 24	-	-	-	-	-	-	-	-	-
2	Region 25	3.9	3.8	4.0	9.8	9.4	10.1	72.9	72.5	73.3
1	Region 26	4.1	-	-	10.1	-	-	72.5	-	-
2	Region 27	3.9	3.8	4.0	9.9	9.8	10.0	72.9	72.7	73.1
6	Region 28	3.9	3.7	4.2	10.0	9.8	10.6	72.6	72.1	73.5
10	Region 29	3.8	3.3	4.3	10.0	9.0	10.9	73.1	72.3	73.9
14	Region 30	3.6	3.2	4.1	9.3	8.1	10.2	73.3	72.4	75.1
7	Region 31	3.7	3.4	3.9	9.4	8.5	9.9	73.2	73.0	73.7
9	Region 32	3.9	3.7	4.3	9.5	8.8	10.5	73.5	72.3	74.4
4	Region 33	3.9	3.6	4.4	8.3	7.4	9.4	73.5	71.8	75.1
6	Region 34	4.0	3.9	4.2	9.5	9.2	9.9	73.0	72.7	73.3
-	Region 35	-	-	-	-	-	-	-	-	-
6	Region 36	4.1	3.8	4.8	8.9	8.5	9.7	73.1	71.7	73.6
103	**Ave. YM2**	**3.9**			**9.6**			**73.1**		
	Min. YM2		**3.2**			**7.4**			**71.0**	
	Max .YM2			**4.8**			**11.5**			**75.1**

TABLE 18: NUTRITIONAL VALUES OF WHITE MAIZE ACCORDING TO GRADE (2014/2015) (continue)

Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: WM3										
2	Region 13	3.9	3.8	3.9	11.0	10.8	11.2	72.2	71.6	72.7
1	Region 14	3.4	-	-	9.7	-	-	74.4	-	-
2	Region 17	3.8	3.8	3.8	8.9	8.7	9.1	73.1	72.9	73.2
1	Region 18	3.9	-	-	8.6	-	-	73.0	-	-
1	Region 19	4.0	-	-	10.4	-	-	72.7	-	-
2	Region 20	4.3	4.2	4.4	10.7	10.6	10.8	70.9	70.8	71.0
1	Region 21	4.5	-	-	7.9	-	-	72.0	-	-
1	Region 24	4.0	-	-	9.6	-	-	73.0	-	-
2	Region 25	4.2	4.1	4.2	8.7	7.5	9.8	73.4	73.2	73.6
-	Region 26	-	-	-	-	-	-	-	-	-
1	Region 28	3.8	-	-	9.7	-	-	73.2	-	-
1	Region 29	4.0	-	-	7.9	-	-	72.9	-	-
1	Region 30	4.3	-	-	8.1	-	-	73.0	-	-
-	Region 31	-	-	-	-	-	-	-	-	-
1	Region 33	3.8	-	-	8.4	-	-	72.6	-	-
2	Region 34	4.1	4.1	4.1	8.4	8.3	8.4	72.8	72.7	72.8
19	**Ave. WM3**	**4.0**			**9.2**			**72.7**		
	Min. WM3		**3.4**			**7.5**			**70.8**	
	Max. WM3			**4.5**			**11.2**			**74.4**

TABLE 18: NUTRITIONAL VALUES OF YELLOW MAIZE ACCORDING TO GRADE (2014/2015) (continue)

Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
GRADE: YM3										
1	Region 13	3.6	-	-	11.1	-	-	73.0	-	-
-	Region 14	-	-	-	-	-	-	-	-	-
-	Region 17	-	-	-	-	-	-	-	-	-
1	Region 18	4.1	-	-	10.5	-	-	72.5	-	-
-	Region 19	-	-	-	-	-	-	-	-	-
2	Region 20	3.8	3.7	3.8	9.7	9.6	9.8	73.7	73.3	74.0
-	Region 21	-	-	-	-	-	-	-	-	-
-	Region 24	-	-	-	-	-	-	-	-	-
-	Region 25	-	-	-	-	-	-	-	-	-
1	Region 26	4.1	-	-	10.5	-	-	72.6	-	-
-	Region 28	-	-	-	-	-	-	-	-	-
2	Region 29	3.7	3.6	3.9	9.7	8.6	10.7	73.2	72.4	74.0
-	Region 30	-	-	-	-	-	-	-	-	-
2	Region 31	3.5	3.4	3.6	10.2	10.0	10.4	73.5	72.7	74.3
-	Region 33	-	-	-	-	-	-	-	-	-
-	Region 34	-	-	-	-	-	-	-	-	-
9	**Ave. YM3**	**3.8**			**10.1**			**73.2**		
	Min. YM3		**3.4**			**8.6**			**72.4**	
	Max .YM3			**4.1**			**11.1**			**74.3**

TABLE 18: NUTRITIONAL VALUES OF WHITE MAIZE ACCORDING TO GRADE (2014/2015) (continue)

Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
CLASS: COM										
1	Region 13	3.8	-	-	9.1	-	-	71.9	-	-
-	Region 14	-	-	-	-	-	-	-	-	-
-	Region 16	-	-	-	-	-	-	-	-	-
1	Region 19	4.0	-	-	10.2	-	-	72.4	-	-
1	Region 21	4.1	-	-	9.0	-	-	72.4	-	-
-	Region 29	–	-	-	–	-	-	–	-	-
1	Region 30	4.5	-	-	9.1	-	-	72.5	-	-
1	Region 33	4.2	-	-	8.2	-	-	73.0	-	-
5	**Ave. COM**	**4.1**			**9.1**			**72.4**		
	Min. COM		**3.8**			**8.2**			**71.9**	
	Max. COM			**4.5**			**10.2**			**73.0**
485	**Ave. White**	**4.2**			**9.4**			**72.6**		
	Min. White		**3.3**			**6.3**			**69.8**	
	Max. White			**5.8**			**11.2**			**74.9**
1000	**Ave. Maize**	**4.1**			**9.4**			**72.8**		
	Min. Maize		**3.1**			**6.3**			**69.8**	
	Max. Maize			**5.8**			**11.9**			**75.2**

TABLE 18: NUTRITIONAL VALUES OF YELLOW MAIZE ACCORDING TO GRADE (2014/2015) (continue)

Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
CLASS: COM										
1	Region 13	3.7	-	-	10.5	-	-	73.1	-	-
1	Region 14	4.3	-	-	9.5	-	-	72.3	-	-
1	Region 16	4.3	-	-	10.1	-	-	72.3	-	-
2	Region 19	3.6	3.5	3.7	11.1	11.0	11.2	72.8	72.7	72.9
-	Region 21	-	-	-	-	-	-	-	-	-
1	Region 29	4.4	-	-	9.9	-	-	71.9	-	-
1	Region 30	3.3	-	-	8.4	-	-	75.2	-	-
4	Region 33	3.8	3.7	4.0	9.0	8.8	9.2	72.8	72.6	73.0
11	**Ave. COM**	**3.9**			**9.7**			**72.9**		
	Min. COM		**3.3**			**8.4**			**71.9**	
	Max. COM			**4.4**			**11.2**			**75.2**
515	**Min. Yellow**	**4.0**			**9.5**			**72.9**		
	Min. Yellow		**3.1**			**7.1**			**70.8**	
	Max. Yellow			**5.1**			**11.9**			**75.2**
1000	**Ave. Maize**	**4.1**			**9.4**			**72.8**		
	Min .Maize		**3.1**			**6.3**			**69.8**	
	Max. Maize			**5.8**			**11.9**			**75.2**

TABLE 19: NUTRITIONAL VALUES OF WHITE AND YELLOW MAIZE (2014/2015)

Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
	WHITE									
3	Region 11	4.0	3.6	4.5	8.9	8.8	9.1	72.4	72.2	72.9
15	Region 12	4.2	3.8	4.7	9.7	9.2	10.3	72.2	71.4	73.2
33	Region 13	4.2	3.8	4.8	9.9	8.3	11.2	72.4	71.1	73.3
31	Region 14	4.2	3.4	4.8	9.7	8.9	10.5	72.6	71.1	74.4
3	Region 15	4.3	4.2	4.4	9.8	9.7	9.9	72.2	71.8	72.7
5	Region 16	4.3	4.2	4.5	10.1	9.7	10.8	72.3	72.0	72.8
37	Region 17	4.2	3.8	4.5	9.7	8.5	10.3	72.6	71.6	73.9
10	Region 18	4.2	3.8	4.5	9.5	8.6	10.4	72.4	71.5	73.1
34	Region 19	4.2	3.8	4.8	9.8	8.7	10.5	72.4	71.3	73.5
24	Region 20	4.2	3.5	4.5	9.4	8.0	10.8	72.6	70.8	74.0
21	Region 21	4.3	3.8	4.8	9.7	7.9	11.2	72.0	71.0	73.4
14	Region 22	4.1	3.8	4.3	9.9	9.0	11.0	72.1	71.6	72.8
17	Region 23	4.1	3.9	4.4	9.9	9.4	10.8	72.2	71.1	73.3
8	Region 24	4.3	3.8	4.7	9.5	8.1	10.4	72.5	71.4	73.6
9	Region 25	4.2	3.8	4.5	9.3	7.5	10.1	73.0	71.9	73.9
8	Region 26	4.4	4.0	4.7	9.9	7.8	11.0	72.4	71.2	73.6
1	Region 27	4.5	-	-	8.2	-	-	72.0	-	-
18	Region 28	4.1	3.7	4.8	9.3	8.5	10.9	72.5	70.8	73.8
21	Region 29	4.3	3.3	5.0	9.5	7.2	11.2	72.4	71.3	74.6
30	Region 30	4.0	3.5	4.5	9.0	8.1	10.2	72.8	72.2	74.2
20	Region 31	4.1	3.6	4.9	9.2	7.9	10.3	73.0	71.9	74.3
16	Region 32	3.9	3.6	4.1	9.2	8.3	10.4	73.2	71.9	74.6
41	Region 33	4.1	3.6	4.7	8.4	6.3	10.1	73.2	71.6	74.9
38	Region 34	4.1	3.6	4.7	9.1	8.0	11.0	72.7	70.6	74.0
5	Region 35	4.3	4.1	4.8	8.5	8.2	9.1	72.7	71.3	73.2
23	Region 36	4.3	3.9	5.8	9.0	8.5	11.1	72.6	69.8	73.7
485	**Ave. white**	**4.2**			**9.4**			**72.6**		
	Min. white		**3.3**			**6.3**			**69.8**	
	Max. white			**5.8**			**11.2**			**74.9**
	YELLOW									
19	Region 10	3.5	3.3	3.6	7.9	7.5	8.3	74.0	73.1	74.6
5	Region 11	3.5	3.4	3.6	8.4	7.9	9.3	73.7	73.0	74.2
7	Region 12	3.9	3.7	4.1	9.3	8.5	10.3	73.2	72.5	74.0
15	Region 13	4.0	3.6	4.5	10.5	9.3	11.2	72.4	71.6	73.3
18	Region 14	4.0	3.7	4.4	10.0	9.3	11.0	72.8	71.3	74.3
1	Region 15	4.1	-	-	11.6	-	-	71.9	-	-
4	Region 16	4.2	4.0	4.3	10.3	9.8	10.9	72.3	71.8	72.9
16	Region 17	4.1	3.8	4.5	10.2	9.5	10.9	72.7	72.0	73.4
8	Region 18	4.1	3.7	4.5	10.0	8.9	10.5	72.6	72.1	73.3
21	Region 19	4.0	3.5	4.4	9.8	8.1	11.6	73.1	72.0	74.4
18	Region 20	3.9	3.7	4.3	9.3	8.1	10.5	73.2	72.2	74.4
8	Region 21	4.1	3.5	4.8	9.8	7.8	11.5	72.0	70.8	73.7
7	Region 22	4.3	3.8	5.1	10.5	9.2	11.9	71.9	70.8	73.2
5	Region 23	4.2	4.0	4.3	10.9	9.7	11.9	71.7	71.2	72.3
5	Region 24	3.9	3.6	4.5	10.2	8.7	11.3	72.7	71.5	73.8
6	Region 25	4.0	3.7	4.3	9.6	9.3	10.1	73.1	72.5	73.6

TABLE 19: NUTRITIONAL VALUES OF WHITE AND YELLOW MAIZE (2014/2015) (continue)

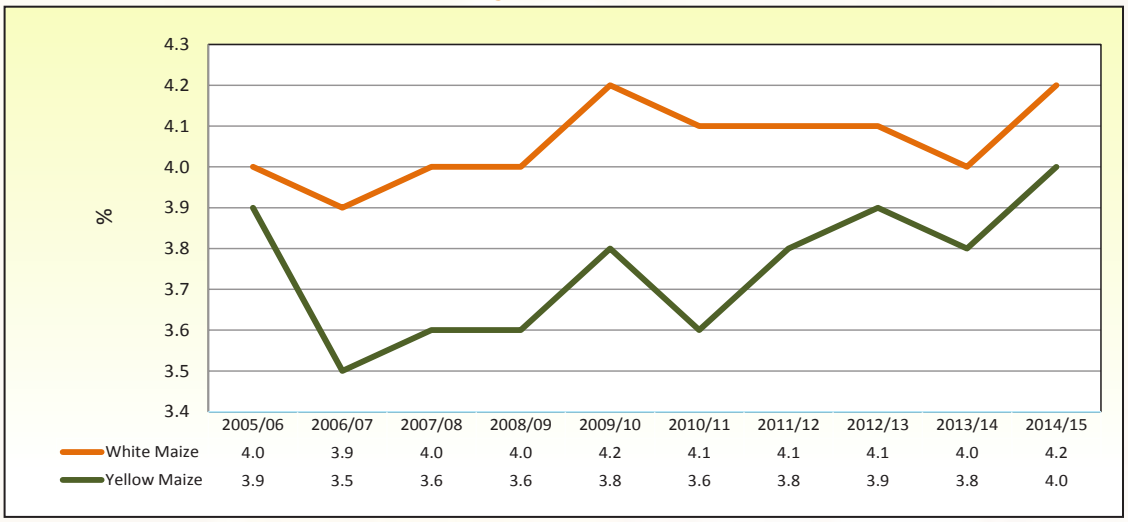
Number of samples	Region	Fat % (db)			Protein % (db)			Starch % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
YELLOW										
9	Region 26	4.2	4.1	4.5	10.5	10.0	11.5	72.2	71.7	72.6
5	Region 27	4.0	3.8	4.3	9.6	9.1	10.0	72.8	72.3	73.3
32	Region 28	4.2	3.6	4.8	9.6	8.9	10.6	72.3	71.0	73.5
58	Region 29	4.0	3.3	5.0	9.8	8.4	10.9	72.7	71.4	74.0
59	Region 30	3.9	3.1	4.6	9.3	8.1	10.6	72.9	71.6	75.2
49	Region 31	3.9	3.4	4.6	9.6	8.5	10.4	73.0	71.5	74.3
40	Region 32	3.9	3.4	4.6	9.2	8.6	10.5	73.1	71.6	74.4
43	Region 33	3.9	3.5	4.8	8.6	7.3	9.7	73.4	71.5	75.1
27	Region 34	4.1	3.6	4.7	9.4	8.5	10.1	72.9	71.3	74.1
6	Region 35	3.8	3.6	3.9	7.6	7.1	7.9	73.9	73.4	74.5
24	Region 36	4.0	3.7	4.8	8.7	7.6	9.9	73.3	71.7	74.5
515	**Ave. yellow**	**4.0**			**9.5**			**72.9**		
	Min. yellow		**3.1**			**7.1**			**70.8**	
	Max. yellow			**5.1**			**11.9**			**75.2**
WHITE AND YELLOW										
19	Region 10	3.5	3.3	3.6	7.9	7.5	8.3	74.0	73.1	74.6
8	Region 11	3.7	3.4	4.5	8.6	7.9	9.3	73.2	72.2	74.2
22	Region 12	4.1	3.7	4.7	9.6	8.5	10.3	72.5	71.4	74.0
48	Region 13	4.2	3.6	4.8	10.1	8.3	11.2	72.4	71.1	73.3
49	Region 14	4.1	3.4	4.8	9.8	8.9	11.0	72.7	71.1	74.4
4	Region 15	4.2	4.1	4.4	10.3	9.7	11.6	72.2	71.8	72.7
9	Region 16	4.2	4.0	4.5	10.2	9.7	10.9	72.3	71.8	72.9
53	Region 17	4.2	3.8	4.5	9.9	8.5	10.9	72.7	71.6	73.9
18	Region 18	4.2	3.7	4.5	9.7	8.6	10.5	72.5	71.5	73.3
55	Region 19	4.1	3.5	4.8	9.8	8.1	11.6	72.7	71.3	74.4
42	Region 20	4.1	3.5	4.5	9.4	8.0	10.8	72.9	70.8	74.4
29	Region 21	4.2	3.5	4.8	9.8	7.8	11.5	72.0	70.8	73.7
21	Region 22	4.2	3.8	5.1	10.1	9.0	11.9	72.1	70.8	73.2
22	Region 23	4.2	3.9	4.4	10.2	9.4	11.9	72.1	71.1	73.3
13	Region 24	4.1	3.6	4.7	9.8	8.1	11.3	72.6	71.4	73.8
15	Region 25	4.1	3.7	4.5	9.4	7.5	10.1	73.0	71.9	73.9
17	Region 26	4.3	4.0	4.7	10.2	7.8	11.5	72.3	71.2	73.6
6	Region 27	4.1	3.8	4.5	9.3	8.2	10.0	72.7	72.0	73.3
50	Region 28	4.2	3.6	4.8	9.5	8.5	10.9	72.4	70.8	73.8
79	Region 29	4.1	3.3	5.0	9.7	7.2	11.2	72.6	71.3	74.6
89	Region 30	3.9	3.1	4.6	9.2	8.1	10.6	72.9	71.6	75.2
69	Region 31	3.9	3.4	4.9	9.5	7.9	10.4	73.0	71.5	74.3
56	Region 32	3.9	3.4	4.6	9.2	8.3	10.5	73.1	71.6	74.6
84	Region 33	4.0	3.5	4.8	8.5	6.3	10.1	73.3	71.5	75.1
65	Region 34	4.1	3.6	4.7	9.2	8.0	11.0	72.8	70.6	74.1
11	Region 35	4.0	3.6	4.8	8.0	7.1	9.1	73.4	71.3	74.5
47	Region 36	4.1	3.7	5.8	8.8	7.6	11.1	72.9	69.8	74.5
1000	**Ave. white & yellow**	**4.1**			**9.4**			**72.8**		
	Min. white & yellow		**3.1**			**6.3**			**69.8**	
	Max. white & yellow			**5.8**			**11.9**			**75.2**

