

TABLE 23: MYCOTOXIN RESULTS - SUMMARY OF SEASONS 2000/2001 TO 2011/2012

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.	
2000/2001	900	57	<1	0	22	1 670	0	8 100	680	0	5 400	<100	0	120	<2.0	0	0	0	0	0	
2001/2002	900	90	0	0	0	760	0	5 100	630	0	2 200	<100	0	30	<2.0	0	0	0	0	0	
2002/2003	900	90	0	0	0	730	0	3 900	<500	0	4 300	<100	0	140	<2.0	0	0	0	0	0	
2003/2004	900	90	0	0	0	1 140	160	5 600	200	0	13 000	<100	0	120	<2.0	0	0	0	0	290	
2004/2005	1 000	100	0	0	0	1 080	0	5 300	600	0	3 900	<100	0	440	<2.0	0	0	0	0	Not tested	
2005/2006	900	90	0	0	0	970	0	13 000	2 740	0	6 200	30	0	390	<2.0	0	0	0	0	Not tested	
2006/2007	900	90	<1	0	9	640	0	4 500	530	0	3 100	0	0	0	<2.0	0	0	0	0	Not tested	
2007/2008	900	100	0	0	2	470	0	5 500	240	0	1 700	0	0	100	<1.0	0	0	0	0	Not tested	
2008/2009	810	90	0	0	0	490	0	3 300	430	0	2 900	<25	0	160	<1.0	0	0	0	0	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	77	0	0	0	139	0	1 401	49	0	883	5	0	187	0	0	0	0	0	0	
**2011/2012	1 000	100	0	0	0	182	0	4 419	10	0	485	5	0	297	0	0	0	0	0	0	
Total	10 603	1 064																			
	Min.		0				0						0			0				0	
	Max.				22			13 000			13 000			440							290

* Sum of Aflatoxin (G₁; B₁; G₂; B₂) and sum of Fumonisin (B₁; B₂)

* Sum of Aflatoxin (G₁; B₁; G₂; B₂) and sum of Fumonisin (B₁; B₂; B₃)

Mycotoxin methodology

Technique used for season 1999/2000 - 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
Zemonisin	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

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 quantitation, is reported as <"LOQ".

µg/kg = ppb (parts per billion)

Technique used for season 2007/2008 - 2008/2009

The SAGL uses 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 - 2011/2012

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