South African

Commercial Maize Quality 2021/2022

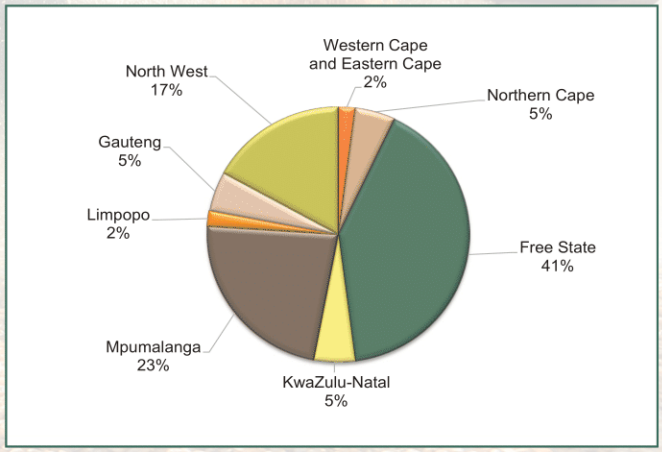
Acknowledgments
With gratitude to:

- The Maize Trust for financial support in conducting this survey.
- Agbiz Grain and its members for providing the samples to make this survey possible.
- The Crop Estimates Committee (CEC) of the Department of Agriculture, Land Reform and Rural Development (DALLRD) for providing production related figures.
- South African Grain Information Service (SAGIS) for providing supply and demand figures relating to maize and maize products.
- The Bureau for Food and Agricultural Policy (BFAP) for providing research based market analysis.

Introduction

During the 2022 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 105. 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 524 white and 476 yellow maize samples.

Graph 1: Provincial contribution to the production of the 2021/22 maize crop



Figures provided by the CEC.

The quality attributes tested, 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 60 samples representative of white and yellow maize produced per region.