TABLE 20: NUTRITIONAL VALUES OF SOUTH AFRICAN WHITE AND YELLOW MAIZE 2005/2006 - 2014/2015

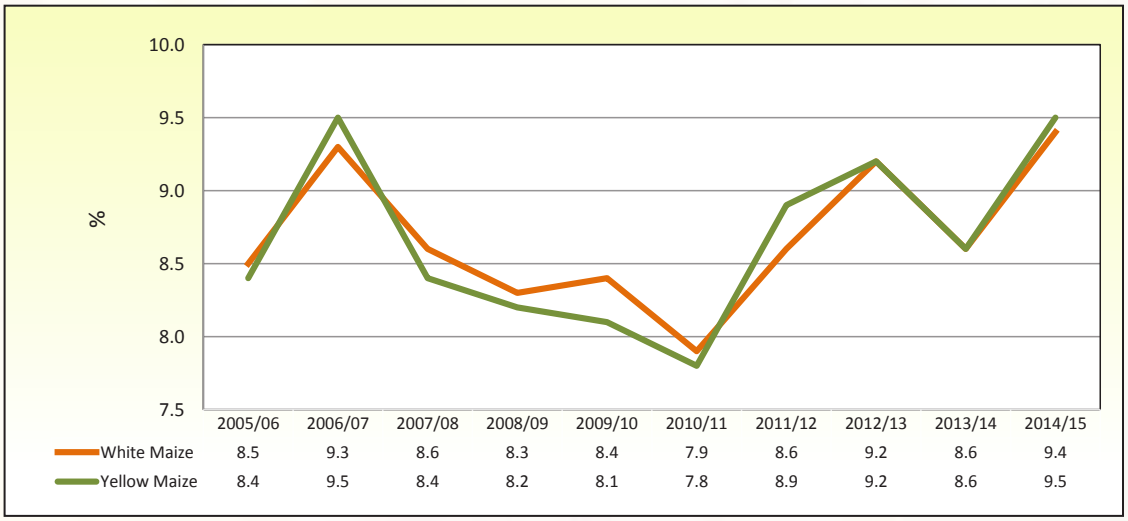
Season	Number of samples	Fat % (db)			Protein % (db)			Starch % (db)		
		ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
White Maize										
2005/06	593	4.0	3.3	5.0	8.5	6.4	10.4	71.1	69.5	73.4
2006/07	563	3.9	2.9	4.8	9.3	7.5	12.0	72.9	70.1	74.9
2007/08	483	4.0	3.2	4.7	8.6	6.6	10.9	71.9	69.9	74.0
2008/09	483	4.0	3.5	5.1	8.3	6.4	10.4	72.4	70.7	74.2
2009/10	458	4.2	3.5	5.8	8.4	6.6	10.0	72.6	70.6	74.6
2010/11	413	4.1	2.8	4.6	7.9	6.1	9.5	73.6	71.9	77.0
2011/12	577	4.1	3.3	4.7	8.6	6.3	11.2	72.6	70.6	74.3
2012/13	508	4.1	3.3	5.3	9.2	6.4	11.5	71.4	68.5	73.6
2013/14	451	4.0	3.4	5.0	8.6	6.7	10.1	72.9	70.9	75.1
2014/15	485	4.2	3.3	5.8	9.4	6.3	11.2	72.6	69.8	74.9
Weighted Average		**4.1**			**8.7**			**72.4**		
Minimum			**2.8**			**6.1**			**68.5**	
Maximum				**5.8**			**12.0**			**77.0**
Yellow Maize										
2005/06	307	3.9	3.2	4.9	8.4	6.6	9.7	71.5	69.5	73.3
2006/07	337	3.5	2.8	4.6	9.5	6.9	12.7	73.3	70.5	75.2
2007/08	417	3.6	2.9	4.8	8.4	6.9	10.4	72.3	70.0	75.0
2008/09	327	3.6	2.9	4.7	8.2	6.2	10.6	73.2	71.1	74.8
2009/10	342	3.8	3.3	4.7	8.1	6.5	10.1	73.4	71.0	75.4
2010/11	280	3.6	2.8	4.4	7.8	6.3	9.8	74.2	72.2	76.0
2011/12	423	3.8	3.0	4.6	8.9	7.0	11.3	73.0	71.0	75.0
2012/13	492	3.9	2.9	4.7	9.2	7.1	12.8	71.9	69.4	73.9
2013/14	479	3.8	3.0	4.8	8.6	6.0	11.3	73.1	70.8	75.7
2014/15	515	4.0	3.1	5.1	9.5	7.1	11.9	72.9	70.8	75.2
Weighted Average		**3.8**			**8.7**			**72.8**		
Minimum			**2.8**			**6.0**			**69.4**	
Maximum				**5.1**			**12.8**			**76.0**
White and Yellow Maize										
2005/06	900	4.0	3.2	5.0	8.4	6.4	10.4	71.2	69.5	73.4
2006/07	900	3.7	2.8	4.8	9.4	6.9	12.7	73.0	70.1	75.2
2007/08	900	3.8	2.9	4.8	8.5	6.6	10.9	72.1	69.9	75.0
2008/09	810	3.8	2.9	5.1	8.3	6.2	10.6	72.7	70.7	74.8
2009/10	800	4.0	3.3	5.8	8.3	6.5	10.1	72.9	70.6	75.4
2010/11	693	3.9	2.8	4.6	7.9	6.1	9.8	73.8	71.9	77.0
2011/12	1000	4.0	3.0	4.7	8.7	6.3	11.3	72.8	70.6	75.0
2012/13	1000	4.0	2.9	5.3	9.2	6.4	12.8	71.6	68.5	73.9
2013/14	930	3.9	3.0	5.0	8.6	6.0	11.3	73.0	70.8	75.7
2014/15	1000	4.1	3.1	5.8	9.4	6.3	11.9	72.8	69.8	75.2
Weighted Average		**3.9**			**8.7**			**72.6**		
Minimum			**2.8**			**6.0**			**68.5**	
Maximum				**5.8**			**12.8**			**77.0**

Please note:
Different starch methods have been used over years and data have been corrected accordingly.

Graph 42: Fat content of white and yellow maize over 10 seasons



Graph 43: Protein content of white and yellow maize over 10 seasons



Graph 44: Starch content of white and yellow maize over 10 seasons

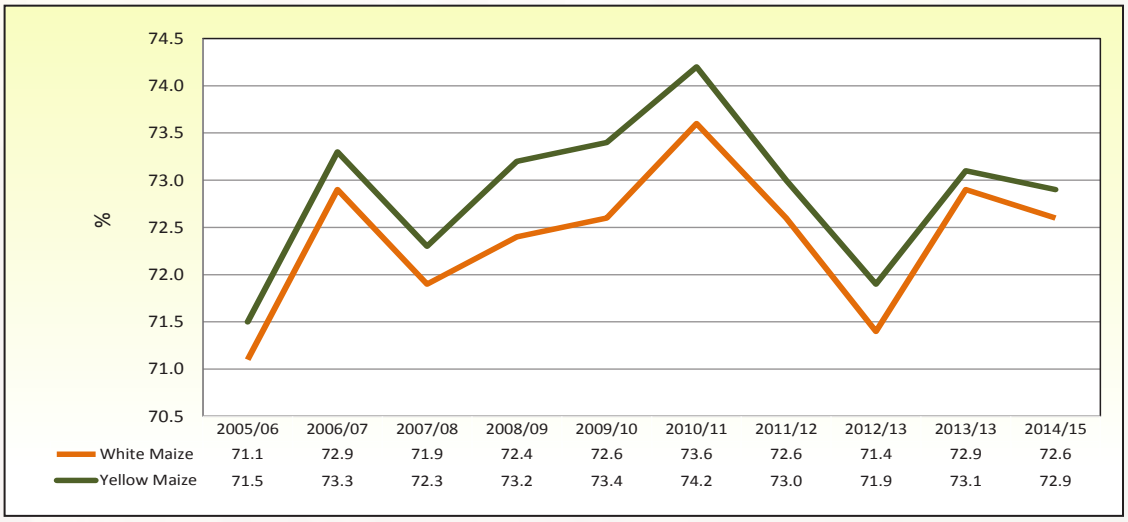


TABLE 21: PRESENCE OF GENETICALLY MODIFIED MAIZE (2014/2015)

REGION	W/Y	Cry1Ab % (LOQ: 0.4%)	Cry2Ab % (LOQ: 0.5%)	CP4 EPSPS % (LOQ: 0.25%)	REGION	W/Y	Cry1Ab % (LOQ: 0.4%)	Cry2Ab % (LOQ: 0.5%)	CP4 EPSPS % (LOQ: 0.25%)	REGION	W/Y	Cry1Ab % (LOQ: 0.4%)	Cry2Ab % (LOQ: 0.5%)	CP4 EPSPS % (LOQ: 0.25%)
10	Y	>5.0	>5.0	>5.0	21	Y	>5.0	>5.0	>5.0	31	W	>5.0	>5.0	>5.0
10	Y	>5.0	>5.0	>5.0	21	W	>5.0	>5.0	>5.0	31	W	<0.4	<0.5	<0.25
11	Y	>5.0	4.2	>5.0	22	Y	>5.0	>5.0	>5.0	31	Y	<0.4	<0.5	0.40
12	Y	>5.0	>5.0	>5.0	22	W	>5.0	>5.0	>5.0	31	Y	3.8	<0.5	>5.0
12	W	>5.0	4.1	>5.0	23	W	>5.0	>5.0	>5.0	31	Y	3.1	2.6	0.42
13	Y	>5.0	>5.0	>5.0	23	Y	>5.0	>5.0	>5.0	32	Y	>5.0	>5.0	>5.0
13	W	>5.0	>5.0	>5.0	24	W	>5.0	>5.0	>5.0	32	Y	>5.0	0.58	>5.0
13	W	>5.0	>5.0	>5.0	25	W	>5.0	>5.0	>5.0	32	W	<0.4	<0.5	4.1
13	Y	>5.0	>5.0	>5.0	26	Y	>5.0	>5.0	>5.0	32	W	>5.0	>5.0	>5.0
13	Y	>5.0	>5.0	>5.0	26	W	>5.0	>5.0	>5.0	32	Y	0.63	0.82	0.81
14	W	>5.0	>5.0	>5.0	28	W	>5.0	>5.0	>5.0	32	W	0.57	<0.5	<0.25
14	Y	>5.0	>5.0	>5.0	28	W	>5.0	>5.0	>5.0	33	W	>5.0	>5.0	>5.0
14	Y	>5.0	>5.0	>5.0	28	Y	>5.0	3.7	>5.0	33	W	>5.0	>5.0	>5.0
14	W	>5.0	>5.0	>5.0	28	Y	>5.0	>5.0	>5.0	33	Y	>5.0	<0.5	>5.0
14	Y	>5.0	>5.0	>5.0	28	Y	>5.0	>5.0	>5.0	33	W	>5.0	>5.0	>5.0
16	W	>5.0	>5.0	>5.0	29	W	>5.0	<0.5	1.4	33	W	>5.0	1.3	>5.0
17	W	>5.0	>5.0	>5.0	29	Y	>5.0	>5.0	>5.0	33	Y	>5.0	>5.0	>5.0
17	W	>5.0	>5.0	>5.0	29	W	>5.0	0.64	>5.0	33	Y	>5.0	4.6	>5.0
17	Y	>5.0	>5.0	>5.0	29	Y	>5.0	>5.0	>5.0	33	Y	>5.0	3.9	>5.0
17	W	>5.0	>5.0	>5.0	29	Y	<0.4	<0.5	>5.0	34	W	>5.0	>5.0	>5.0
17	Y	>5.0	>5.0	>5.0	29	W	1.6	<0.5	0.63	34	W	>5.0	>5.0	>5.0
18	Y	>5.0	1.2	>5.0	29	Y	3.9	>5.0	0.67	34	Y	>5.0	<0.5	>5.0
18	W	>5.0	>5.0	>5.0	29	W	>5.0	>5.0	>5.0	34	W	>5.0	>5.0	>5.0
19	W	>5.0	>5.0	>5.0	30	Y	1.7	<0.5	0.44	34	Y	0.64	<0.5	0.32
19	Y	>5.0	>5.0	>5.0	30	Y	<0.4	<0.5	1.5	34	Y	>5.0	>5.0	>5.0
19	W	>5.0	>5.0	>5.0	30	W	>5.0	>5.0	>5.0	35	W	>5.0	>5.0	>5.0
19	Y	>5.0	>5.0	>5.0	30	W	>5.0	<0.5	3.4	35	Y	>5.0	<0.5	>5.0
19	Y	>5.0	4.1	>5.0	30	Y	>5.0	0.54	>5.0	36	Y	>5.0	>5.0	>5.0
19	W	>5.0	>5.0	>5.0	30	Y	>5.0	<0.5	>5.0	36	Y	>5.0	>5.0	>5.0
20	Y	>5.0	>5.0	>5.0	30	Y	>5.0	>5.0	>5.0	36	W	>5.0	3.6	>5.0
20	W	0.71	<0.5	1.3	30	Y	>5.0	<0.5	>5.0	36	W	>5.0	4.7	>5.0
20	W	>5.0	>5.0	>5.0	30	W	>5.0	>5.0	>5.0	36	W	>5.0	0.90	>5.0
20	Y	>5.0	>5.0	>5.0	31	Y	<0.4	<0.5	0.63					
21	Y	>5.0	>5.0	>5.0	31	Y	>5.0	>5.0	>5.0					

n	Season	% Samples positive for Cry1Ab	n	Season	% Samples positive for Cry2Ab	n	Season	% Samples positive for CP4 EPSPS
100	**2014/15**	**94**	**100**	**2014/15**	**81**	**100**	**2014/15**	**98**
100	2013/14	96	100	2013/14	90	100	2013/14	94
100	2012/13	97	100	2012/13	73	100	2012/13	95
100	2011/12	97	100	2011/12	27	100	2011/12	93
77	2010/11	97	-	-	-	77	2010/11	88

n	Season	% Samples positive for MON810 *(Bt)* (ELISA)	n	Season	% Samples positive for NK603 (RUR) (ELISA)
90	2009/10	96	90	2009/10	61

LOQ: Limit of Quantification

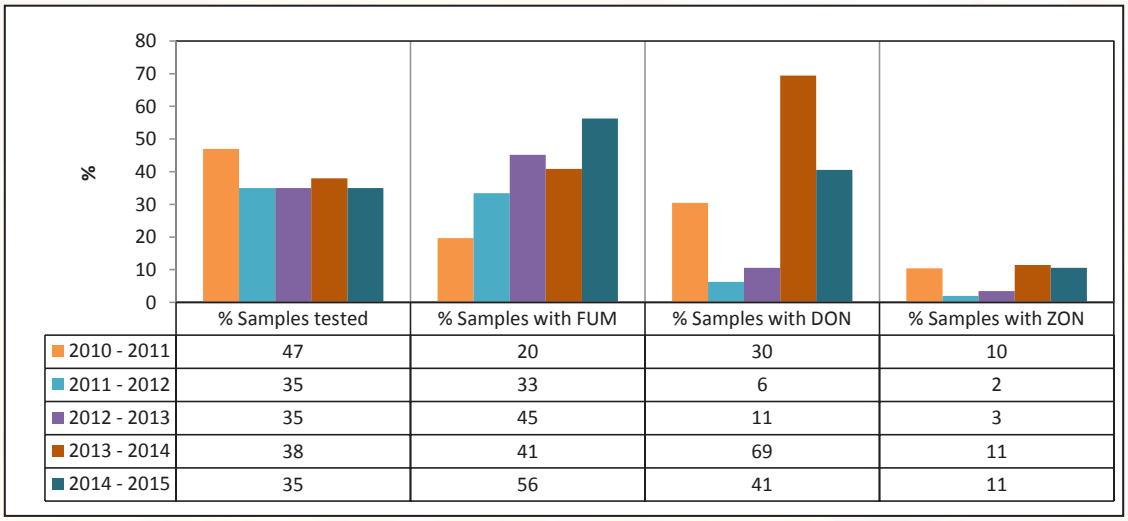
MYCOTOXINS

The annual maize crop quality surveys provide an ideal opportunity to evaluate the occurrence status of mycotoxins throughout all production regions in South Africa. Reliable analytical data is accumulated to establish a database to enable industry to comment on proposed legislative levels and to supply reliable data for targeted research projects to effectively manage the mycotoxin levels in maize.

A total number of 325 samples were analysed for mycotoxin residue levels in the 2010/2011 season. From the 2011/2012 season onwards to this, the 2014/2015 season, 350 samples were analysed annually. The samples were selected to represent all the production regions as well as both white and yellow maize proportionally.

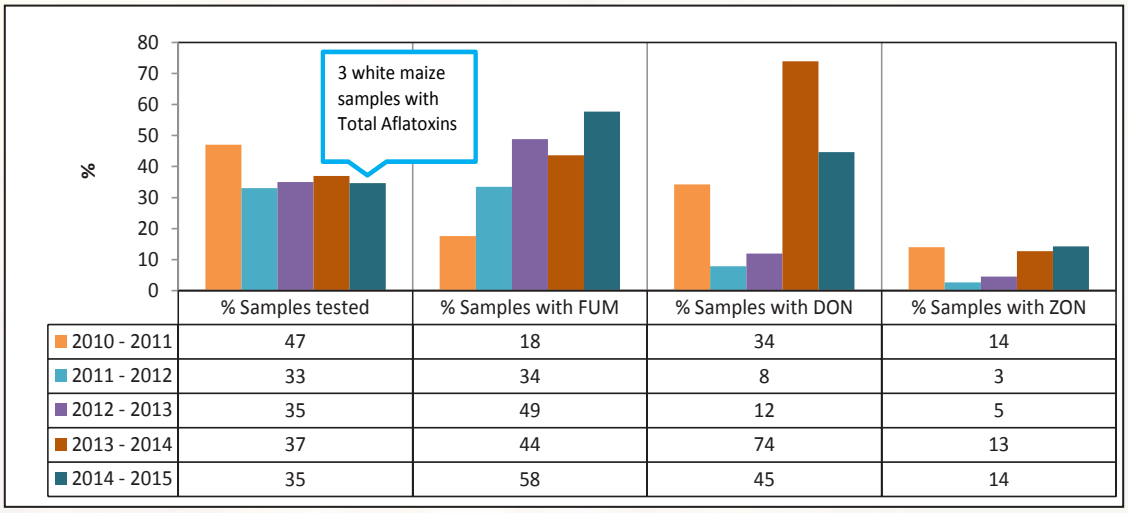
Graphs 45 to 47 provide a summary of the seasonal effect on the percentages total crop, white maize and yellow maize samples that tested positive for Fumonisins (FUM), Deoxinyvalenol (DON) and Zearalenone (ZON).

Graph 45: Percentage white and yellow maize samples that tested positive for mycotoxins over five seasons



	% Samples tested	% Samples with FUM	% Samples with DON	% Samples with ZON
2010 - 2011	47	20	30	10
2011 - 2012	35	33	6	2
2012 - 2013	35	45	11	3
2013 - 2014	38	41	69	11
2014 - 2015	35	56	41	11

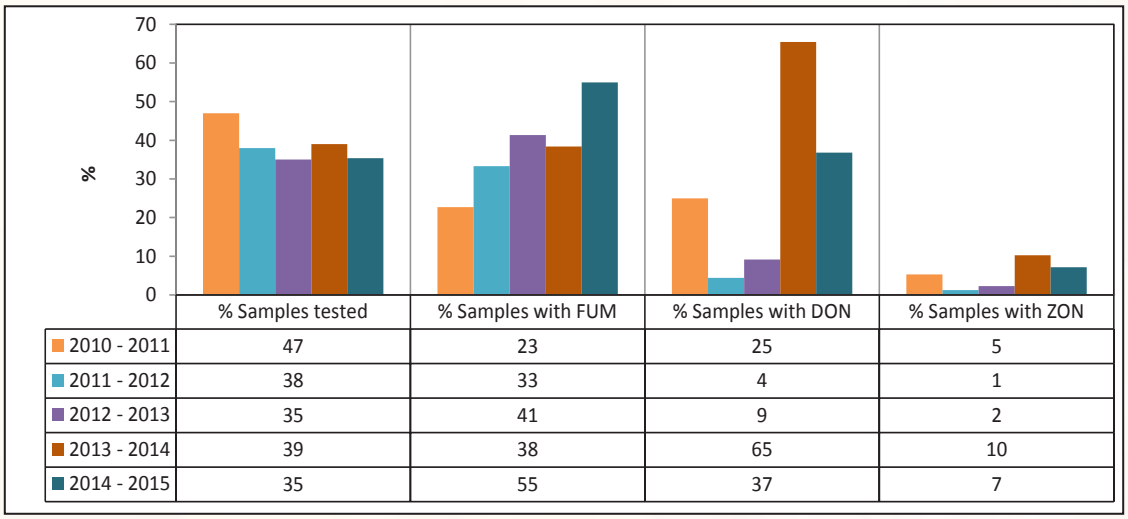
Graph 46: Percentage white maize samples that tested positive for mycotoxins over five seasons



	% Samples tested	% Samples with FUM	% Samples with DON	% Samples with ZON
2010 - 2011	47	18	34	14
2011 - 2012	33	34	8	3
2012 - 2013	35	49	12	5
2013 - 2014	37	44	74	13
2014 - 2015	35	58	45	14

For the first time since the 2010/2011 season, three samples tested positive for Aflatoxin (Afla) residues. All three of these samples were white maize from regions in North West.

