Genetic Modification

Annually the SAGL screen 10 % of the crop samples to test for MON 810 (Bt maize event) and NK 603 (RUR).

The methodology the SAGL uses is a quantitative enzyme-linked immuno sorbent assay. The SAGL does however not report quantities recorded below the limit of detection and above the value of the reference standards used, the reason being that the methodology can not accurately measure beyond those values. MON 810 were positively identified in 97 % of the samples tested and NK 603 in 59 % of the samples tested. Please note that the crop quality samples received by the SAGL are actually composite samples made up by the silos per class and grade of individual deliveries.

Mycotoxins

Aflatoxin was detected on three randomly selected crop samples. Thirteen samples tested positive for Ochratoxin A.

The Fumonisin average was 0,64 ppm. Eight samples tested higher than 2,0 ppm for Fumonisin with a maximum of 4,5 ppm.

Deoxynivalenol (DON) was detected in 47 % of the samples tested, giving an average of 0,5 ppm, with a maximum of 3,1 ppm.

None of the ninety samples showed any traces of Zearalenone.

Imported Maize

South Africa has imported in total 1 073 511 tons of yellow maize from Argentina as on 15/02/2008 for the 2006/2007 production season and 27 950 tons of white maize from African countries. (Season ends on 30/04/2008.) (SAGIS website.)

The quality data of the imported maize compared to the average quality of the RSA maize of the same class and grade for this season are given on pages 51 and 52.

2006/2007 Imported maize (up to 01/02/2008)

Eighty-seven maize samples from imported maize were analysed up to 01/02/2008. Of these maize, four samples graded as YM2 and eighty-three samples graded as Class Other Maize.

The major downgrading factor of imported maize to YM2 was the high percentage of defective kernels below the 6,35 mm sieve.

Imported maize downgraded to Class Other Maize were mainly due to the high percentage of pinked maize kernels.

The imported YM2 had an average hectolitre mass of 77,1 kg/hl while RSA YM2 had an average hectolitre mass of 74,4 kg/hl.

The imported maize even had smaller kernels than this season's local crop characterized by small kernels.

The average weighted fat content of the imported maize (4,7 % (db)) were higher than the average of the same RSA grade maize (3,5 % (db)), while the RSA maize gave a slightly higher protein content and a markedly better starch content.

Most quality tendencies are similar to the previous season.

The imported maize had an average total Aflatoxin of 0,43 ppb (µg/kg) with a maximum of 9,0 ppb in a sample.

The average Fumonisin content of imported maize were 1,66 ppm (mg/kg) with a maximum of 5,30 ppm. RSA maize in that same class and grade averaged 1,05 ppm Fumonisin and a maximum of 4,50 ppm.

RSA maize of the same class and grade this season had an average Deoxynivalenol (DON) content of 0,96 ppm with a maximum of 2,10 ppm, while the imported maize had an average of 0,84 ppm and a maximum of 2,80 ppm DON. The averages values of Ochratoxin A and Zearalenone of imported maize were low while none of these mycotoxins were traced this season in RSA YM2 and RSA COM maize.