

TABLE 19: MYCOTOXIN RESULTS - SUMMARY OF SEASONS 1999/2000 TO 2010/2011

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.		
1999/2000	900	90	0	0	0	650	30	4 900	Not tested	Not tested	Not tested	Not tested	Not tested	Not tested	Not tested	Not tested	Not tested	Not tested	Not tested	Not tested		
2000/2001	900	57	<1	0	22	1 670	0	8 100	0	5 400	680	0	120	<2.0	0	0	0	0	0	0	0	
2001/2002	900	90	0	0	0	760	0	5 100	0	2 200	630	0	30	<2.0	0	0	0	0	0	0	0	
2002/2003	900	90	0	0	0	730	0	3 900	0	4 300	<500	0	140	<2.0	0	0	2.0	<150	0	0	290	
2003/2004	900	90	0	0	0	1 140	160	5 600	0	13 000	200	0	120	<2.0	0	0	5.7	Not tested	Not tested	Not tested	Not tested	
2004/2005	1 000	100	0	0	0	1 080	0	5 300	0	3 900	600	0	440	<2.0	0	0	2.4	Not tested	Not tested	Not tested	Not tested	
2005/2006	900	90	0	0	0	970	0	13 000	0	6 200	2 740	0	390	<2.0	0	0	2.9	Not tested	Not tested	Not tested	Not tested	
2006/2007	900	90	<1	0	9	640	0	4 500	0	3 100	530	0	0	<2.0	0	0	6.5	Not tested	Not tested	Not tested	Not tested	
2007/2008	900	100	0	0	2	470	0	5 500	0	1 700	240	0	100	<1.0	0	0	2.0	Not tested	Not tested	Not tested	Not tested	
2008/2009	810	90	0	0	0	490	0	3 300	0	2 900	430	0	160	<1.0	0	0	1.0	Not tested	Not tested	Not tested	Not tested	
*2009/2010	800	90	0	0	0	251	0	4 035	0	1 845	206	0	0	0	0	0	0	0	0	0	0	
*2010/2011	693	77	0	0	0	139	0	1 401	0	883	49	0	187	0	0	0	0	0	0	0	0	
Total	10 503	1 054																				
	Min			0								0										
	Max				22			13 000		13 000			440				6.5					290

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

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
Fumonisin	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.

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

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 - 2010/2011

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

Mycotoxin	LOD for maize µg/kg
Aflatoxin G ₁	5
Aflatoxin B ₁	5
Aflatoxin G ₂	5
Aflatoxin B ₂	5
Fumonisin B ₁	100
Fumonisin B ₂	5
Deoxynivalenol	5
Zearalenone	20
Ochratoxin A	5
T - 2 Toxin	5