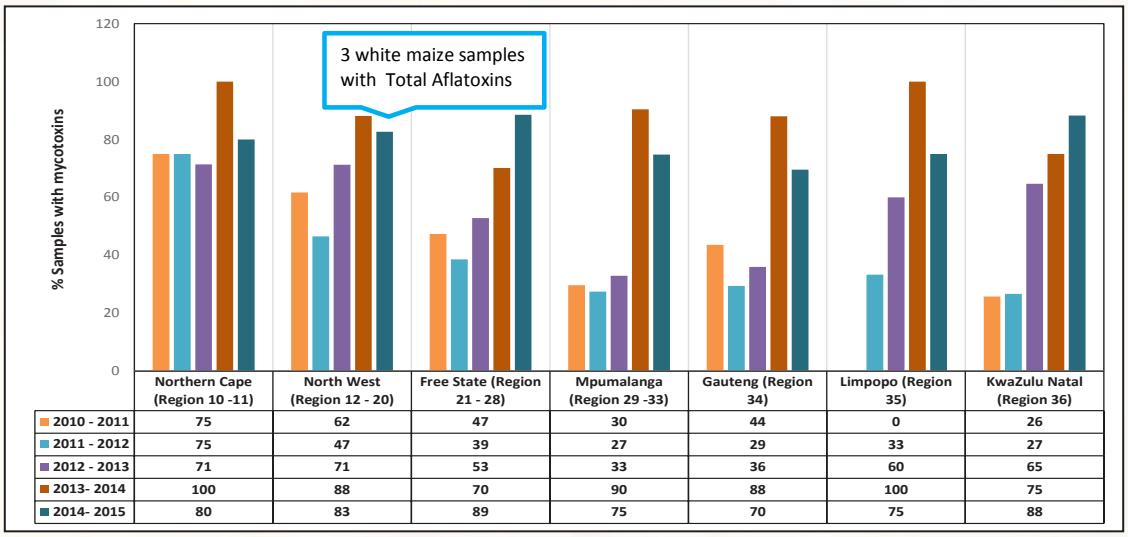
Graph 47: Percentage yellow maize samples that tested positive for mycotoxins over five seasons



	% Samples tested	% Samples with FUM	% Samples with DON	% Samples with ZON
2010 - 2011	47	23	25	5
2011 - 2012	38	33	4	1
2012 - 2013	35	41	9	2
2013 - 2014	39	38	65	10
2014 - 2015	35	55	37	7

The percentage of samples that tested positive for mycotoxins per season in the different provinces are provided in Graph 48.

Graphs 48: Percentage of samples that tested positive for mycotoxins per province over five seasons



	Northern Cape (Region 10 -11)	North West (Region 12 - 20)	Free State (Region 21 - 28)	Mpumalanga (Region 29 -33)	Gauteng (Region 34)	Limpopo (Region 35)	KwaZulu Natal (Region 36)
2010 - 2011	75	62	47	30	44	0	26
2011 - 2012	75	47	39	27	29	33	27
2012 - 2013	71	71	53	33	36	60	65
2013- 2014	100	88	70	90	88	100	75
2014- 2015	80	83	89	75	70	75	88

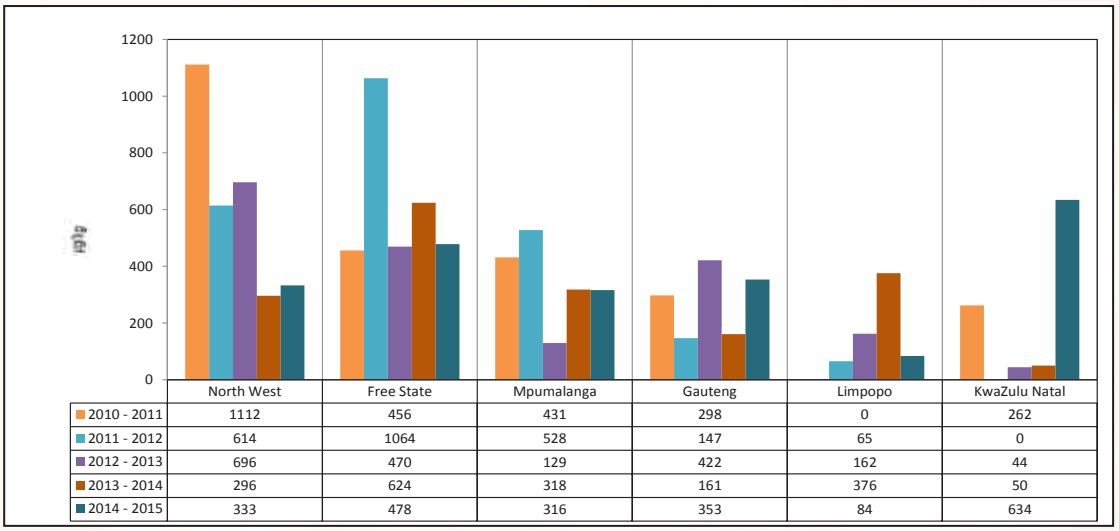
Please note that the percentages referred to in Graphs 44 to 47 were calculated based on the number of samples analysed for mycotoxin residue levels and not the total number of samples received for the crop survey.

Global trends in the occurrence and concentration levels of mycotoxins are summarised in the Annual BIOMIN Mycotoxin Survey report of 2015. A total number of 8 271 agricultural commodity (primary components used for feeds) samples from 75 countries were analysed, these include approximately 1 700 maize samples. Of these, 74% of the samples were contaminated with FUM, 76% with DON, 48% with ZON and 13% with Afla. Samples from South Africa (not only maize), showed 6% Afla, 94% ZON, 86% DON and 76% FUM contamination and none with T-2 or Ochratoxin A.

In North America, the DON concentration increased with approximately 10% and the prevalence of DON doubled in South America since the previous year, with 32% of the samples testing positive. Seventy percent of all the samples from South America was contaminated with FUM at an average level of 2 235 µg/kg. The highest FUM value worldwide was detected in a Brazilian maize sample (36 489 µg/kg). Aflatoxins were present in 18% of the samples at 40 µg/kg on average and 11% of all the samples exceeded the risk threshold. The second highest average values of Afla were detected in the African samples. Overall, DON constitutes the most frequent threat to feed commodities followed by ZON and FUM.[1]

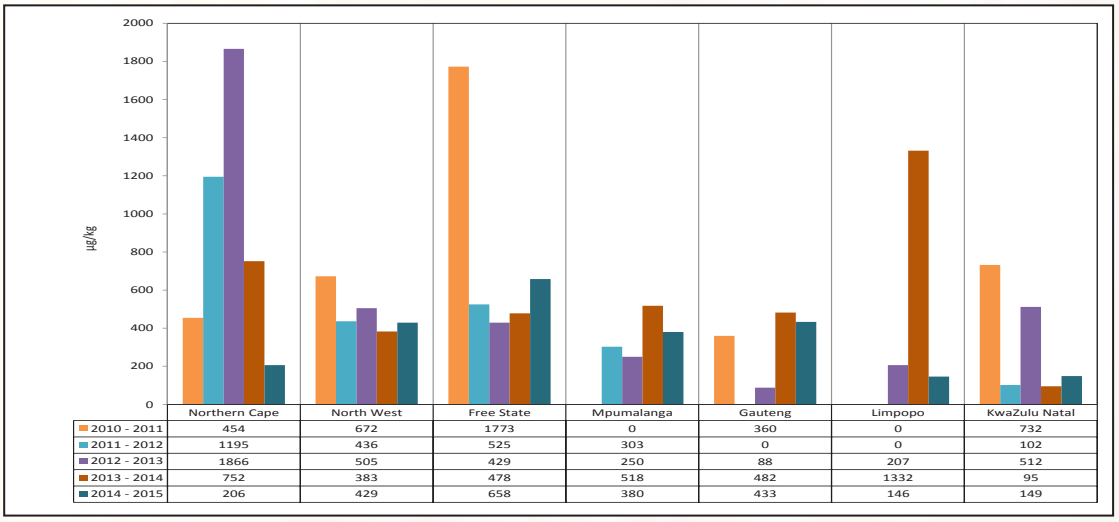
Locally, FUM and DON were found in samples from all the maize producing regions, except for Limpopo where no DON was found. Different patterns of occurrence are observed in different seasons. Mean concentration levels also differ over seasons. FUM tend to show higher mean concentrations on yellow maize compared to white maize from the same region. Please see Graphs 49 and 50.

Graph 49: Total Fumonisin mean concentration in white maize per province over five seasons



	North West	Free State	Mpumalanga	Gauteng	Limpopo	KwaZulu Natal
2010 - 2011	1112	456	431	298	0	262
2011 - 2012	614	1064	528	147	65	0
2012 - 2013	696	470	129	422	162	44
2013 - 2014	296	624	318	161	376	50
2014 - 2015	333	478	316	353	84	634

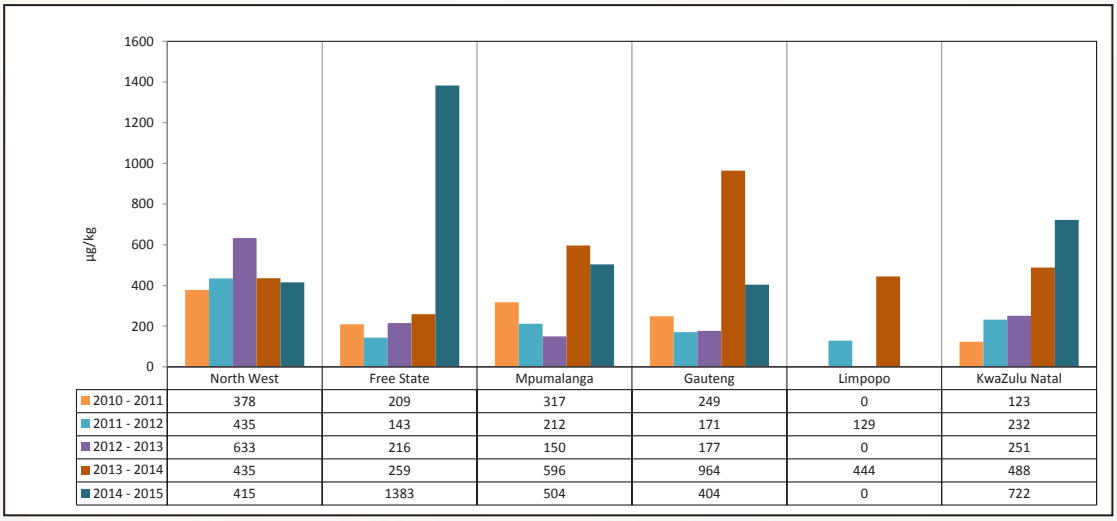
Graph 50: Total Fumonisin mean concentration in yellow maize per province over five seasons



	Northern Cape	North West	Free State	Mpumalanga	Gauteng	Limpopo	KwaZulu Natal
2010 - 2011	454	672	1773	0	360	0	732
2011 - 2012	1195	436	525	303	0	0	102
2012 - 2013	1866	505	429	250	88	207	512
2013 - 2014	752	383	478	518	482	1332	95
2014 - 2015	206	429	658	380	433	146	149

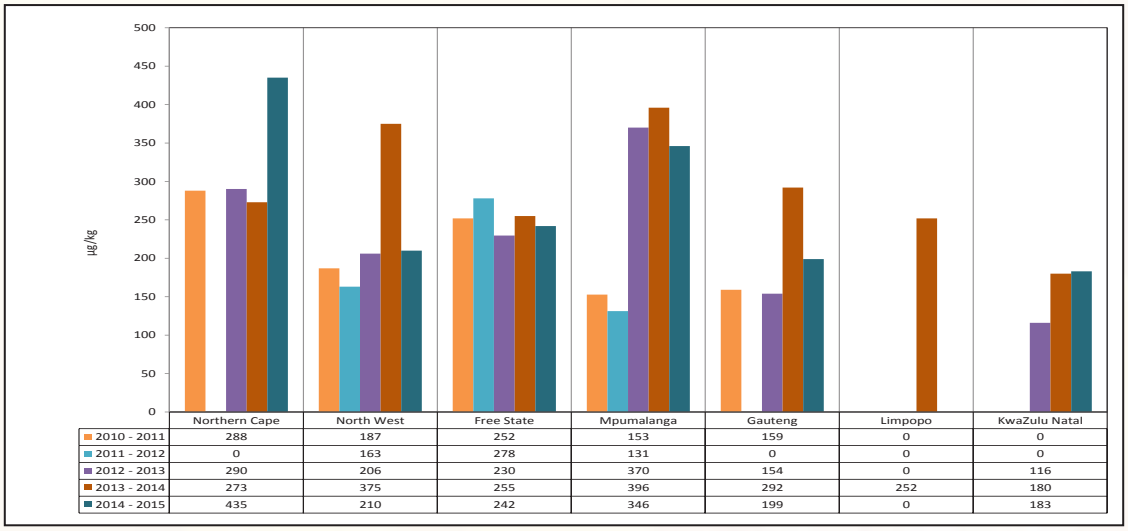
DON shows higher mean concentrations on white maize than yellow maize from the same region. Please see Graphs 51 and 52.

Graph 51: DON mean concentration in white maize per province over five seasons



	North West	Free State	Mpumalanga	Gauteng	Limpopo	KwaZulu Natal
2010 - 2011	378	209	317	249	0	123
2011 - 2012	435	143	212	171	129	232
2012 - 2013	633	216	150	177	0	251
2013 - 2014	435	259	596	964	444	488
2014 - 2015	415	1383	504	404	0	722

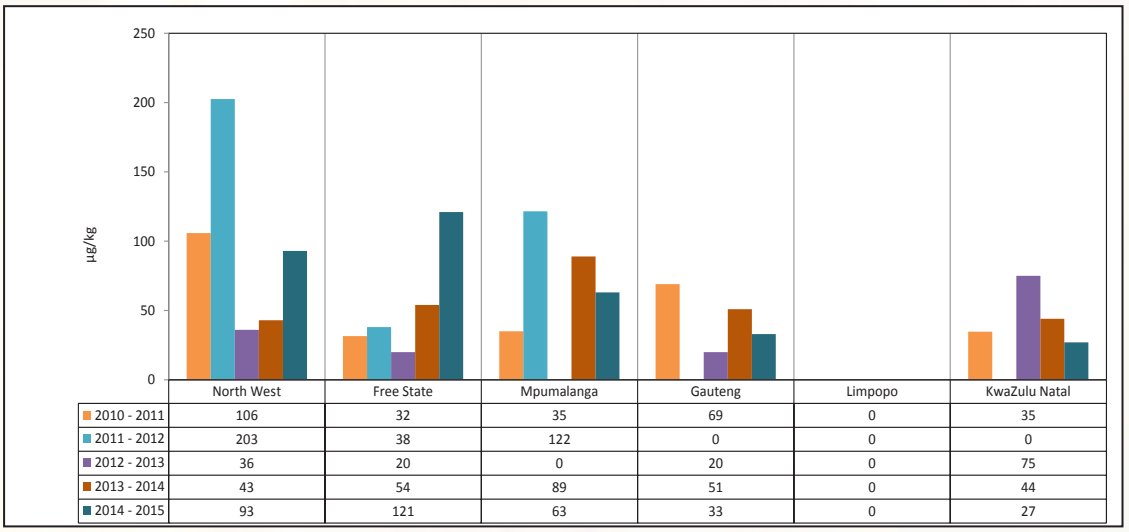
Graph 52: DON mean concentration in yellow maize per province over five seasons



	Northern Cape	North West	Free State	Mpumalanga	Gauteng	Limpopo	KwaZulu Natal
2010 - 2011	288	187	252	153	159	0	0
2011 - 2012	0	163	278	131	0	0	0
2012 - 2013	290	206	230	370	154	0	116
2013 - 2014	273	375	255	396	292	252	180
2014 - 2015	435	210	242	346	199	0	183

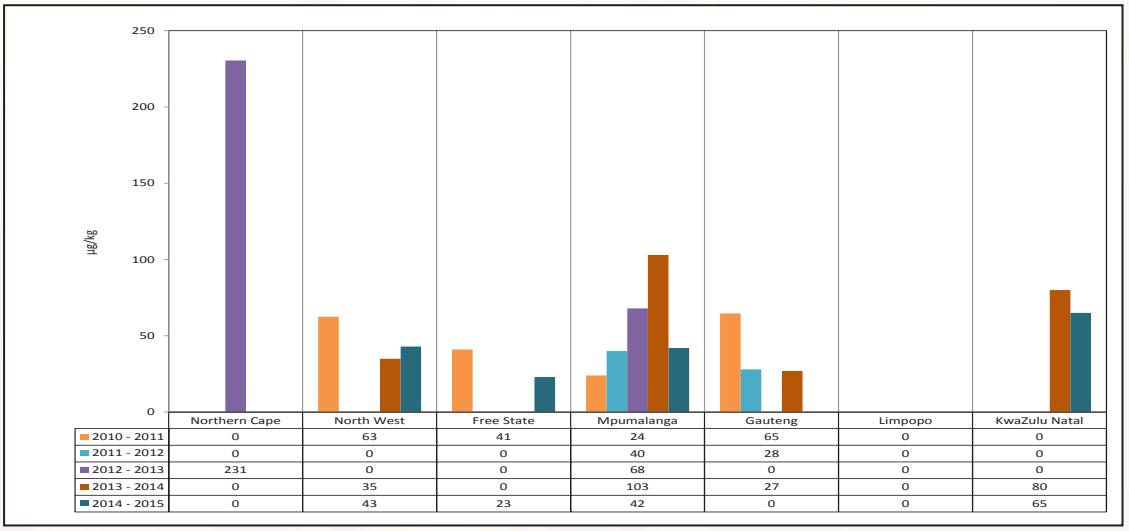
ZON mean concentrations tend to show better correlation between white and yellow maize from the same region, than FUM and DON. Please see Graphs 53 and 54.

Graph 53: ZON mean concentration in white maize per province over five seasons



	North West	Free State	Mpumalanga	Gauteng	Limpopo	KwaZulu Natal
2010 - 2011	106	32	35	69	0	35
2011 - 2012	203	38	122	0	0	0
2012 - 2013	36	20	0	20	0	75
2013 - 2014	43	54	89	51	0	44
2014 - 2015	93	121	63	33	0	27

Graph 54: ZON mean concentration in yellow maize per province over five seasons



	Northern Cape	North West	Free State	Mpumalanga	Gauteng	Limpopo	KwaZulu Natal
2010 - 2011	0	63	41	24	65	0	0
2011 - 2012	0	0	0	40	28	0	0
2012 - 2013	231	0	0	68	0	0	0
2013 - 2014	0	35	0	103	27	0	80
2014 - 2015	0	43	23	42	0	0	65

Table 22 on pages 74 to 85 provides the mycotoxin results of all 350 samples analysed for the 2014/2015 season. Table 23 on page 86 provides an overview of the mycotoxin results obtained from the 2003/2004 to 2014/2015 seasons.

International Mycotoxin Regulations

The Maximum, advisory and guidance levels for mycotoxins on maize, maize products and cereals from the European Union, USA and China are provided below for comparison purposes.

The **European Union** specifies the following maximum levels for mycotoxins on maize in foodstuffs:

Aflatoxin

- Maize and rice to be subjected to sorting or other physical treatment before human consumption or used as an ingredient in foodstuffs, 5.0 µg/kg (B_1) and 10.0 µg/kg (Sum of B_1, B_2, G_1 and G_2).

Fumonisin

- Unprocessed maize with the exception of unprocessed maize intended to be processed by wet milling, 4 000 µg/kg.
- Maize intended for direct human consumption, maize-based foods for direct consumption, with certain exceptions, 1 000 µg/kg.
- Maize-based breakfast cereals and maize-based snacks, 800 µg/kg.
- Processed maize-based foods and baby foods for infants and young children, 200 µg/kg.
- Milling fractions and other milling products with particle size > 500 µm not used for direct human consumption, 1 400 µg/kg.
- Milling fractions and other milling products with particle size ≤ 500 µm not used for direct human consumption, 2 000 µg/kg.

Deoxynivalenol (DON)

- Unprocessed maize, with the exception of unprocessed maize intended to be processed by wet milling, 1 750 µg/kg.
- Cereals intended for direct human consumption, cereal flour, bran and germ as end product marketed for direct human consumption, 750 µg/kg.
- Processed cereal based baby and baby foods for infants and young children, 200 µg/kg.
- Milling fractions of maize and other milling products with particle size > 500 µm not used for direct human consumption, 750 µg/kg.
- Milling fractions of maize and other milling products with particle size ≤ 500 µm not used for direct human consumption, 1 250 µg/kg.

Zearalenone

- Unprocessed maize with the exception of unprocessed maize intended to be processed by wet milling, 350 µg/kg.
- Cereals intended for direct human consumption, cereal flour, bran and germ as end product marketed for direct human consumption, 75 µg/kg.
- Maize intended for direct human consumption, maize-based snacks and maize-based breakfast cereals, 100 µg/kg.
- Processed maize-based foods for infants and young children, 20 µg/kg.
- Milling fractions and other milling products with particle size > 500 µm not used for direct human consumption, 200 µg/kg.
- Milling fractions and other milling products with particle size ≤ 500 µm not used for direct human consumption, 300 µg/kg.

