

## Mycotoxins

Mycotoxins are secondary metabolites produced by fungi on agricultural commodities intended for human and animal consumption. These mycotoxins are potentially dangerous to humans and animals since they are, amongst other also carcinogens. Aside from health risks, mycotoxin contamination can also reduce the value of the crops. Environmental factors such as temperature, humidity, soil and storage conditions influence toxin production.

During 2010 SAGL implemented a multi-mycotoxin screening method using UPLC-MS/MS. With this technique simultaneous quantification and confirmation of Aflatoxin G<sub>1</sub>; B<sub>1</sub>; G<sub>2</sub>; B<sub>2</sub>, Fumonisin B<sub>1</sub>; B<sub>2</sub>; B<sub>3</sub>, Deoxynivalenol, T2-toxin, Zearalenone and Ochratoxin A are possible in one run.

Ten samples (representing different regions as well as different classes and grades) were selected randomly for mycotoxin analyses.

No mycotoxin residues were detected on any of the samples analysed.

**Table 2: Mycotoxin results for the 2011/2012 season**

Region	Grade	Aflatoxin µg/kg				Fumonisin µg/kg			DON µg/kg	Ochratoxin A µg/kg	Zearalenone µg/kg	T2 - Toxin µg/kg	
		G <sub>1</sub>	B <sub>1</sub>	G <sub>2</sub>	B <sub>2</sub>	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>					
		LOD											
		5 µg/kg	5 µg/kg	5 µg/kg	5 µg/kg	100 µg/kg	40 µg/kg	40 µg/kg	100 µg/kg	5 µg/kg	20 µg/kg	20 µg/kg	
11	SB1	0	0	0	0	0	0	0	0	0	0	0	
13	SB1	0	0	0	0	0	0	0	0	0	0	0	
19	COSB	0	0	0	0	0	0	0	0	0	0	0	
20	SB1	0	0	0	0	0	0	0	0	0	0	0	
21	SB1	0	0	0	0	0	0	0	0	0	0	0	
25	SB1	0	0	0	0	0	0	0	0	0	0	0	
28	SB1	0	0	0	0	0	0	0	0	0	0	0	
31	SB1	0	0	0	0	0	0	0	0	0	0	0	
34	SB1	0	0	0	0	0	0	0	0	0	0	0	
36	COSB	0	0	0	0	0	0	0	0	0	0	0	
<i>Average</i>		0	0	0	0	0	0	0	0	0	0	0	
<i>Number of samples</i>		10	10	10	10	10	10	10	10	10	10	10	

Note: All results <LOD and non detected are reported as 0 for calculation purposes  
 LOD: Limit of detection, see table  
 µg/kg = ppb (parts per billion)