South African

Commercial Maize Quality 2020/2021

Acknowledgments

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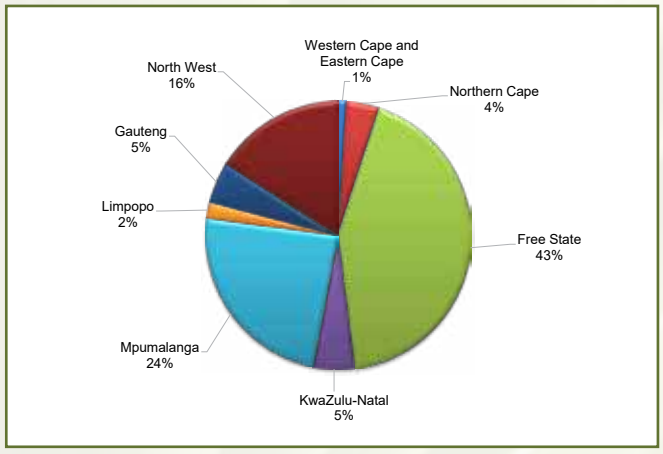
Introduction

During the 2021 harvesting season, a representative sample of each delivery of maize at the various grain intake points was taken according to the prescribed grading regulation. The sampling procedure for the samples used in this survey is described on page 103. A total of 1 000 composite samples, representing white and yellow maize of each production region, were received and analysed to determine the quality. The samples consisted of 560 white and 440 yellow maize samples.

Graph 1: Provincial contribution to the production of the 2020/21 maize crop



Figures provided by the CEC.

The quality attributes which were tested for, include:

- RSA grading: Samples were graded according to the following factors, as defined in the South African grading regulation: defective kernels above and below the 6.35 mm sieve, total defective kernels, foreign matter, other colour kernels, combined deviations and pinked kernels.
- USA grading: Samples were graded according to the American Grading Regulations to determine the following factors: Test weight per bushel (pounds), heat damaged kernels, total damaged kernels, broken corn and foreign matter (BCFM) and other colour.
- Nutritional values: Moisture, crude protein, crude fat, crude fibre and starch.
- Physical Quality factors: Test weight (kg/hl), 100 kernel mass, kernel size, breakage susceptibility, stress cracks, milling index and grit yield.
- All white maize samples were milled on the Roff laboratory mill and the whiteness index of the maize meal determined.
- Mycotoxin analyses were performed on 350 samples representative of white and yellow maize produced per region.

Testing for the presence of a selection of traits present in Genetically Modified (GM) maize were performed on 100 samples representative of white and yellow maize produced per region.