Ochratoxin A

- Unprocessed cereals, 5 µg/kg.
- All products derived from unprocessed cereals, including processed cereal products and cereals intended for direct human consumption with the exception of food for infants and young children, 3 µg/kg. [(2)]

The European Union recommends the following maximum levels for Aflatoxin B_1 on products intended for animal feeds with a moisture content of 12%:

Complementary and complete feedingstuffs depending on the class and age of the animal, 5 – 20 µg/kg.

The European Union recommends the following guidance levels for mycotoxins on products intended for animal feeds with a moisture content of 12%:

Fumonisin B_1 + B_2

- Maize and maize products, 60 000 µg/kg.
- Complementary and complete feedingstuffs depending on the class and age of animal, 5 000 – 50 000 µg/kg.

Deoxynivalenol (DON)

- Cereals and cereal products with the exception of maize by-products, 8 000 µg/kg.
- Maize by-products, 12 000 µg/kg.
- Complementary and complete feedingstuffs depending on the class and age of animal, 900 – 5 000 µg/kg.

Zearalenone

- Cereals and cereal products with the exception of maize by-products, 2 000 µg/kg.
- Maize by-products, 3 000 µg/kg.
- Complementary and complete feedingstuffs depending on the class of animal, 100 – 500 µg/kg.

Ochratoxin A

- Cereals and cereal products, 250 µg/kg.
- Complementary and complete feedingstuffs depending on the class of animal, 50 – 5000 µg/kg.[3]

In the **USA**, the Food and Drug Administration (FDA) actions levels for Aflatoxin in animal feeds vary between 20 µg/kg and 300 µg/kg, depending on the intended use (species of animal). The action level for all commodities intended for human consumption is 20 µg/kg (excluding Aflatoxin M_1 (milk) where the maximum level is 0.5 µg/kg).

Advisory maximum levels for DON in animal feed varies between 5 000 and 10 000 µg/kg in grains and grain by-products and 1 000 to 10 000 µg/kg in the complete diet, depending on the species of animal as well as the percentage portion of the diet represented by the grain. Distillers grains, brewers grains, gluten feeds and gluten meals should not exceed 30 000 µg/kg.

Guidance levels for Fumonisin in maize and maize by-products used in animal feeds varies between 5 000 µg/kg and 100 000 µg/kg based on the class of animal and proportion of the diet and 1 000 µg/kg to 50 000 µg/kg for the complete diet.

Guidance levels for Fumonisins (FB_1 + FB_2 + FB_3) in foodstuffs are as follows: Degermed dry milled maize products (e.g. flaking grits, maize grits, maize meal, maize flour with fat content of < 2.25%, dry weight basis), 2 000 µg/kg. Cleaned corn intended for popcorn, 3 000 µg/kg. Whole or partially degermed dry milled maize products (e.g. flaking grits, maize grits, maize meal, maize flour with fat content of > 2.25%, dry weight basis), 4 000 µg/kg. [4]

In **China**, the maximum level for Aflatoxin B_1 in maize, maize flour and maize products, is 20 µg/kg. The maximum levels for DON and Zearalenone in maize and maize flour is 1000 µg/kg and 60 µg/kg respectively. In grains and milled grain products, the maximum level of Ochratoxin A allowed is 5 µg/kg. [5]

References:

1. BIOMIN Mycotoxin Annual Report 2015 www.biomin.net.
2. COMMISSION REGULATION (EC) No 1881/226 of 19 December 2006 setting maximum levels for certain contaminants in foodstuffs.
3. COMMISSION RECOMMENDATION of 17 August 2006 on the presence of deoxynivalenol, zearalenone, ochratoxin A, T-2 and HT-2 and fumonisins in products intended for animal feeding.
4. FDA Mycotoxin Regulatory Guidance, A Guide for Grain Elevators, Feed Manufacturers, Grain Processors and Exporters, August 2011.
5. National Food Safety Standard, Maximum Levels of Mycotoxins in Foods, GB 2761-2012.

National Mycotoxin Regulations

According to the Foodstuffs, Cosmetics and Disinfectants Act (Act 54 of 1972) and Regulation No. R. 1145, dated 8 October 2004, all foodstuffs, ready for human consumption, may not contain more than 10 µg/kg of aflatoxin, of which aflatoxin B_1 may not exceed 5 µg/kg.

According to the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act (Act 36 of 1947) and Regulation No. R. 70 of 12 February 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 feedlot	300 000	300 000 000
	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

TABLE 22: MYCOTOXIN RESULTS - MAIZE CROP QUALITY 2014/2015

Region	Grade	Aflatoxin µg/kg					Fumonisin µg/kg				DON µg/kg	15-ADON µg/kg	Ochratoxin A µg/kg	Zearalenone µg/kg	HT-2 µg/kg	T-2 µg/kg
		G_1	B_1	G_2	B_2	Total	B_1	B_2	B_3	Total						
		LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg		LOQ: 20 µg/kg	LOQ: 20 µg/kg	LOQ: 20 µg/kg		LOQ: 100 µg/kg	LOQ: 100 µg/kg	LOQ: 5 µg/kg	LOQ: 20 µg/kg	LOD: 20 µg/kg	LOQ: 20 µg/kg
10	YM1	ND	ND	ND	ND	ND	90	ND	ND	90	ND	ND	ND	ND	ND	ND
10	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	YM2	ND	ND	ND	ND	ND	51	ND	ND	51	ND	ND	ND	ND	ND	ND
10	YM1	ND	ND	ND	ND	ND	193	30	ND	223	303	151	ND	ND	ND	ND
10	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	YM1	ND	ND	ND	ND	ND	40	ND	ND	40	ND	ND	ND	ND	ND	ND
10	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	567	169	ND	ND	ND	ND
11	WM1	ND	ND	ND	ND	ND	306	67	26	399	358	ND	ND	ND	ND	ND
11	YM1	ND	ND	ND	ND	ND	498	248	33	779	ND	ND	ND	ND	ND	ND
11	YM2	ND	ND	ND	ND	ND	52	ND	ND	52	ND	ND	ND	ND	ND	ND
12	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
12	YM2	ND	ND	ND	ND	ND	48	ND	ND	48	ND	ND	ND	ND	ND	ND
12	YM2	ND	ND	ND	ND	ND	82	20	ND	102	ND	ND	ND	ND	ND	ND
12	WM1	ND	ND	ND	ND	ND	66	ND	ND	66	ND	ND	ND	ND	ND	ND
12	WM1	ND	ND	ND	ND	ND	20	ND	ND	20	ND	ND	ND	ND	ND	ND
12	WM1	33	9	6	ND	48	913	268	53	1 234	ND	ND	ND	ND	ND	ND
12	WM2	ND	ND	ND	ND	ND	481	107	41	629	ND	ND	ND	ND	ND	ND
12	WM1	ND	ND	ND	ND	ND	151	35	ND	186	ND	ND	ND	ND	ND	ND
13	YM1	ND	ND	ND	ND	ND	273	74	ND	347	ND	ND	ND	ND	ND	ND
13	YM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
13	WM1	ND	ND	ND	ND	ND	23	ND	ND	23	ND	ND	ND	ND	ND	ND
13	YM2	ND	ND	ND	ND	ND	422	76	41	539	ND	ND	ND	ND	ND	ND
13	YM1	ND	ND	ND	ND	ND	646	227	36	909	ND	ND	ND	ND	ND	ND
13	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
13	YM1	ND	ND	ND	ND	ND	1 519	391	91	2 001	117	ND	ND	ND	ND	ND
13	WM1	ND	ND	ND	ND	ND	744	174	47	965	ND	ND	ND	ND	ND	ND
13	COM	ND	ND	ND	ND	ND	69	ND	ND	69	ND	ND	ND	ND	ND	ND
13	WM3	ND	ND	ND	ND	ND	261	72	ND	333	272	ND	ND	ND	ND	ND
13	YM3	ND	ND	ND	ND	ND	427	83	25	535	ND	ND	ND	ND	ND	ND
13	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 22: MYCOTOXIN RESULTS - MAIZE CROP QUALITY 2014/2015 (continue)

Region	Grade	Aflatoxin µg/kg					Fumonisin µg/kg				DON µg/kg	15-ADON µg/kg	Ochratoxin A µg/kg	Zearalenone µg/kg	HT-2 µg/kg	T-2 µg/kg
		G_1	B_1	G_2	B_2	Total	B_1	B_2	B_3	Total						
		LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg		LOQ: 20 µg/kg	LOQ: 20 µg/kg	LOQ: 20 µg/kg		LOQ: 100 µg/kg	LOQ: 100 µg/kg	LOQ: 5 µg/kg	LOQ: 20 µg/kg	LOD: 20 µg/kg	LOQ: 20 µg/kg
13	WM1	ND	ND	ND	ND	ND	658	160	44	862	ND	ND	ND	ND	ND	ND
13	YM2	ND	ND	ND	ND	ND	1 440	377	180	1 997	289	ND	ND	ND	ND	ND
13	YM1	ND	ND	ND	ND	ND	79	24	ND	103	ND	ND	ND	ND	ND	ND
13	WM2	ND	ND	ND	ND	ND	109	21	ND	130	ND	ND	ND	ND	ND	ND
13	WM1	ND	ND	ND	ND	ND	436	145	39	620	ND	ND	ND	ND	ND	ND
14	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
14	WM1	ND	ND	ND	ND	ND	230	44	ND	274	ND	ND	ND	ND	ND	ND
14	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
14	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
14	WM1	ND	ND	ND	ND	ND	72	ND	ND	72	ND	ND	ND	ND	ND	ND
14	WM2	ND	ND	ND	ND	ND	683	176	51	910	ND	ND	ND	ND	ND	ND
14	YM1	ND	ND	ND	ND	ND	167	29	ND	196	ND	ND	ND	ND	ND	ND
14	YM2	ND	ND	ND	ND	ND	136	21	ND	157	ND	ND	ND	ND	ND	ND
14	YM1	ND	ND	ND	ND	ND	575	196	42	813	ND	ND	ND	ND	ND	ND
14	YM1	ND	ND	ND	ND	ND	215	49	ND	264	ND	ND	ND	ND	ND	ND
14	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
14	YM1	ND	ND	ND	ND	ND	318	89	24	431	ND	ND	ND	ND	ND	ND
14	YM1	ND	ND	ND	ND	ND	183	58	ND	241	ND	ND	ND	ND	ND	ND
14	WM1	ND	ND	ND	ND	ND	72	23	ND	95	ND	ND	ND	ND	ND	ND
14	YM1	ND	ND	ND	ND	ND	102	25	ND	127	ND	ND	ND	ND	ND	ND
14	WM1	ND	ND	ND	ND	ND	69	22	ND	91	ND	ND	ND	ND	ND	ND
14	WM1	ND	ND	ND	ND	ND	748	181	84	1 013	ND	ND	ND	ND	ND	ND
15	WM1	ND	ND	ND	ND	ND	115	41	ND	156	ND	ND	ND	ND	ND	ND
16	COM	ND	ND	ND	ND	ND	92	24	ND	116	ND	ND	ND	ND	ND	ND
16	WM1	ND	ND	ND	ND	ND	133	44	ND	177	ND	ND	ND	ND	ND	ND
16	WM1	ND	ND	ND	ND	ND	523	138	48	709	ND	ND	ND	ND	ND	ND
17	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	151	ND	ND	ND	ND	ND
17	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
17	WM2	ND	ND	ND	ND	ND	1 068	283	88	1 439	ND	ND	ND	ND	ND	ND
17	WM3	ND	26	ND	13	39	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 22: MYCOTOXIN RESULTS - MAIZE CROP QUALITY 2014/2015 (continue)

Region	Grade	Aflatoxin µg/kg					Fumonisin µg/kg				DON µg/kg	15-ADON µg/kg	Ochratoxin A µg/kg	Zearalenone µg/kg	HT-2 µg/kg	T-2 µg/kg
		G_1	B_1	G_2	B_2	Total	B_1	B_2	B_3	Total						
		LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg		LOQ: 20 µg/kg	LOQ: 20 µg/kg	LOQ: 20 µg/kg		LOQ: 100 µg/kg	LOQ: 100 µg/kg	LOQ: 5 µg/kg	LOQ: 20 µg/kg	LOD: 20 µg/kg	LOQ: 20 µg/kg
17	YM2	ND	ND	ND	ND	ND	95	28	ND	123	ND	ND	ND	ND	ND	ND
17	WM1	ND	ND	ND	ND	ND	102	20	ND	122	ND	ND	ND	ND	ND	ND
17	YM1	ND	ND	ND	ND	ND	115	28	ND	143	ND	ND	ND	ND	ND	ND
17	YM2	ND	ND	ND	ND	ND	65	21	ND	86	ND	ND	ND	ND	ND	ND
17	WM1	ND	ND	ND	ND	ND	30	ND	ND	30	ND	ND	ND	ND	ND	ND
17	WM1	ND	ND	ND	ND	ND	40	ND	ND	40	ND	ND	ND	ND	ND	ND
17	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
17	WM1	ND	ND	ND	ND	ND	66	ND	ND	66	ND	ND	ND	ND	ND	ND
17	YM1	ND	ND	ND	ND	ND	1 807	323	70	2 200	ND	ND	ND	ND	ND	ND
17	YM1	ND	ND	ND	ND	ND	33	ND	ND	33	ND	ND	ND	ND	ND	ND
17	WM1	ND	ND	ND	ND	ND	77	ND	ND	77	ND	ND	ND	ND	ND	ND
17	WM1	ND	ND	ND	ND	ND	151	42	ND	193	ND	ND	ND	ND	ND	ND
17	YM2	ND	ND	ND	ND	ND	77	22	ND	99	ND	ND	ND	ND	ND	ND
17	WM1	ND	ND	ND	ND	ND	84	30	ND	114	ND	ND	ND	ND	ND	ND
17	YM1	ND	ND	ND	ND	ND	348	78	33	459	ND	ND	ND	ND	ND	ND
18	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
18	WM1	ND	ND	ND	ND	ND	149	88	ND	237	ND	ND	ND	ND	ND	ND
18	YM1	ND	ND	ND	ND	ND	34	ND	ND	34	103	ND	ND	ND	ND	ND
18	WM3	ND	ND	ND	ND	ND	64	20	ND	84	1 391	290	ND	93	ND	ND
18	WM2	ND	ND	ND	ND	ND	607	181	33	821	ND	ND	ND	ND	ND	ND
18	YM3	ND	ND	ND	ND	ND	81	20	ND	101	ND	ND	ND	ND	ND	ND
19	WM1	ND	ND	ND	ND	ND	111	29	ND	140	ND	ND	ND	ND	ND	ND
19	COM	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
19	YM2	ND	ND	ND	ND	ND	467	116	21	604	242	ND	ND	ND	ND	ND
19	WM1	ND	ND	ND	ND	ND	111	24	ND	135	ND	ND	ND	ND	ND	ND
19	YM1	ND	ND	ND	ND	ND	247	51	ND	298	ND	ND	ND	ND	ND	ND
19	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
19	YM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
19	COM	ND	ND	ND	ND	ND	216	39	ND	255	ND	ND	ND	ND	ND	ND
19	YM1	ND	ND	ND	ND	ND	261	98	ND	359	ND	ND	ND	ND	ND	ND

TABLE 22: MYCOTOXIN RESULTS - MAIZE CROP QUALITY 2014/2015 (continue)

Region	Grade	Aflatoxin µg/kg					Fumonisin µg/kg				DON µg/kg	15-ADON µg/kg	Ochratoxin A µg/kg	Zearalenone µg/kg	HT-2 µg/kg	T-2 µg/kg
		G_1	B_1	G_2	B_2	Total	B_1	B_2	B_3	Total						
		LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg		LOQ: 20 µg/kg	LOQ: 20 µg/kg	LOQ: 20 µg/kg		LOQ: 100 µg/kg	LOQ: 100 µg/kg	LOQ: 5 µg/kg	LOQ: 20 µg/kg	LOD: 20 µg/kg	LOQ: 20 µg/kg
19	WM2	ND	ND	ND	ND	ND	50	ND	ND	50	103	ND	ND	ND	ND	ND
19	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
19	WM1	ND	ND	ND	ND	ND	554	165	36	755	ND	ND	ND	ND	ND	ND
19	YM1	ND	ND	ND	ND	ND	45	ND	ND	45	ND	ND	ND	ND	ND	ND
19	WM2	ND	ND	ND	ND	ND	76	20	ND	96	164	ND	ND	ND	ND	ND
19	WM1	ND	ND	ND	ND	ND	573	115	41	729	160	ND	ND	ND	ND	ND
19	YM1	ND	ND	ND	ND	ND	201	33	ND	234	ND	ND	ND	ND	ND	ND
19	YM1	ND	ND	ND	ND	ND	47	ND	ND	47	191	ND	ND	ND	ND	ND
19	WM1	ND	ND	ND	ND	ND	141	39	ND	180	ND	ND	ND	ND	ND	ND
20	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
20	WM1	ND	ND	ND	ND	ND	248	67	20	335	ND	ND	ND	ND	ND	ND
20	YM2	ND	ND	ND	ND	ND	115	23	ND	138	304	ND	ND	60	ND	ND
20	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
20	WM3	ND	6	ND	ND	6	108	ND	ND	108	ND	ND	ND	ND	ND	ND
20	YM1	ND	ND	ND	ND	ND	695	181	33	909	ND	ND	ND	ND	ND	ND
20	WM1	ND	ND	ND	ND	ND	22	ND	ND	22	197	ND	ND	ND	ND	ND
20	WM1	ND	ND	ND	ND	ND	31	ND	ND	31	236	ND	ND	ND	ND	ND
20	WM1	ND	ND	ND	ND	ND	392	67	27	486	ND	ND	ND	ND	ND	ND
20	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
20	WM1	ND	ND	ND	ND	ND	45	ND	ND	45	ND	ND	ND	ND	ND	ND
20	YM1	ND	ND	ND	ND	ND	500	156	25	681	ND	ND	ND	ND	ND	ND
20	YM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	328	ND	ND	ND	ND	ND
20	WM1	ND	ND	ND	ND	ND	149	27	ND	176	800	190	ND	ND	ND	ND
20	YM3	ND	ND	ND	ND	ND	218	54	ND	272	164	ND	ND	25	ND	ND
21	YM1	ND	ND	ND	ND	ND	63	23	ND	86	ND	ND	ND	ND	ND	ND
21	COM	ND	ND	ND	ND	ND	54	ND	ND	54	135	ND	ND	ND	ND	ND
21	WM1	ND	ND	ND	ND	ND	107	ND	ND	107	ND	ND	ND	ND	ND	ND
21	YM1	ND	ND	ND	ND	ND	1 056	262	55	1 373	124	ND	ND	ND	ND	ND
21	WM1	ND	ND	ND	ND	ND	79	22	ND	101	ND	ND	ND	ND	ND	ND
21	YM2	ND	ND	ND	ND	ND	175	43	ND	218	ND	ND	ND	ND	ND	ND

TABLE 22: MYCOTOXIN RESULTS - MAIZE CROP QUALITY 2014/2015 (continue)

