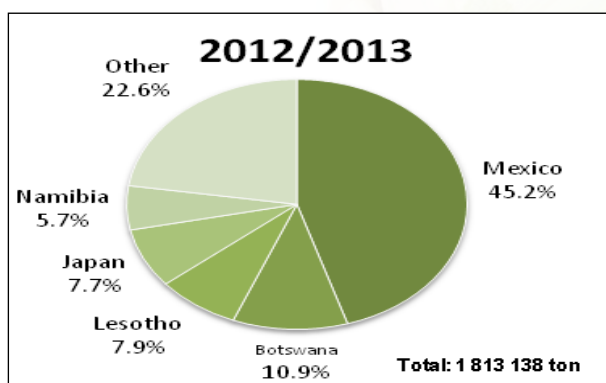


### 3. Imported and Exported Maize

A total of 10 562 tons of white maize was imported from Zambia during the 2012/2013 season. No samples were forwarded to SAGL for quality analysis purposes.

During the season under review, 413 152 tons of yellow maize and 1 399 986 tons of white maize were exported. Please see graph 25 below for the major destinations for RSA exports of maize.

**Graph 25: Major destinations for RSA maize exports during the 2012/2013 season**



Information provided by SAGIS.

### 4. Maize Crop Quality 2012/2013 - summary of results

#### 4.1 RSA Grading

The maize crop was of good quality, with 85% of white and 79% yellow maize, graded as maize grade one. The percentage defective kernels above and below the 6.35 mm sieve, 4.6% for white and 4.5% for yellow, were comparable and slightly lower than the previous season's 4.5% and 5.0% for white and yellow maize respectively. The percentage Diplodia infected kernels was equal to the previous season's 0.6%, while Fusarium infected kernels increased with 0.7% this season. Foreign matter and other colour maize did not pose any problems.

The average percentage total deviations of white maize decreased with 0.1% and that of yellow maize with 0.4% compared to the previous season. The average percentage total deviations on South African maize this season was at 4.9% slightly lower than the 5.1% of the 2011/2012 season.

#### 4.2 USA Grading

Of the 1000 maize samples graded according to USA grading regulations, 79% were graded US1, 13%

US2, 3% US3, 2% US4, 1% US5 while mixed and sample grade represented 2%. The main reason for downgrading the samples were the percentage total damaged kernels exceeding the maximum limit per grade.

#### 4.3 Physical Quality factors

Hectolitre mass/Bushel weight/Test weight is applied as a grading factor in the USA grading regulations. White maize had an average hectolitre mass of 78.2 kg/hl compared to the 76.6 kg/hl of yellow maize. The hectolitre mass in total varied from 67.8 kg/hl to 82.9 kg/hl and averaged 77.4 kg/hl, slightly higher than the ten year average. Only sixteen samples reported values below the minimum requirement (56.0 lbs or 72.1 kg/hl) for USA grade 1 maize.

The 100 kernel mass averaged 29.0 g which is 1.4 g lower than the previous season and also 3.6 g lower than the ten year average.

Yellow maize kernels were on average smaller than white kernels. The breakage susceptibility of both white and yellow maize compared well with the 2011/2012 season (which was the lowest of the previous ten seasons). The % stress cracks varied from 0 – 37%, averaged 5% and compared well with previous seasons.

The milling index varied from 46.9 to 119.5 and averaged 95.1, slightly higher than the previous season. The average milling index for white maize is higher (97.0) than that of yellow maize (93.2).

#### 4.4 Roff milling and whiteness index (WI)

The average % extraction of total meal in white maize obtained with the Roff mill averaged 79.2% (equal to the previous season) and varied from 71.8% to 84.3%.

The whiteness index averaged 25.1 for unsifted and 15.9 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 28.5 for unsifted maize meal. Sifted maize meal averaged 23.6.

The higher the WI value obtained, the whiter the meal sample. The main contributing factors causing differences in WI values are the presence of defective kernels and other colour maize like yellow maize, the type of cultivar as well as the soil composition.