Region	Grade	Aflatoxin µg/kg					Fumonisin µg/kg				DON µg/kg	15-ADON µg/kg	Ochratoxin A µg/kg	Zearalenone µg/kg	HT-2 µg/kg	T-2 µg/kg
		G_1	B_1	G_2	B_2	Total	B_1	B_2	B_3	Total						
		LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg		LOQ: 20 µg/kg	LOQ: 20 µg/kg	LOQ: 20 µg/kg		LOQ: 100 µg/kg	LOQ: 100 µg/kg	LOQ: 5 µg/kg	LOQ: 20 µg/kg	LOD: 20 µg/kg	LOQ: 20 µg/kg
21	YM2	ND	ND	ND	ND	ND	454	125	34	613	206	ND	ND	ND	ND	ND
21	WM2	ND	ND	ND	ND	ND	159	71	ND	230	ND	ND	ND	ND	ND	ND
21	YM2	ND	ND	ND	ND	ND	324	78	31	433	528	238	ND	23	ND	ND
21	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
22	YM2	ND	ND	ND	ND	ND	137	27	ND	164	ND	ND	ND	ND	ND	ND
22	YM1	ND	ND	ND	ND	ND	774	228	62	1 064	ND	ND	ND	ND	ND	ND
22	WM1	ND	ND	ND	ND	ND	344	86	33	463	ND	ND	ND	ND	ND	ND
22	WM1	ND	ND	ND	ND	ND	189	38	20	247	ND	ND	ND	ND	ND	ND
22	YM1	ND	ND	ND	ND	ND	1 333	434	76	1 843	ND	ND	ND	ND	ND	ND
22	WM2	ND	ND	ND	ND	ND	917	283	51	1 251	ND	ND	ND	ND	ND	ND
22	WM1	ND	ND	ND	ND	ND	214	49	ND	263	ND	ND	ND	ND	ND	ND
23	YM1	ND	ND	ND	ND	ND	26	ND	ND	26	ND	ND	ND	ND	ND	ND
23	WM1	ND	ND	ND	ND	ND	784	202	50	1 036	ND	ND	ND	ND	ND	ND
23	YM1	ND	ND	ND	ND	ND	2 714	505	163	3 382	ND	ND	ND	ND	ND	ND
23	WM2	ND	ND	ND	ND	ND	362	118	31	511	ND	ND	ND	ND	ND	ND
23	YM1	ND	ND	ND	ND	ND	81	ND	ND	81	ND	ND	ND	ND	ND	ND
23	WM1	ND	ND	ND	ND	ND	118	36	ND	154	ND	ND	ND	ND	ND	ND
23	YM1	ND	ND	ND	ND	ND	205	56	31	292	ND	ND	ND	ND	ND	ND
23	WM1	ND	ND	ND	ND	ND	1 301	311	115	1 727	ND	ND	ND	ND	ND	ND
24	YM1	ND	ND	ND	ND	ND	530	117	31	678	ND	ND	ND	ND	ND	ND
24	WM1	ND	ND	ND	ND	ND	354	113	ND	467	ND	ND	ND	ND	ND	ND
24	YM1	ND	ND	ND	ND	ND	210	40	ND	250	ND	ND	ND	ND	ND	ND
24	WM3	ND	ND	ND	ND	ND	818	268	71	1 157	156	ND	ND	ND	ND	ND
24	WM1	ND	ND	ND	ND	ND	214	67	ND	281	ND	ND	ND	ND	ND	ND
25	WM3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
25	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	289	106	ND	ND	ND	ND
25	YM1	ND	ND	ND	ND	ND	138	42	ND	180	ND	ND	ND	ND	ND	ND
25	WM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	652	200	ND	25	ND	ND
25	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	618	194	ND	ND	ND	ND
26	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 22: MYCOTOXIN RESULTS - MAIZE CROP QUALITY 2014/2015 (continue)

Region	Grade	Aflatoxin µg/kg					Fumonisin µg/kg				DON µg/kg	15-ADON µg/kg	Ochratoxin A µg/kg	Zearalenone µg/kg	HT-2 µg/kg	T-2 µg/kg
		G_1	B_1	G_2	B_2	Total	B_1	B_2	B_3	Total						
		LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg		LOQ: 20 µg/kg	LOQ: 20 µg/kg	LOQ: 20 µg/kg		LOQ: 100 µg/kg	LOQ: 100 µg/kg	LOQ: 5 µg/kg	LOQ: 20 µg/kg	LOD: 20 µg/kg	LOQ: 20 µg/kg
26	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
26	YM2	ND	ND	ND	ND	ND	22	ND	ND	22	221	ND	ND	ND	ND	ND
26	WM1	ND	ND	ND	ND	ND	51	ND	ND	51	ND	ND	ND	ND	ND	ND
26	WM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	271	126	ND	ND	ND	ND
26	YM1	ND	ND	ND	ND	ND	178	46	ND	224	260	ND	ND	ND	ND	ND
27	YM1	ND	ND	ND	ND	ND	950	251	57	1 258	ND	ND	ND	ND	ND	ND
27	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	106	ND	ND	ND	ND	ND
28	WM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	3 167	890	ND	78	ND	ND
28	YM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	229	ND	ND	ND	ND	ND
28	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
28	WM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	723	ND	ND	94	ND	ND
28	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	692	110	ND	ND	ND	ND
28	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	269	ND	ND	ND	ND	ND
28	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
28	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	179	ND	ND	ND	ND	ND
28	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	71	ND	ND
28	YM2	ND	ND	ND	ND	ND	241	66	ND	307	ND	ND	ND	ND	ND	ND
28	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	166	ND	ND	ND	ND	ND
28	YM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	327	ND	ND	ND	ND	ND
28	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
28	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
28	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	202	ND	ND	ND	ND	ND
28	WM3	ND	ND	ND	ND	ND	23	ND	ND	23	9 736	1 768	ND	337	ND	ND
28	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	106	ND	ND	ND	ND	ND
28	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	137	ND	ND	ND	ND	ND
29	WM2	ND	ND	ND	ND	ND	540	138	49	727	142	ND	ND	ND	ND	ND
29	YM3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
29	WM3	ND	ND	ND	ND	ND	ND	ND	ND	ND	3 260	764	ND	78	ND	ND
29	YM1	ND	ND	ND	ND	ND	47	ND	ND	47	ND	ND	ND	ND	ND	ND
29	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	985	174	ND	ND	ND	ND

TABLE 22: MYCOTOXIN RESULTS - MAIZE CROP QUALITY 2014/2015 (continue)

Region	Grade	Aflatoxin µg/kg					Fumonisin µg/kg				DON µg/kg	15-ADON µg/kg	Ochratoxin A µg/kg	Zearalenone µg/kg	HT-2 µg/kg	T-2 µg/kg
		G_1	B_1	G_2	B_2	Total	B_1	B_2	B_3	Total						
		LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg		LOQ: 20 µg/kg	LOQ: 20 µg/kg	LOQ: 20 µg/kg		LOQ: 100 µg/kg	LOQ: 100 µg/kg	LOQ: 5 µg/kg	LOQ: 20 µg/kg	LOD: 20 µg/kg	LOQ: 20 µg/kg
29	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
29	YM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
29	WM1	ND	ND	ND	ND	ND	53	24	ND	77	460	120	ND	ND	ND	ND
29	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	105	ND	ND	ND	ND	ND
29	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
29	YM1	ND	ND	ND	ND	ND	484	207	37	728	ND	ND	ND	ND	ND	ND
29	YM2	ND	ND	ND	ND	ND	698	227	43	968	593	ND	ND	32	ND	ND
29	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	105	ND	ND	ND	ND	ND
29	YM2	ND	ND	ND	ND	ND	410	156	30	596	ND	ND	ND	ND	ND	ND
29	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
29	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	171	ND	ND	ND	ND	ND
29	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
29	WM1	ND	ND	ND	ND	ND	453	151	24	628	265	ND	ND	ND	ND	ND
29	YM3	ND	ND	ND	ND	ND	504	133	24	661	ND	ND	ND	ND	ND	ND
29	WM1	ND	ND	ND	ND	ND	110	ND	ND	110	ND	ND	ND	ND	ND	ND
29	YM1	ND	ND	ND	ND	ND	186	72	ND	258	142	ND	ND	ND	ND	ND
29	YM1	ND	ND	ND	ND	ND	50	ND	ND	50	ND	ND	ND	ND	ND	ND
29	YM1	ND	ND	ND	ND	ND	147	42	ND	189	ND	ND	ND	ND	ND	ND
29	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	163	ND	ND	ND	ND	ND
29	WM2	ND	ND	ND	ND	ND	581	156	33	770	1 000	ND	ND	105	ND	ND
29	WM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	157	ND	ND	ND	ND	ND
29	YM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
30	WM3	ND	ND	ND	ND	ND	ND	ND	ND	ND	144	ND	ND	ND	ND	ND
30	YM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
30	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
30	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	144	ND	ND	ND	ND	ND
30	YM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	106	ND	ND	ND	ND	ND
30	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	781	196	ND	ND	ND	ND
30	YM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
30	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 22: MYCOTOXIN RESULTS - MAIZE CROP QUALITY 2014/2015 (continue)

Region	Grade	Aflatoxin µg/kg					Fumonisin µg/kg				DON µg/kg	15-ADON µg/kg	Ochratoxin A µg/kg	Zearalenone µg/kg	HT-2 µg/kg	T-2 µg/kg
		G_1	B_1	G_2	B_2	Total	B_1	B_2	B_3	Total						
		LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg		LOQ: 20 µg/kg	LOQ: 20 µg/kg	LOQ: 20 µg/kg		LOQ: 100 µg/kg	LOQ: 100 µg/kg	LOQ: 5 µg/kg	LOQ: 20 µg/kg	LOD: 20 µg/kg	LOQ: 20 µg/kg
30	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	324	ND	ND	ND	ND	ND
30	WM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	308	ND	ND	37	ND	ND
30	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
30	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	180	ND	ND	ND	ND	ND
30	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
30	WM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	1 419	120	ND	32	ND	ND
30	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	236	ND	ND	ND	ND	ND
30	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	591	ND	ND	ND	ND	ND
30	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
30	YM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	318	ND	ND	20	ND	ND
30	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	858	155	ND	ND	ND	ND
30	YM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	148	ND	ND	ND	ND	ND
30	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	242	ND	ND	ND	ND	ND
30	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	167	ND	ND	ND	ND	ND
30	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	298	ND	ND	ND	ND	ND
30	YM1	ND	ND	ND	ND	ND	366	61	25	452	162	ND	ND	ND	ND	ND
30	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	145	ND	ND	ND	ND	ND
30	COM	ND	ND	ND	ND	ND	ND	ND	ND	ND	224	ND	ND	ND	ND	ND
30	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	101	ND	ND	ND	ND	ND
30	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	335	ND	ND	ND	ND	ND
30	COM	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
30	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	409	106	ND	ND	ND	ND
30	WM1	ND	ND	ND	ND	ND	255	48	ND	303	376	211	ND	26	ND	ND
31	WM2	ND	ND	ND	ND	ND	26	ND	ND	26	ND	ND	ND	ND	ND	ND
31	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
31	YM1	ND	ND	ND	ND	ND	196	53	ND	249	465	ND	ND	ND	ND	ND
31	YM2	ND	ND	ND	ND	ND	97	24	ND	121	ND	ND	ND	ND	ND	ND
31	YM2	ND	ND	ND	ND	ND	29	ND	ND	29	273	ND	ND	ND	ND	ND
31	YM3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
31	WM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 22: MYCOTOXIN RESULTS - MAIZE CROP QUALITY 2014/2015 (continue)

Region	Grade	Aflatoxin µg/kg					Fumonisin µg/kg				DON µg/kg	15-ADON µg/kg	Ochratoxin A µg/kg	Zearalenone µg/kg	HT-2 µg/kg	T-2 µg/kg
		G_1	B_1	G_2	B_2	Total	B_1	B_2	B_3	Total						
		LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg		LOQ: 20 µg/kg	LOQ: 20 µg/kg	LOQ: 20 µg/kg		LOQ: 100 µg/kg	LOQ: 100 µg/kg	LOQ: 5 µg/kg	LOQ: 20 µg/kg	LOD: 20 µg/kg	LOQ: 20 µg/kg
31	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
31	YM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	209	ND	ND	ND	ND	ND
31	YM1	ND	ND	ND	ND	ND	31	ND	ND	31	ND	ND	ND	ND	ND	ND
31	WM1	ND	ND	ND	ND	ND	959	287	74	1 320	113	ND	ND	ND	ND	ND
31	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	106	ND	ND	ND	ND	ND
31	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	478	ND	ND	ND	ND	ND
31	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	223	ND	ND	60	ND	ND
31	YM1	ND	ND	ND	ND	ND	48	ND	ND	48	126	ND	ND	48	ND	ND
31	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
31	YM1	ND	ND	ND	ND	ND	109	31	ND	140	ND	ND	ND	ND	ND	ND
31	YM2	ND	ND	ND	ND	ND	330	100	ND	430	152	ND	ND	ND	ND	ND
31	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
31	YM1	ND	ND	ND	ND	ND	188	61	ND	249	145	ND	ND	ND	ND	ND
31	YM3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
31	WM1	ND	ND	ND	ND	ND	70	ND	ND	70	470	127	ND	ND	ND	ND
31	WM1	ND	ND	ND	ND	ND	87	21	ND	108	375	ND	ND	25	ND	ND
31	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
32	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	71	ND	ND
32	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
32	WM2	ND	ND	ND	ND	ND	24	ND	ND	24	1 617	202	ND	212	ND	ND
32	WM2	ND	ND	ND	ND	ND	43	ND	ND	43	1 047	182	ND	91	ND	ND
32	YM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	213	ND	ND	ND	ND	ND
32	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
32	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	154	ND	ND	ND	ND	ND
32	YM2	ND	ND	ND	ND	ND	313	69	31	413	ND	ND	ND	23	ND	ND
32	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	565	108	ND	25	ND	ND
32	WM1	ND	ND	ND	ND	ND	44	ND	ND	44	ND	ND	ND	ND	ND	ND
32	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	184	ND	ND	ND	ND	ND
32	YM2	ND	ND	ND	ND	ND	161	49	ND	210	ND	ND	ND	ND	ND	ND
32	YM1	ND	ND	ND	ND	ND	889	308	39	1 236	ND	ND	ND	ND	ND	ND

TABLE 22: MYCOTOXIN RESULTS - MAIZE CROP QUALITY 2014/2015 (continue)

Region	Grade	Aflatoxin µg/kg					Fumonisin µg/kg				DON µg/kg	15-ADON µg/kg	Ochratoxin A µg/kg	Zearalenone µg/kg	HT-2 µg/kg	T-2 µg/kg
		G_1	B_1	G_2	B_2	Total	B_1	B_2	B_3	Total						
		LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg		LOQ: 20 µg/kg	LOQ: 20 µg/kg	LOQ: 20 µg/kg		LOQ: 100 µg/kg	LOQ: 100 µg/kg	LOQ: 5 µg/kg	LOQ: 20 µg/kg	LOD: 20 µg/kg	LOQ: 20 µg/kg
32	YM1	ND	ND	ND	ND	ND	593	162	31	786	ND	ND	ND	ND	ND	ND
32	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	335	ND	ND	ND	ND	ND
32	YM2	ND	ND	ND	ND	ND	436	101	ND	537	110	ND	ND	ND	ND	ND
32	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
32	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
32	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	243	ND	ND	ND	ND	ND
33	WM2	ND	ND	ND	ND	ND	457	137	47	641	135	ND	ND	ND	ND	ND
33	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
33	COM	ND	ND	ND	ND	ND	ND	ND	ND	ND	138	ND	ND	ND	ND	ND
33	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	192	188	ND	ND	ND	ND
33	YM1	ND	ND	ND	ND	ND	41	ND	ND	41	851	228	ND	38	ND	ND
33	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	231	ND	ND	ND	ND	ND
33	WM1	ND	ND	ND	ND	ND	36	ND	ND	36	400	ND	ND	29	ND	ND
33	YM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	140	ND	ND	ND	ND	ND
33	COM	ND	ND	ND	ND	ND	ND	ND	ND	ND	748	227	ND	ND	ND	ND
33	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	179	ND	ND	ND	ND	ND
33	YM1	ND	ND	ND	ND	ND	660	146	ND	806	177	ND	ND	ND	ND	ND
33	YM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
33	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
33	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	473	157	ND	ND	ND	ND
33	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	260	ND	ND	ND	ND	ND
33	WM3	ND	ND	ND	ND	ND	508	161	ND	669	1 218	183	ND	69	ND	ND
33	WM1	ND	ND	ND	ND	ND	37	ND	ND	37	ND	ND	ND	ND	ND	ND
33	YM1	ND	ND	ND	ND	ND	351	62	ND	413	ND	ND	ND	ND	ND	ND
33	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	437	134	ND	23	ND	ND
33	WM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	349	ND	ND	ND	ND	ND
33	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	106	ND	ND	ND	ND	ND
33	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	127	ND	ND	ND	ND	ND
33	COM	ND	ND	ND	ND	ND	136	43	ND	179	253	ND	ND	ND	ND	ND
33	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 22: MYCOTOXIN RESULTS - MAIZE CROP QUALITY 2014/2015 (continue)

Region	Grade	Aflatoxin µg/kg					Fumonisin µg/kg				DON µg/kg	15-ADON µg/kg	Ochratoxin A µg/kg	Zearalenone µg/kg	HT-2 µg/kg	T-2 µg/kg
		G_1	B_1	G_2	B_2	Total	B_1	B_2	B_3	Total						
		LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg		LOQ: 20 µg/kg	LOQ: 20 µg/kg	LOQ: 20 µg/kg		LOQ: 100 µg/kg	LOQ: 100 µg/kg	LOQ: 5 µg/kg	LOQ: 20 µg/kg	LOD: 20 µg/kg	LOQ: 20 µg/kg
33	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
33	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
33	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	254	ND	ND	ND	ND	ND
33	WM1	ND	ND	ND	ND	ND	59	ND	ND	59	206	ND	ND	ND	ND	ND
33	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	362	157	ND	ND	ND	ND
33	YM1	ND	ND	ND	ND	ND	305	87	ND	392	ND	ND	ND	ND	ND	ND
34	YM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	141	ND	ND	ND	ND	ND
34	WM2	ND	ND	ND	ND	ND	92	21	ND	113	ND	ND	ND	ND	ND	ND
34	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	318	ND	ND	ND	ND	ND
34	WM3	ND	ND	ND	ND	ND	189	52	ND	241	ND	ND	ND	ND	ND	ND
34	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
34	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
34	WM1	ND	ND	ND	ND	ND	150	46	ND	196	506	112	ND	ND	ND	ND
34	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
34	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	270	ND	ND	ND	ND	ND
34	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
34	WM1	ND	ND	ND	ND	ND	106	30	ND	136	ND	ND	ND	ND	ND	ND
34	YM1	ND	ND	ND	ND	ND	460	103	33	596	287	ND	ND	ND	ND	ND
34	WM2	ND	ND	ND	ND	ND	367	94	23	484	239	ND	ND	ND	ND	ND
34	YM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
34	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
34	WM1	ND	ND	ND	ND	ND	1 373	322	114	1 809	142	ND	ND	35	ND	ND
34	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	221	ND	ND	ND	ND	ND
34	WM3	ND	ND	ND	ND	ND	29	ND	ND	29	1 135	215	ND	31	ND	ND
34	YM1	ND	ND	ND	ND	ND	534	87	31	652	ND	ND	ND	ND	ND	ND
34	YM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
34	WM1	ND	ND	ND	ND	ND	114	33	ND	147	ND	ND	ND	ND	ND	ND
34	YM1	ND	ND	ND	ND	ND	51	ND	ND	51	168	ND	ND	ND	ND	ND
34	WM1	ND	ND	ND	ND	ND	22	ND	ND	22	ND	ND	ND	ND	ND	ND
35	WM1	ND	ND	ND	ND	ND	84	ND	ND	84	ND	ND	ND	ND	ND	ND

TABLE 22: MYCOTOXIN RESULTS - MAIZE CROP QUALITY 2014/2015 (continue)

Region	Grade	Aflatoxin µg/kg					Fumonisin µg/kg				DON µg/kg	15-ADON µg/kg	Ochratoxin A µg/kg	Zearalenone µg/kg	HT-2 µg/kg	T-2 µg/kg
		G_1	B_1	G_2	B_2	Total	B_1	B_2	B_3	Total						
		LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg	LOQ: 5 µg/kg		LOQ: 20 µg/kg	LOQ: 20 µg/kg	LOQ: 20 µg/kg		LOQ: 100 µg/kg	LOQ: 100 µg/kg	LOQ: 5 µg/kg	LOQ: 20 µg/kg	LOD: 20 µg/kg	LOQ: 20 µg/kg
35	YM1	ND	ND	ND	ND	ND	175	35	ND	210	ND	ND	ND	ND	ND	ND
35	YM1	ND	ND	ND	ND	ND	81	ND	ND	81	ND	ND	ND	ND	ND	ND
35	WM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
36	WM1	ND	ND	ND	ND	ND	70	ND	ND	70	ND	ND	ND	24	ND	ND
36	YM1	ND	ND	ND	ND	ND	146	64	ND	210	167	ND	ND	ND	ND	ND
36	YM2	ND	ND	ND	ND	ND	53	ND	ND	53	190	ND	ND	124	ND	ND
36	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	135	ND	ND	ND	ND	ND
36	WM2	ND	ND	ND	ND	ND	1 229	266	80	1 575	ND	ND	ND	ND	ND	ND
36	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	120	129	ND	ND	ND	ND
36	YM2	ND	ND	ND	ND	ND	230	78	23	331	372	ND	ND	42	ND	ND
36	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	477	150	ND	23	ND	ND
36	YM1	ND	ND	ND	ND	ND	29	ND	ND	29	ND	ND	ND	ND	ND	ND
36	WM1	ND	ND	ND	ND	ND	70	ND	ND	70	ND	ND	ND	ND	ND	ND
36	YM1	ND	ND	ND	ND	ND	39	ND	ND	39	204	ND	ND	29	ND	ND
36	YM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	107	ND	ND	ND	ND	ND
36	WM1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
36	YM2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
36	WM2	ND	ND	ND	ND	ND	155	33	ND	188	992	194	ND	24	ND	ND
36	YM1	ND	ND	ND	ND	ND	203	26	ND	229	118	ND	ND	ND	ND	ND
36	WM1	ND	ND	ND	ND	ND	940	266	43	1 249	1 285	307	ND	36	ND	ND
Total number of samples		**350**	**350**	**350**	**350**	**350**	**350**	**350**	**350**	**350**	**350**	**350**	**350**	**350**	**350**	**350**
Average of total number of samples		**0**	**0**	**0**	**0**	**0**	**172**	**43**	**9**	**224**	**183**	**27**	**0**	**6**	**0**	**0**
Number of positive results		**1**	**3**	**1**	**1**	**3**	**197**	**142**	**64**	**197**	**143**	**37**	**0**	**37**	**0**	**0**
Average of positive results		**33**	**14**	**6**	**13**	**31**	**305**	**107**	**48**	**397**	**447**	**251**	**-**	**60**	**-**	**-**
Maximum of positive results		**33**	**26**	**6**	**13**	**48**	**2 714**	**505**	**180**	**3 382**	**9 736**	**1 768**	**-**	**337**	**-**	**-**

Note:

Limit of quantitation (LOQ) means the lowest concentration level that can be quantified with acceptable precision and accuracy by the LC-MS/MS.

A concentration measured below the LOQ is reported as <LOQ.

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).

µg/kg = ppb (parts per billion)

TABLE 23: MYCOTOXIN RESULTS - SUMMARY OF SEASONS 2003/2004 TO 2014/2015

Season	Total Number of samples received	Number of samples tested for mycotoxins	Aflatoxin µg/kg			Fumonisin µg/kg			Deoxynivalenol µg/kg			Zearalenone µg/kg			Ochratoxin A µg/kg			T-2 Toxin µg/kg		
			ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.	ave.	min.	max.
2003/2004	900	90	0	0	0	1 140	160	5 600	200	0	13 000	<100	0	120	<2.0	0	5.7	Not tested		
2004/2005	1 000	100	0	0	0	1 080	0	5 300	600	0	3 900	<100	0	440	<2.0	0	2.4	Not tested		
2005/2006	900	90	0	0	0	970	0	13 000	2 740	0	6 200	30	0	390	<2.0	0	2.9	Not tested		
2006/2007	900	90	<1	0	9	640	0	4 500	530	0	3 100	0	0	0	<2.0	0	6.5	Not tested		
2007/2008	900	100	0	0	2	470	0	5 500	240	0	1 700	0	0	100	<1.0	0	2	Not tested		
2008/2009	810	90	0	0	0	490	0	3 300	430	0	2 900	<25	0	160	<1.0	0	1	Not tested		
*2009/2010	800	90	0	0	0	251	0	4 035	206	0	1 845	0	0	0	0	0	0	0	0	0
*2010/2011	693	325	0	0	0	468	0	7 048	165	0	1 835	33	0	270	0	0	0	0	0	0
**2011/2012	1 000	350	0	0	0	383	0	11 297	146	0	911	33	0	297	0	0	0	0	0	0
**2012/2013	1 000	350	0	0	0	530	0	11 243	186	0	1 175	30	0	426	0	0	0	2	0	232
**2013/2014	930	350	0	0	0	451	0	5 357	243	0	6 134	38	0	445	0	0	0	0	0	0
**2014/2015	1 000	350	2	0	48	357	0	3 382	397	0	9 736	36	0	337	0	0	0	0	0	0
Total	13 533	1 864																		
Min.				0			0			0			0			0			0	
Max.					48			13 000			13 000			445			7			290

*** Sum of Aflatoxin (G_1; B_1; G_2; B_2) and sum of Fumonisin (B_1; B_2)**

**** Sum of Aflatoxin (G_1; B_1; G_2; B_2) and sum of Fumonisin (B_1; B_2; B_3)**

RSA averages calculated from averages per provice.

Mycotoxin methodology

Technique used for season 2003/2004 - 2006/2007

The mycotoxin analyses were carried out in accordance with the Vicam Immunoaffinity Column Chromatography method using the different Vicam Instruction Manuals for the different mycotoxins. Detection of the toxins was done on a Fluorometer. The following range and limit of detection apply for each toxin:

Mycotoxin	Assay range µg/kg	LOD for maize µg/kg
Aflatoxin	0 - 300	1
2umonisin	0 - 10 000	250
Deoxynivalenol	500 - 50 000	500
Zearalenone	0 - 5 000	100
Ochratoxin A	0 - 50	2
T - 2 Toxin	150 - 2 000	150

Technique used for season 2007/2008 - 2008/2009

The SAGL used the ROSA (Rapid One Step Assay) Quantitative test, which is a lateral flow immuno assay test, together with the ROSA-M Reader for measuring the mycotoxin content. The following range and limit of detection apply for each toxin:

Mycotoxin	Assay range µg/kg	LOD for maize µg/kg
Aflatoxin	0 - 100	2
Fumonisin	0 - 60 000	100
Deoxynivalenol	0 - 5 000	250
Zearalenone	0 - 1 000	25
Ochratoxin A	0 - 150	1

Technique used for season 2009/2010 - 2014/2015

During 2010 SAGL implemented a multi-mycotoxin screening method using UPLC-MS/MS. The following limit of detection applies for each toxin:

Mycotoxin	LOQ for maize µg/kg	LOD for maize µg/kg
Aflatoxin G_1	5	2.5
Aflatoxin B_1	5	2.5
Aflatoxin G_2	5	2.5
Aflatoxin B_2	5	2.5
Fumonisin B_1	20	10
Fumonisin B_2	20	10
Fumonisin B_3	20	10
Deoxynivalenol	100	50
Zearalenone	20	10
Ochratoxin A	5	2.5
T - 2 Toxin	20	10

Notes:

Limit of detection (LOD) means the lowest level that can be detected accurately by the technique.

Limit of quantitation (LOQ) means the lowest level that can be quantified accurately by the technique.

A result above zero but lower than the limit of detection/quantitation, is reported as <LOD/<LOQ.

µg/kg = ppb (parts per billion)

METHODS

SAMPLING PROCEDURE

A working group determined the process which needs to be followed to ensure that the crop quality samples which are 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.

After grading, the grading samples are placed in separate containers according to class and grade.

After 80% of the expected harvest has been received, the silo divides the content of each container 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, the combined contents of the containers is mixed thoroughly before dividing it with a multi slot divider to obtain the required 3 kg sample.

The samples are marked clearly 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 are then forwarded to the SAGL.

RSA GRADING

RSA grading was done in accordance with the Grading Regulations for maize, as published in the Government Gazette No. 32190 of 8 May 2009, Regulation No. R.473 and amended by Industry-Wide Dispensation REF No: 20/4/14/1, dated 15 April 2010.

Description of deviations relating to RSA grading:

Defective maize kernels

The following definition of Defective maize kernels is quoted from the Grading Regulations:
"Defective maize kernels" means maize kernels and pieces of maize kernels –

(a) that are shrivelled, obviously immature, frost-damaged, heat damaged, water damaged, mouldy or chalky;
(b) that are discoloured by external factors such as water and sun: Provided that discoloration on both sides of the maize kernel limited to less than a quarter from the bottom tip of the maize kernel shall not be considered as defective, oxidation stained maize kernels, coffee stained maize kernels and pinked maize kernels shall not be considered as defective;
(c) that have sprouted, including kernels which the shoot (plumule) in the germ is visibly discoloured;
(d) that have cavities in the germ or endosperm caused by insects or rodents;
(e) that are visibly soiled (smeared) or contaminated by smut, fire, soil, smoke or coal-dust;
(f) all matter that can pass through the 6.35 mm round-hole sieve; and
(g) that 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."

Foreign matter

The term "foreign matter" means all matter above the sieve other than maize, glass, stones, coal, dung or metal.

Other colour

"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 endopserm as a result of genetic (characteristics) composition have another colour than yellow.

Combined deviation

The term "combined deviation" means the sum of defective kernels (above and below the 6.35 mm sieve), foreign matter and other colour kernels.

Pinked kernels

The term "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.

The specification, according to the Grading Regulations for classes 1 to 3 of white maize is a maximum of 12%. No specification for yellow maize according to the Grading Regulations.

Fungal infection

Kernels which are mouldy (fungi infected) are reported as defective kernels according to the grading regulations.

"Mouldy" means kernels and pieces of kernels that –
(a) are visibly infected by fungi and 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 kernel are partially to completely infected.

For this survey all samples were also inspected for the visual symptoms of Diplodia and Fusarium infection and 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.

% Cobrot reported is the percentage maize kernels that are both Fusarium and Diplodia infected.

USA GRADING

USA grading was determined in accordance with the method of the American Grading Regulations (United States Department of Agriculture).

There are seven grades or standards in US grading, Grades nos. 1 to 5, sample grade and mixed grade. No.1 is the most desirable followed by no. 2 down to sample grade and mixed grade.

Description of deviations relating to USA grading:

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.

Heat damaged kernels

Kernels and pieces of kernels which are materially discolored by excessive respiration, with the dark discoloration extending out of the germ through the sides and into the back of the kernel as well as kernels and pieces of kernels which are puffed or swollen and materially discolored by external heat caused by artificial drying methods.

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.

Foreign material is all matter that passes readily through a 2.38 mm round-hole sieve and all matter other than corn that remains on top of the 4.76 mm round-hole sieve after sieving.

Broken corn and foreign material is all matter that passes readily through a 4.76 mm round-hole sieve and all matter other than corn that remains in the sieved sample after sieving.

Bushel weight

The specific mass (or grain density) of maize (expressed as test weight or bushel weight) is a quality characteristic which is important to some maize consumers and is applied as a grading factor in the USA grading regulations.

The Test weight per bushel apparatus is used to determine the approximate weight of a bushel of a particular lot of grain.

Bushel weight was determined on the maize crop samples and the results converted to hectoliter mass by multiplication with a factor of 1.2872.

Other colour

Maize samples are deemed to be mixed grade when maize kernels of another colour for white maize exceeds 2% and for yellow maize exceeds 5%.

NUTRITIONAL VALUE

The fat, protein and starch 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 calibration on the Infratec 1241 Grain Analyser (NIT) was checked against international chemical methods for the determination of nutritional values.

The chemical methods used to check the calibration were:

a) Crude fat: Petroleum ether extraction (Soxhlet) method (In house method 024)
b) Crude protein: Dumas (Leco) method (AACCI 46-30.01)
c) Starch: Hydrochloric Acid dissolution method (Polarimeter) (In house method 019)

The results obtained by the Infratec 1241 Grain Analyser (NIT) were checked by analysing every tenth sample by means of the primary methods.

PHYSICAL CHARACTERISTICS

Test weight

Test weight is reported in kilogram per hectolitre. 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 (See USA grading-Bushel weight).

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.

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, normally 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 excesive 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, for example 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 fraction below the 6.35 mm and 4.75 mm sieves was collected and the percentage broken kernels < 6.35 mm and < 4.75 mm was 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 an indication of the relative differences between samples tested. The milling index is measured with the Infratec 1241 - Generation 3 Standard Version Grain Analyser.

In previous seasons (up to 2012/2013) the samples were analysed by means of the calibration model developed by die Grain Crops Institute of the ARC. The last two seasons' samples were analysed by means of the new version of the milling index model developed by the SAGL. The NMI (New Milling Index) model was developed on data acquired from analyses performed on maize cultivar trials over three seasons. These trials included a range of hardness levels. Samples were supplied by the ARC-GCI and by commercial seed breeders for inclusion in the statistical modelling.

Calibrations were done between NIT spectra and various Roff Milling parameters including the ARC Roff milling formula. From these, the best solution was selected based on multivariate regression (Partial Least Square Regression). The samples used for the model were all pure cultivar samples.

MILLING OF MAIZE ON 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 germ, 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 following fractions are weighed and determined as percentage: Break 1 meal, Break 2 meal, Break 3 meal and Break 3 grits. Break 1, 2 and 3 germ and bran are combined and then weighed for determination of Bran/Germ %. Break 3 grits are weighed for determination of % Grits. Break 1, 2 and 3 meal are weighed for determination of % extraction total meal.

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 was done on unsifted and sifted maize meal obtained from Break 2 and 3 of the Roff mill. The sifted samples were sifted with a 300 µm sieve and then mixed to contain 87% of maize meal > 300 µm and 13% of maize meal < 300 µm.

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 1000 maize crop samples were tested for Aflatoxin G_1; B_1; G_2; B_2, Fumonisin B_1, B_2 and B_3, Deoxynivalenol, 15-ADON, HT-2 Toxin, T-2 Toxin, Zearalenone and Ochratoxin A by means of a multi-mycotoxin screening method using UPLC - MS/MS.

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

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).

GMO (Genetically Modified Organisms)

The EnviroLogix QuickComb kit for bulk grain was used to quantitatively determine the presence of genetically modified maize. The kit is designed to extract and detect the presence of certain proteins at the levels typically expressed in genetically modified bulk maize grain. The procedure prescribed in the EnviroLogix - QuickScan Instruction Manual, Rev 10-04-10 was followed. Results were scanned and interpreted quantitatively with the EnviroLogix QuickScan system.

100 crop samples were tested for Cry1Ab, Cry2Ab and CP4 EPSPS modified maize. Cry1Ab protein in maize is produced from a gene derived from *Bacillus thuringiensis (Bt)*.

GMO Protein/Trait	Event	Trade name / Brand
Cry1Ab	MON810 MON89034 Bt11	YieldGard®
Cry2Ab	MON89034	*in* Genuity™ VT Triple PRO™ SmartStax™
CP4 EPSPS	NK603	Roundup Ready®

Maize Imports and Exports

RSA MAIZE IMPORTS PER COUNTRY

2014/15 Season (26 Apr 2014 - 24 Apr 2015)

Country	White maize (tons)	Yellow maize (tons)	All maize (tons)
Argentina	0	65 250	65 250
Total	**0**	**65 250**	**65 250**

RSA MAIZE IMPORTS PER HARBOUR

2014/15 Season (26 Apr 2014 - 24 Apr 2015)

Harbour	White maize (tons)	Yellow maize (tons)	All maize (tons)
Cape Town	0	65 250	65 250
Total	**0**	**65 250**	**65 250**

RSA MAIZE EXPORTS PER COUNTRY

2014/15 Season (26 Apr 2014 - 24 Apr 2015)

Country	White maize (tons)	Yellow maize (tons)	All maize (tons)
Angola	0	2 559	2 559
Botswana	163 196	31 548	194 744
Cameroon	0	3 540	3 540
Italy	0	50 079	50 079
Japan	0	198 198	198 198
Korea, Democratic People's Republic	3 881	1 420	5 301
Korea, Republic of	0	214 474	214 474
Lesotho	106 985	7 540	114 525
Mozambique	102 503	23 434	125 937
Namibia	85 935	38 174	124 109
Portugal	0	52 499	52 499
Saudi Arabia	0	55 959	55 959
Swaziland	27 551	47 678	75 229
Taiwan, Province of China	0	679 194	679 194
Zimbabwe	57 449	3 609	61 058
Total	**547 500**	**1 409 905**	**1 957 405**

Maize Imports and Exports during the 2014/2015 marketing season

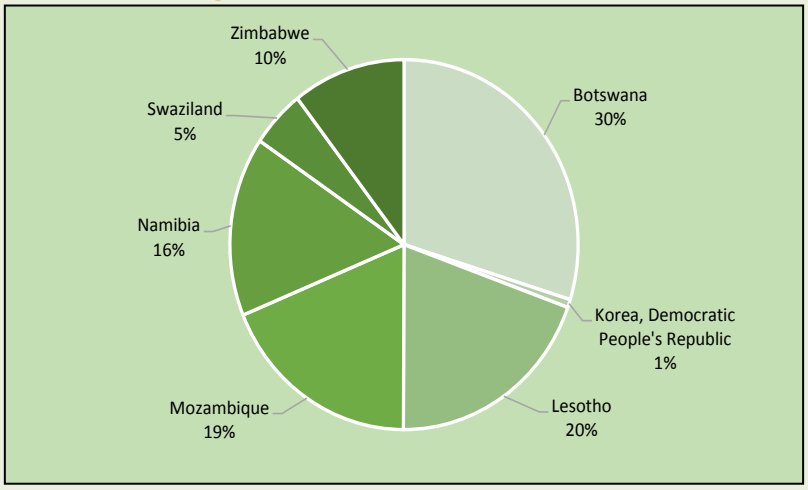
A total of 65 250 tons of yellow maize was imported from Argentina during the 2014/2015 season (26 April 2014 to 24 April 2015). Twelve samples of imported maize were received at the SAGL for quality analyses purposes. Two of the samples were graded YM1, one sample YM2 and nine samples were downgraded to Class Other Maize according to South African grading regulations. Eight of the nine samples were downgraded due to the presence of an undesirable odour and the last sample as a result of poisonous seeds in excess of the maximum permissible number, namely 1 per 1 000 g.

The results of the quality analyses performed on the imported maize are compared to those of the local maize crop of the corresponding class and grade and period. Please see the summary of results on page 95. The grading results, excluding the presence of the undesirable odour and poisonous seeds, looked good and compared well with that of local maize. The 100 kernel mass of the imported maize were lower on average and the kernels size significantly smaller. The kernels were also less susceptible to breakage. The average protein content of the imported maize compared well with the RSA maize, while the average fat content was higher and the starch lower. The Fumonisin, Deoxynivalenol and Zearalenone mycotoxin content was on average higher than locally produced maize. Levels were however still well below internationally acceptable limits as well as national maximum limits for animal feed.

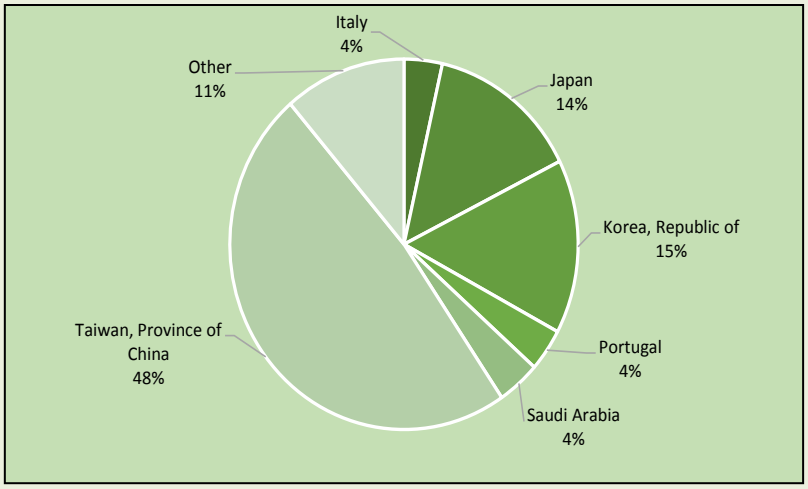
During the season under review, 547 500 tons of white maize and 1 409 905 tons of yellow maize were exported to both Africa and overseas. Please see graphs 55 and 56 below for the major destinations for RSA exports of maize.

All figures were obtained from SAGIS.

Graph 55: Major destinations for RSA white maize exported during the 2014/2015 season



Graph 56: Major destinations for RSA yellow maize exported during the 2014/2015 season



IMPORTED MAIZE QUALITY

Quality of maize imported from 26 April 2014 to 24 April 2015 compared to RSA crop quality 2013/2014

Country of origin	Argentina				RSA Crop Average			
Class and grade yellow maize	**YM1**	**YM2**	**COM**	**Average**	**YM1**	**YM2**	**COM**	**Average**
RSA Grading								
Defective kernels above 6.35 mm sieve, %	3.4	3.3	4.3	4.1	3.0	7.0	9.2	4.0
Defective kernels below 6.35 mm sieve, %	3.8	4.2	3.4	3.5	1.7	3.7	2.3	2.1
Total defective kernels, %	7.2	7.5	7.7	7.6	4.7	10.7	11.5	6.1
Other colour maize kernels, %	0.0	0.0	0.0	0.0	0.1	0.4	2.1	0.2
Foreign matter, %	0.2	0.2	0.1	0.1	0.1	0.1	0.5	0.1
Combined deviations, %	7.4	7.7	7.1	7.2	4.9	11.2	14.1	6.4
Pinked maize kernels, %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Physical Factors								
100 Kernel mass, g	30.2	27.9	29.8	29.7	32.3	30.0	31.9	31.8
Stress cracks, %	7	9	12	11	7	8	19	7
Milling Index	79.7	78.6	80.4	80.1	90.4	84.8	75.5	89.0
Kernel Size								
% above 10 mm sieve	1.5	3.5	3.8	3.4	15.8	12.1	11.9	14.9
% above 8 mm sieve	55.9	51.6	63.5	61.2	67.6	64.6	70.7	67.1
% belowe 8 mm sieve	42.7	44.9	32.7	35.4	16.7	23.3	17.4	18.0
Breakage susceptibility								
% Below 6.35 mm sieve	0.2	0.0	0.3	0.3	1.8	2.2	4.4	1.9
% Below 4.75 mm sieve	0.6	0.6	0.6	0.6	1.3	1.5	3.1	1.4
Nutritional Factors								
Protein, % (db)	7.9	7.8	8.5	8.4	8.6	8.5	8.4	8.6
Fat, % (db)	4.7	4.6	4.4	4.5	3.9	3.7	3.6	3.8
Starch, % (db)	70.7	68.7	70.5	70.4	73.1	73.4	73.3	73.1
Number of samples	***2***	***1***	***9***	***12***	***367***	***95***	***9***	***479***
Mycotoxins								
Afla G_1 (µg/kg) [max. value]	0 [0]				0 [0]	0 [0]	0 [0]	0
Afla B_1 (µg/kg) [max. value]	0 [0]				0 [0]	0 [0]	0 [0]	0
Afla G_2 (µg/kg) [max. value]	0 [0]				0 [0]	0 [0]	0 [0]	0
Afla B_2 (µg/kg) [max. value]	0 [0]				0 [0]	0 [0]	0 [0]	0
Fum B_1 (µg/kg) [max. value]	1532 [1716]				130 [3893]	140 [1223]	8 [25]	129
Fum B_2 (µg/kg) [max. value]	607 [702]				56 [1163]	62 [519]	0 [<20]	55
Fum B_3 (µg/kg) [max. value]	127 [148]				7 [301]	9 [93]	0 [0]	7
Deoxynivalenol (µg/kg) [max. value]	279 [313]				198 [1504]	335 [2601]	37 [112]	227
15-ADON [max. value]	0 [<100]				21 [300]	38 [292]	0 [0]	26
Ochratoxin A (µg/kg) [max. value]	0 [0]				0 [0]	0 [0]	0 [0]	0
Zearalenone (µg/kg) [max. value]	126 [216]				4 [127]	24 [354]	4 [13]	9
HT2 [max. value]	0 [0]				0 [0]	0 [0]	0 [0]	0
T-2 Toxin (µg/kg) [max. value]	0 [0]				0 [0]	0 [0]	0 [0]	0
Number of samples	***3***				***138***	***42***	***3***	***185***
GMO								
Cry1Ab, % [max value]	>5.0% [>5.0%]				4.49 [>5.0]	3.49 [>5.0]	>5.0 [>5.0]	4.14
Cry2Ab, % [max value]	>5.0% [>5.0%]				3.90 [>5.0]	2.27 [>5.0]	>5.0 [>5.0]	3.39
CP4 EPSPS, % [max value]	>5.0% [>5.0%]				4.28 [>5.0]	4.13 [>5.0]	>5.0 [>5.0]	4.16
Number of samples	***3***				***38***	***14***	***1***	***53***

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

RSA MAIZE IMPORTS PER COUNTRY

2015/16 Season (25 Apr 2015 - 8 Apr 2016)

Country	White maize (tons)	Yellow maize (tons)			All maize (tons)
	Imports for RSA	Imports for RSA	Imports for Exports	Total	
Argentina	0	946 758	2 167	948 925	948 925
Brazil	0	502 147	1 064	503 211	503 211
Mexico	51 040	0	0	0	51 040
Mozambique	0	0	33	33	33
Paraguay	0	177 096	1 167	178 263	178 263
Swaziland	0	0	4 156	4 156	4 156
Ukraine	0	27 539	0	27 539	27 539
Zambia	21 491	0	0	0	21 491
Total	**72 531**	**1 653 540**	**8 587**	**166 2127**	**1 734 658**

RSA MAIZE IMPORTS PER HARBOUR

2015/16 Season (25 Apr 2014 - 8 Apr 2016)

Harbour	White maize (tons)	Yellow maize (tons)	All maize (tons)
Cape Town	0	630 605	630 605
Durban	51 040	768 866	819 906
East London	0	30 434	30 434
Port Elizabeth	0	213 188	213 188
Richards Bay	0	14 845	14 845
Total	**51 040**	**1 657 938**	**1 708 978**

RSA MAIZE EXPORTS PER COUNTRY

2015/16 Season (25 Apr 2015 - 8 Apr 2016)

Country	White maize (tons)	Yellow maize (tons)	All maize (tons)
Botswana	146 904	55 985	202 889
Central African Republic	0	897	897
Korea, Democratic People's Republic	0	3 281	3 281
Korea, Republic of	0	2 277	2 277
Lesotho	59 655	10 515	70 170
Mozambique	67 863	37 116	104 979
Namibia	97 697	40 974	138 671
Swaziland	26 239	51 170	77 409
Zimbabwe	35 108	197	35 305
Total	**433 466**	**202 412**	**635 878**

Maize Imports and Exports during the 2015/2016 marketing season

A total of 72 531 tons of white maize and 1 653 540 tons of yellow maize was imported for local use from the start of the 2015/2016 season to date (25 April 2015 to 8 April 2016). The white maize was imported from Mexico and Zambia and the yellow maize from Argentina, Brazil, Paraguay and the Ukraine. SAGL received one sample representing the white maize imported from Mexico. To date, 70 samples representing Argentinian maize, 68 samples Brazilian maize and 23 samples from Paraguay, have been received at SAGL for quality analysis purposes. No samples from the Ukraine have been received to date.

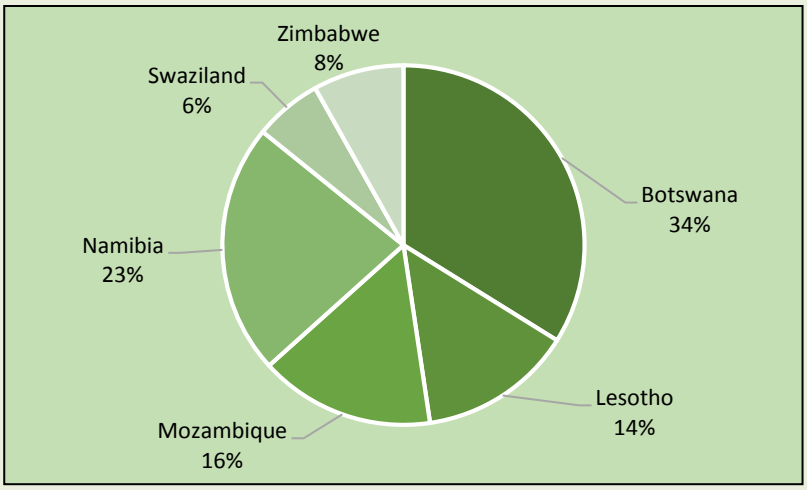
The majority of the samples that were downgraded to Class Other Maize according to South African grading regulations were due to the presence of an undesirable odour. Nine samples were downgraded as a result of poisonous seeds in excess of the maximum permissible number of either 1 per 1 000 g or 7 per 1 000 g. One sample was downgraded as a result of the foreign matter present exceeding the allowable level 0.75% and the last as a result of the presence of live insects. The Fumonisin, Deoxynivalenol and Zearalenone mycotoxin content was on average higher than locally produced maize. Levels were however still well below internationally acceptable limits as well as national maximum limits for animal feed.

The results of the quality analyses performed on the imported maize are compared to those of the local maize crop of the corresponding class and grade and period. Please see the summary of results on pages 98 to 101.

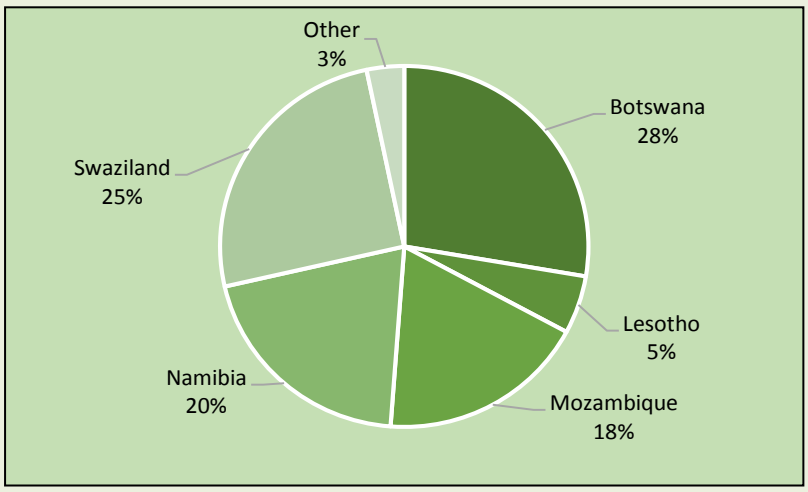
During the season under review, 433 466 tons of white maize and 202 412 tons of yellow maize were exported to both Africa and overseas. Please see graphs 57 and 58 below for the major destinations for RSA exports of maize.

All figures were obtained from SAGIS.

Graph 57: Major destinations for RSA white maize exported during the 2015/2016 season



Graph 58: Major destinations for RSA yellow maize exported during the 2015/2016 season



IMPORTED MAIZE QUALITY

Quality of maize imported from 25 April 2015 to date compared to RSA crop quality 2014/2015

Country of origin	Mexico		RSA Crop Average	
Class and grade yellow maize	**WM2**	**Average**	**WM2**	**Average**
RSA Grading				
Defective kernels above 6.35 mm sieve, %	10.2	10.2	5.3	3.1
Defective kernels below 6.35 mm sieve, %	1.8	1.8	3.5	2.2
Total defective kernels, %	12.0	12.0	8.7	5.3
Other colour maize kernels, %	0.0	0.0	0.7	0.4
Foreign matter, %	0.4	0.4	0.2	0.1
Combined deviations, %	12.4	12.4	9.6	5.8
Pinked maize kernels, %	0.0	0.0	0.4	0.5
Physical Factors				
100 Kernel mass, g	29.4	29.4	31.2	31.1
Stress cracks, %	2	2	7	6
Milling Index	89.3	89.3	103.0	100.4
Kernel Size				
% above 10 mm sieve	1.1	1.1	17.7	15.4
% above 8 mm sieve	61.8	61.8	65.0	66.1
% belowe 8 mm sieve	37.1	37.1	17.3	18.4
Breakage susceptibility				
% Below 6.35 mm sieve	0.1	0.1	1.3	1.1
% Below 4.75 mm sieve	0.3	0.3	1.0	0.8
Number of samples	***1***	***1***	***59***	***485***
Nutritional Factors				
Protein, % (db)	8.8	8.8	9.6	9.4
Fat, % (db)	4.5	4.5	4.2	4.2
Starch, % (db)	68.4	68.4	72.4	72.6
Roff Milling				
Break 1, %	13.5	13.5	12.5	12.9
Break 2, %	12.1	12.1	11.7	11.8
Break 3, %	25.3	25.3	24.6	24.9
Grits, %	28.1	28.1	29.7	29.0
Bran and Germ, %	21.0	21.0	21.5	21.3
Extraction (Total meal), %	79.0	79.0	78.5	78.7
Whiteness Index				
Whiteness Index, 87:13, sifted	14.2	14.2	13.4	14.9
Whiteness Index, unsifted	23.4	23.4	21.2	22.9
Number of samples	***1***	***1***	***59***	***480***
Mycotoxins				
Afla G_1 (µg/kg) [max. value]	0 [0]		0 [0]	0
Afla B_1 (µg/kg) [max. value]	0 [0]		0 [0]	0
Afla G_2 (µg/kg) [max. value]	0 [0]		0 [0]	0
Afla B_2 (µg/kg) [max. value]	0 [0]		0 [0]	0
Fum B_1 (µg/kg) [max. value]	1604 [1604]		268 [1229]	164
Fum B_2 (µg/kg) [max. value]	299 [299]		70 [283]	41
Fum B_3 (µg/kg) [max. value]	223 [223]		18 [88]	9
Deoxynivalenol (µg/kg) [max. value]	0 [0]		416 [3167]	284
15-ADON [max. value]	0 [0]		64 [890]	47
Ochratoxin A (µg/kg) [max. value]	0 [0]		0 [0]	0
Zearalenone (µg/kg) [max. value]	0 [0]		23 [212]	10
HT2 [max. value]	0 [0]		0 [0]	0
T-2 Toxin (µg/kg) [max. value]	0 [0]		0 [0]	0
Number of samples	***1***		***30***	***168***
GMO				
Cry1Ab, % [max value]	<0.4 [<0.4]		>5.0 [>5.0]	4.52
Cry2Ab, % [max value]	<0.5 [<0.5]		4.07 [>5.0]	3.92
CP4 EPSPS, % [max value]	<0.25 [<0.25]		4.65 [>5.0]	4.47
Number of samples	***1***		***15***	***46***

IMPORTED MAIZE QUALITY

Quality of maize imported from 25 April 2015 to date compared to RSA crop quality 2014/2015

Country of origin	Argentina*					RSA Crop Average				
Class and grade yellow maize	**YM1**	**YM2**	**YM3**	**COM**	**Average**	**YM1**	**YM2**	**YM3**	**COM**	**Average**
RSA Grading										
Defective kernels above 6.35 mm sieve, %	4.1	5.0	3.7	9.6	6.1	2.5	4.5	10.5	6.0	3.1
Defective kernels below 6.35 mm sieve, %	2.7	4.2	6.1	3.6	3.4	2.0	4.7	8.9	4.7	2.7
Total defective kernels, %	6.8	9.2	9.7	13.2	9.5	4.5	9.2	19.5	10.6	5.9
Other colour maize kernels, %	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.0	5.7	0.3
Foreign matter, %	0.1	0.2	0.3	0.2	0.2	0.1	0.2	0.3	0.4	0.1
Combined deviations, %	6.9	9.4	10.0	13.4	9.7	4.7	9.7	19.7	16.7	6.2
Pinked maize kernels, %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Physical Factors										
100 Kernel mass, g	30.4	29.8	33.7	30.2	30.3	29.4	25.9	22.9	28.7	28.6
Stress cracks, %	5	5	2	7	5	5	5	5	10	5
Milling Index	88.5	85.4	82.4	85.4	86.3	95.4	93.9	89.4	96.6	95.0
Kernel Size										
% above 10 mm sieve	3.1	3.4	10.0	3.3	3.4	9.5	6.3	2.7	12.5	8.8
% above 8 mm sieve	62.8	60.8	65.2	59.8	61.4	65.5	57.4	43.6	61.5	63.4
% belowe 8 mm sieve	34.1	35.8	24.9	36.9	35.1	25.0	36.2	53.6	26.0	27.8
Breakage susceptibility										
% Below 6.35 mm sieve	0.2	0.3	0.4	0.3	0.3	1.2	1.5	1.9	2.4	1.3
% Below 4.75 mm sieve	0.4	0.5	0.3	0.4	0.4	0.9	1.0	1.1	1.3	0.9
Number of samples	***29***	***17***	***2***	***22***	***70***	***392***	***103***	***9***	***11***	***515***
Nutritional Factors										
Protein, % (db)	8.5	8.5	8.6	8.4	8.5	9.4	9.6	10.1	9.7	9.5
Fat, % (db)	4.4	4.5	4.3	4.6	4.5	4.0	3.9	3.8	3.9	4.0
Starch, % (db)	70.4	69.5	72.6	68.7	69.6	72.9	73.1	73.2	72.9	72.9
Number of samples	***19***	***13***	***1***	***17***	***50***	***392***	***103***	***9***	***11***	***515***
Mycotoxins										
Afla G_1 (µg/kg) [max. value]	0 [0]					0 [0]	0 [0]	0 [0]	0 [0]	0
Afla B_1 (µg/kg) [max. value]	0 [0]					0 [0]	0 [0]	0 [0]	0 [0]	0
Afla G_2 (µg/kg) [max. value]	0 [0]					0 [0]	0 [0]	0 [0]	0 [0]	0
Afla B_2 (µg/kg) [max. value]	0 [0]					0 [0]	0 [0]	0 [0]	0 [0]	0
Fum B_1 (µg/kg) [max. value]	2690 [6407]					198 [2714]	149 [1440]	176 [504]	50 [136]	179
Fum B_2 (µg/kg) [max. value]	616 [1143]					50 [505]	38 [377]	41 [133]	11 [43]	45
Fum B_3 (µg/kg) [max. value]	196 [440]					9 [163]	9 [180]	7 [25]	0 [0]	8
Deoxynivalenol (µg/kg) [max. value]	138 [404]					80 [851]	117 [593]	23 [164]	65 [253]	87
15-ADON [max. value]	0 [0]					9 [228]	5 [238]	0 [<100]	0 [0]	8
Ochratoxin A (µg/kg) [max. value]	0 [0]					0 [<5]	0 [0]	0 [0]	0 [0]	0
Zearalenone (µg/kg) [max. value]	35 [168]					2 [71]	7 [124]	4 [25]	0 [0]	3
HT2 [max. value]	0 [0]					0 [0]	0 [0]	0 [0]	0 [0]	0
T-2 Toxin (µg/kg) [max. value]	0 [0]					0 [0]	0 [0]	0 [0]	0 [0]	0
Number of samples	***18***					***121***	***48***	***7***	***6***	***182***
GMO										
Cry1Ab, % [max value]	>5.0 [>5.0]					4.46 [>5.0]	3.67 [>5.0]	3.80 [3.80]	>5.0[>5.0]	4.05
Cry2Ab, % [max value]	>5.0 [>5.0]					3.68 [>5.0]	2.92 [>5.0]	<0.5 [<0.5]	3.33 [>5.0]	3.45
CP4 EPSPS, % [max value]	>5.0 [>5.0]					4.35 [>5.0]	4.11 [>5.0]	>5.0 [>5.0]	>5.0 [>5.0]	4.08
Number of samples	***14***					***40***	***10***	***1***	***3***	***54***

***Includes analysis results up to 15 April 2016.**

IMPORTED MAIZE QUALITY

Quality of maize imported from 25 April 2015 to date compared to RSA crop quality 2014/2015

Country of origin	Brazil*				RSA Crop Average			
Class and grade yellow maize	**YM1**	**YM2**	**COM**	**Average**	**YM1**	**YM2**	**COM**	**Average**
RSA Grading								
Defective kernels above 6.35 mm sieve, %	4.3	6.1	4.5	5.5	2.5	4.5	6.0	3.1
Defective kernels below 6.35 mm sieve, %	3.1	4.9	7.1	4.5	2.0	4.7	4.7	2.7
Total defective kernels, %	7.4	11.0	11.7	10.0	4.5	9.2	10.6	5.9
Other colour maize kernels, %	0.0	0.0	0.0	0.0	0.1	0.4	5.7	0.3
Foreign matter, %	0.1	0.1	0.8	0.2	0.1	0.2	0.4	0.1
Combined deviations, %	7.5	11.2	12.4	10.1	4.7	9.7	16.7	6.2
Pinked maize kernels, %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Physical Factors								
100 Kernel mass, g	31.1	31.1	31.7	31.1	29.4	25.9	28.7	28.6
Stress cracks, %	14	30	25	25	5	5	10	5
Milling Index	95.8	94.0	86.6	94.2	95.4	93.9	96.6	95.0
Kernel Size								
% above 10 mm sieve	4.8	5.8	5.0	5.4	9.5	6.3	12.5	8.8
% above 8 mm sieve	66.1	66.6	67.3	66.4	65.5	57.4	61.5	63.4
% belowe 8 mm sieve	29.2	27.7	27.8	28.1	25.0	36.2	26.0	27.8
Breakage susceptibility								
% Below 6.35 mm sieve	0.5	1.2	1.1	1.0	1.2	1.5	2.4	1.3
% Below 4.75 mm sieve	1.0	2.0	2.0	1.7	0.9	1.0	1.3	0.9
Number of samples	***20***	***45***	***3***	***68***	***392***	***103***	***11***	***515***
Nutritional Factors								
Protein, % (db)	8.2	8.5	8.5	8.4	9.4	9.6	9.7	9.5
Fat, % (db)	4.4	4.1	4.1	4.2	4.0	3.9	3.9	4.0
Starch, % (db)	72.5	72.8	72.9	72.7	72.9	73.1	72.9	72.9
Number of samples	***17***	***41***	***3***	***61***	***392***	***103***	***11***	***515***
Mycotoxins								
Afla G_1 (µg/kg) [max. value]	0 [8]				0 [0]	0 [0]	0 [0]	0
Afla B_1 (µg/kg) [max. value]	0 [0]				0 [0]	0 [0]	0 [0]	0
Afla G_2 (µg/kg) [max. value]	0 [0]				0 [0]	0 [0]	0 [0]	0
Afla B_2 (µg/kg) [max. value]	0 [0]				0 [0]	0 [0]	0 [0]	0
Fum B_1 (µg/kg) [max. value]	1149 [2050]				198 [2714]	149 [1440]	50 [136]	179
Fum B_2 (µg/kg) [max. value]	233 [385]				50 [505]	38 [377]	11 [43]	45
Fum B_3 (µg/kg) [max. value]	89 [164]				9 [163]	9 [180]	0 [0]	8
Deoxynivalenol (µg/kg) [max. value]	17 [295]				80 [851]	117 [593]	65 [253]	87
15-ADON [max. value]	0 [0]				9 [228]	5 [238]	0 [0]	8
Ochratoxin A (µg/kg) [max. value]	0 [0]				0 [<5]	0 [0]	0 [0]	0
Zearalenone (µg/kg) [max. value]	10 [87]				2 [71]	7 [124]	0 [0]	3
HT2 [max. value]	0 [0]				0 [0]	0 [0]	0 [0]	0
T-2 Toxin (µg/kg) [max. value]	0 [0]				0 [0]	0 [0]	0 [0]	0
Number of samples	***17***				***121***	***48***	***6***	***182***
GMO								
Cry1Ab, % [max value]	>5.0 [>5.0]				4.46 [>5.0]	3.67 [>5.0]	>5.0[>5.0]	4.05
Cry2Ab, % [max value]	>5.0 [>5.0]				3.68 [>5.0]	2.92 [>5.0]	3.33 [>5.0]	3.45
CP4 EPSPS, % [max value]	>5.0 [>5.0]				4.35 [>5.0]	4.11 [>5.0]	>5.0 [>5.0]	4.08
Number of samples	***15***				***40***	***10***	***3***	***54***

***Includes analysis results up to 15 April 2016.**

IMPORTED MAIZE QUALITY

Quality of maize imported from 25 April 2015 to date compared to RSA crop quality 2014/2015

Country of origin	Paraguay*					RSA Crop Average				
Class and grade yellow maize	**YM1**	**YM2**	**YM3**	**COM**	**Average**	**YM1**	**YM2**	**YM3**	**COM**	**Average**
RSA Grading										
Defective kernels above 6.35 mm sieve, %	5.5	8.3	7.2	15.5	8.5	2.5	4.5	10.5	6.0	3.1
Defective kernels below 6.35 mm sieve, %	1.3	2.6	12.0	5.2	3.0	2.0	4.7	8.9	4.7	2.7
Total defective kernels, %	6.8	10.9	19.2	20.7	11.4	4.5	9.2	19.5	10.6	5.9
Other colour maize kernels, %	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.0	5.7	0.3
Foreign matter, %	0.1	0.2	0.4	0.1	0.2	0.1	0.2	0.3	0.4	0.1
Combined deviations, %	6.9	11.1	19.6	20.8	11.6	4.7	9.7	19.7	16.7	6.2
Pinked maize kernels, %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Physical Factors										
100 Kernel mass, g	32.8	34.3	32.8	33.2	33.3	29.4	25.9	22.9	28.7	28.6
Stress cracks, %	39	32	19	59	41	5	5	5	10	5
Milling Index	105.1	103.0	97.2	99.4	103.0	95.4	93.9	89.4	96.6	95.0
Kernel Size										
% above 10 mm sieve	13.5	13.8	14.3	16.3	14.2	9.5	6.3	2.7	12.5	8.8
% above 8 mm sieve	71.5	72.2	69.2	70.0	71.3	65.5	57.4	43.6	61.5	63.4
% belowe 8 mm sieve	14.9	14.0	16.5	13.8	14.5	25.0	36.2	53.6	26.0	27.8
Breakage susceptibility										
% Below 6.35 mm sieve	1.3	1.2	2.1	1.1	1.3	1.2	1.5	1.9	2.4	1.3
% Below 4.75 mm sieve	1.6	1.3	3.2	1.7	1.6	0.9	1.0	1.1	1.3	0.9
Number of samples	***11***	***6***	***1***	***5***	***23***	***392***	***103***	***9***	***11***	***515***
Nutritional Factors										
Protein, % (db)	9.2	9.2	-	9.4	9.2	9.4	9.6	10.1	9.7	9.5
Fat, % (db)	4.4	4.4	-	4.6	4.4	4.0	3.9	3.8	3.9	4.0
Starch, % (db)	73.5	72.0	-	70.5	72.3	72.9	73.1	73.2	72.9	72.9
Number of samples	***8***	***5***	***-***	***5***	***18***	***392***	***103***	***9***	***11***	***515***
Mycotoxins										
Afla G_1 (µg/kg) [max. value]	0 [0]					0 [0]	0 [0]	0 [0]	0 [0]	0
Afla B_1 (µg/kg) [max. value]	0 [0]					0 [0]	0 [0]	0 [0]	0 [0]	0
Afla G_2 (µg/kg) [max. value]	0 [0]					0 [0]	0 [0]	0 [0]	0 [0]	0
Afla B_2 (µg/kg) [max. value]	0 [0]					0 [0]	0 [0]	0 [0]	0 [0]	0
Fum B_1 (µg/kg) [max. value]	1385 [2111]					198 [2714]	149 [1440]	176 [504]	50 [136]	179
Fum B_2 (µg/kg) [max. value]	348 [539]					50 [505]	38 [377]	41 [133]	11 [43]	45
Fum B_3 (µg/kg) [max. value]	93 [145]					9 [163]	9 [180]	7 [25]	0 [0]	8
Deoxynivalenol (µg/kg) [max. value]	0 [0]					80 [851]	117 [593]	23 [164]	65 [253]	87
15-ADON [max. value]	0 [0]					9 [228]	5 [238]	0 [<100]	0 [0]	8
Ochratoxin A (µg/kg) [max. value]	0 [0]					0 [<5]	0 [0]	0 [0]	0 [0]	0
Zearalenone (µg/kg) [max. value]	19 [61]					2 [71]	7 [124]	4 [25]	0 [0]	3
HT2 [max. value]	0 [0]					0 [0]	0 [0]	0 [0]	0 [0]	0
T-2 Toxin (µg/kg) [max. value]	0 [0]					0 [0]	0 [0]	0 [0]	0 [0]	0
Number of samples	***5***					***121***	***48***	***7***	***6***	***182***
GMO										
Cry1Ab, % [max value]	>5.0 [>5.0]					4.46 [>5.0]	3.67 [>5.0]	3.80 [3.80]	>5.0[>5.0]	4.05
Cry2Ab, % [max value]	>5.0 [>5.0]					3.68 [>5.0]	2.92 [>5.0]	<0.5 [<0.5]	3.33 [>5.0]	3.45
CP4 EPSPS, % [max value]	>5.0 [>5.0]					4.35 [>5.0]	4.11 [>5.0]	>5.0 [>5.0]	>5.0 [>5.0]	4.08
Number of samples	***2***					***40***	***10***	***1***	***3***	***54***

***Includes analysis results up to 15 April 2016.**

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

Facility Accreditation Number: **T0116**

is a South African National Accreditation System accredited Testing laboratory provided that all SANAS 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 17025:2005

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

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

Mr R Josias
Chief Executive Officer
Effective Date: 01 November 2014
Certificate Expires: 31 October 2019

ANNEXURE A

SCHEDULE OF ACCREDITATION

Facility Number: T0116

Permanent Address of Laboratory: Southern African Grain Laboratory (NPC) Grain Building 477 Witherite Road The Willows 0040	**Technical Signatories:**	Ms J Nortjé (All) Ms M Fourie (In-house method 012) Ms M Hammes (Chemical) Ms A de Jager (Nutrients & Contaminants) Ms W Louw (In-House Methods 001, 002, 003, 010, and 026) Ms D Moleke (Rheological) Ms I Terblanche (Rheological) Ms H Meyer (Chemical, Nutrients, Contaminants & Grading) Ms J Kruger (Chemical, excluding In-house method 012) Mr L Badenhorst (Grading) Ms P Modiba (Chemical) Ms M Motlanthe (In-house method 001, 003)
Postal Address: Postnet Suite # 391 Private Bag X 1 The Willows 0041	**Nominated Representative:** **Management Representative:**	Ms S du Preez Ms W Louw
Tel: (012) 807-4019 Fax: (086) 216-7672 E-mail: info@sagl.co.za	Issue No.: Date of Issue: Expiry Date:	24 04 March 2015 31 October 2019

Materials / Products Tested	Type of Tests / Properties Measured, Range of Measurement	Standard Specifications, Equipment / Technique Used
CHEMICAL		
Ground Barley	Moisture (Oven Method)	Analytical EBC Method 3.2, Latest Edition (2hour; 130˚C)
Cereal and cereal products specifically- wheat, rice, (hulled paddy), barley, millet, rye and oats as grains, 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 (1hour; 130˚C) (72 hour, 103°C)

Original Date of Accreditation: 01 November 1999 Page 1 of 3

Field Manager

ANNEXURE A

Facility No.: T0116
Date of Issue: 04 March 2015
Expiry Date: 31 October 2019

Materials / Products Tested	Type of Tests / Properties Measured, Range of Measurement	Standard Specifications, Equipment / Technique Used
All flours, cereal grains, oilseeds and animal feeds	Nitrogen and protein (Combustion method - Dumas)	AACCI 46-30.01, Latest Edition
Food stuff	Dietary fibre (total)	In-house method 012
Food stuff and feeds	Carbohydrates (by difference) (calculation) Energy value (calculation) Total digestible nutrition value (calculation)	SOP MC 23
Food stuff and feeds	Determination of ash	In-house method 011
Wheat kernels	Moisture (Oven method)	Government Gazette Wheat Grading Regulation, Latest Edition (72 hour, 103ºC)
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 No 107/1, Latest Edition
NUTRIENTS & CONTAMINANTS		
Vitamin fortified food and feed products and fortification mixes grain based	Vitamin A as all trans Retinol (Saponification) (HPLC)	In-house method 001
Vitamin fortified food and feed products and fortification mixes grain based	Thiamine Mononitrate (HPLC) Riboflavin (HPLC) Nicotinamide (HPLC) Pyridoxine Hydrochloride (HPLC)	In-house method 002
Vitamin fortified food and feed products and fortification mixes grain based	Folic Acid (HPLC)	In-house method 003

Original Date of Accreditation: 01 November 1999 Page 2 of 3

Field Manager

ANNEXURE A

Facility No.: T0116
Date of Issue: 04 March 2015
Expiry Date: 31 October 2019

Materials / Products Tested	Type of Tests / Properties Measured, Range of Measurement	Standard Specifications, Equipment / Technique Used
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
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 No 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 Page 3 of 3

ISSUED BY THE SOUTH AFRICAN NATIONAL ACCREDITATION SYSTEM

Field Manager

AACC INTERNATIONAL

RECOGNITION OF ANALYTICAL PERFORMANCE

Analysis of Feed

Southern African Grain Laboratory
Pretoria SOUTH AFRICA

Achieved Outstanding Accuracy and Precision for the year 2014
in check samples including the following analyses:

Moisture, Protein, Ash, Crude Fiber, Crude Fat EE

Executive Vice President

President

CERTIFICATE
SERTIFIKAAT

Southern African Grain Laboratory NPC

The Willows, Pretoria

Feeds / Voere

27 April 2015 — **22 February 2016**

Ash **Crude Fibre** **Dietary Fibre** **Fat**

Moisture **Nx6.25-Protein** **Zn**

FOR AGRILASA

AgriLASA

GOVERNMENT NOTICES
GOEWERMENTSKENNISGEWINGS

DEPARTMENT OF AGRICULTURE
DEPARTEMENT VAN LANDBOU

No. R. 473 **8 May 2009**

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, acting under section 15 of the Agricultural Product Standards Act, 1990 (Act No. 119 of 1990),

(a) made the regulations in the Schedule; and

(b) determined that the said regulations shall come into operation on date of publication.

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 -

"**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-

(a) that are shrivelled, obviously immature, frost-damaged, heat damaged, water damaged, mouldy or chalky;

(b) that are discoloured by external factors such as water and sun: Provided that discoloration on both sides of the maize kernel limited to less than a quarter from the bottom tip of the maize kernel shall not be considered as defective; oxidation stained maize kernels; coffee stained maize kernels; and pinked maize kernels shall not be considered as defective;

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

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

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

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

(g) that 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;

"**discoloured maize kernels**" means maize kernels that are as a result of environmental conditions more than 25% discoloured on both sides of the kernel, excluding coffee stained maize kernels, oxidation stained maize kernels and pinked maize kernels;

"**foreign matter**" means all matter above the sieve other than maize, glass, stone, coal, dung or metal;

"**frost damaged**" means maize kernels that are covered with wrinkles on both sides of the kernel to the crown and have a pearl-like appearance. Maize kernels of which the bran is flaking is considered frost damaged if signs of frost damage are present;

"**heat damaged**" 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;

"**mouldy**" means kernels or pieces of kernels that-

(a) are visibly infected by fungi and 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;

"**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 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**"means a sieve-

(a) with a flat metal sheet bottom of 1,0 mm thickness perforated with round holes of 6,35 mm (± 0,05 mm) 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;

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

(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 the minimum standards applicable to maize that are 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 subregulation 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.

Standards for grades of Class White Maize and Class Yellow Maize

7. All grades of maize -

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

(b) shall be free from glass, metal, coal or dung;

(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;

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

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

(b) in the case of maize delivered in bulk and subject to regulation 10, 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 dividing 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 subregulation (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 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 sensorial 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 glass, metal, coal, dung, stone, poisonous seed and insect content

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

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 defective maize kernels

16. 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 matter 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 the sieve and determine the mass thereof.

(e) Express the mass as a percentage of the mass of the working sample.

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

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

(h) In the case of yellow maize the percentage obtained -

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

(ii) in terms of paragraph (e), represents the percentage of defective maize kernels in the consignment concerned, which can not pass through the 6,35 mm round-hole sieve.

(i) 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.

Determination of percentage of other colour maize kernels

17. 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.

Determination of percentage of pinked maize kernels

18. The percentage of pinked 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 pinked maize kernels from the working sample and determines 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 pinked maize kernels in the consignment concerned.

PART VI
MOISTURE CONTENT

Determination of moisture content

19. 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 for a class 1 moisture meter as detailed in ISO 7700/1based on the results of the 72 hour, 103°C oven dried method (AACC Method 44-15A).

OFFENCE AND PENALTIES

20. 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.

ANNEXURE/AANHANGSEL
TABLE/TABEL

STANDARDS FOR GRADES OF CLASS WHITE MAIZE AND CLASS YELLOW MAIZE/
STANDAARDE VIR GRADE VAN KLAS WITMIELIES EN KLAS GEELMIELIES

	Maximum permissible deviation/ Maksimum toelaatbare afwyking					
Deviation/Afwyking	White maize/ Witmielies			Yellow maize/ Geelmielies		
	WM1	WM 2	WM 3	YM1	YM2	YM3
1	2	3	4	5	6	7
1. Foreign matter [regulation 15]/ Vreemde voorwerpe [regulasie 15]	0,3%	0,5%	0,75 %	0,3%	0,5%	0,75%
2. Defective maize kernels, above and below the 6,35 mm round-hole sieve [regulations 16]/ *Gebrekkige mieliepitte, bo en onder die 6,35 mm-rondegatsif [regulasies 16]*	7%	13%	30%	*	*	*
3. Defective maize kernels that can pass through the 6,35 mm round-hole sieve [regulation 16(c)]/ *Gebrekkige mieliepitte wat deur die 6,35 mm rondegastsif kan gaan [regulasie 16(c)]*	*	*	*	4%	10%	30%
4. Defective maize kernels that can not pass through the 6,35 mm round-hole sieve [regulation 16(e)]/ *Gebrekkige mieliepitte wat nie deur die 6,35 mm-rondegatsif kan gaan nie [regulasie 16(e)]*	*	*	*	9%	20%	30%
5. Other colour maize kernels [regulation 17]/ *Mieliepitte van 'n ander kleur [regulasie 17]*	3%	6%	10%	2%	5%	5%
6. Deviations referred to in items 1, 3, 4 and 5 individually within the specified limits/ *Afwykings in items 1, 3, 4 en 5 bedoel,gesamentlik: met dien verstande dat die afwykings individueel binne die gespesifisserde perke is*	8%	16%	30%	9%	20%	30%
7. Pinked maize kernels [regulation 18]/ *Verrooide mieliepitte [regulasie 18]*	12%	12%	12%	*	*	*

* Not specified/Nie gespesifiseer nie.

agriculture,
forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

Directorate Food Safety and Quality Assurance Private Bag X258, PRETORIA, 0001 • Tel: +27 12 319 6291

FAX COVER SHEET

TO:	Grain Silo Industry
ATTENTION:	Mr. Dirk Kok
FAX:	012 348 2980

FROM:	Mrs. Caroline Makobe	E-MAIL:	CarolineL@nda.agric.za
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FAX:	(012) 319 6055	SERIAL NO:	
NO. PAGES:	1	DATE:	15 April 2010

Subject

INDUSTRY-WIDE DISPENSATION: AMENDMENT OF THE REGULATION RELATING TO THE GRADING, PACKING AND MARKING OF MAIZE INTENDED FOR SALE IN THE REPUBLIC OF SOUTH AFRICA.

Please refer to the e-mail dated 29th March 2010 from Grain Silo Industry

Permission is hereby granted by the Executive Officer: Agricultural Product Standards, in terms of Section (3) of the Agricultural Products Standards Act, 1990 (Act No. 119 of 1990), to all producers, wholesalers, traders, retailers and importers of Maize to sell and import maize whereby the definition of "Foreign matter" is amended in the English version in order to align it to the Afrikaans one of the above mentioned Regulation to read as follows : ***"Foreign matter" means all matter other than maize, glass, stones above the sieve, coal, dung or metal.***

This dispensation is extended further to apply to item 6 of the Annexure in the Table relating to Standards for grades of Class White and Yellow maize which is amended and replaced with the following item: Provided that all provisions of the regulations shall be complied with:

ANNEXURE/AANHANGSEL

TABLE/TABEL

STANDARDS FOR GRADES OF CLASS WHITE MAIZE AND CLASS YELLOW MAIZE/
STANDAARDE VIR GRADE VAN KLAS WITMIELIES EN KLAS GEELMIELIES

	Maximum permissible deviation/ Maksimum toelaatbare afwyking					
Deviation/Afwyking	White maize/ Witmielies			Yellow maize/ Geelmielies		
	WM 1	WM2	WM3	YM1	YM2	YM3
1	2	3	4	5	6	7
6. Deviations referred to in items 1, 2, 3, 4 and 5 collectively: Provided that the deviations are individually within the specified limits/Afwykings in items 1, 2, 3,4 en 5 bedoel, gesamentlik: Met dien verstande dat die afwykings individueel binne die gespesifiseerde perke is	8%	16%	30%	9%	20%	30%

INDUSTRY-WIDE DISPENSATION: AMENDMENT OF THE REGULATION RELATING TO THE GRADING, PACKING AND MARKING OF MAIZE INTENDED FOR SALE IN THE REPUBLIC OF SOUTH AFRICA.

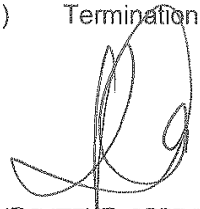
This permission is subject to the following conditions:

(a) All other conditions of the regulations shall be complied with.

(b) It may be withdrawn at any time should a valid complaint be received

(c) All producers, wholesalers, traders, retailers and importers of Maize, Indemnifies this Directorate and the Department from any detrimental effect, financially or otherwise, which may emanate as a result of this permission.

(d) Termination date: until the regulation is reviewed and gazetted.



EXECUTIVE OFFICER:
AGRICULTURAL PRODUCT STANDARDS ACT, NO. 119 OF 1990
Copies: APIS : NPPIS North – Attention: Jimmy Mogodi