

South African

Commercial Maize Quality for the 2024/2025 season

Acknowledgments

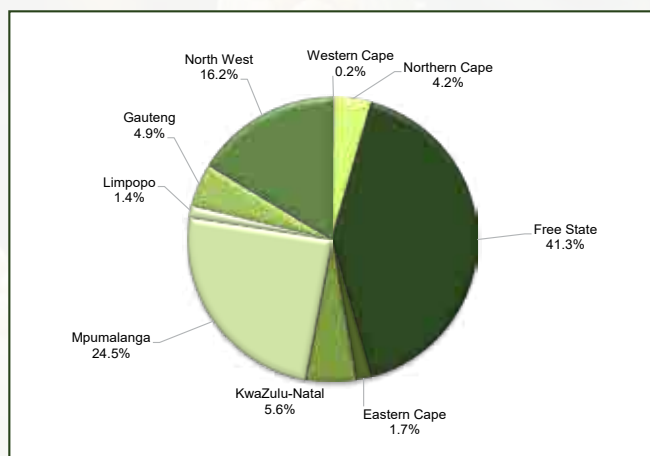
With gratitude to:

- The Maize Trust for financial support in conducting this survey.
- Agbiz Grain and its members for providing maize samples for this survey.
- The Crop Estimates Committee (CEC) of the Department of Agriculture (DoA) for providing production related figures.
- South African Grain Information Service (SAGIS) for providing supply and demand figures relating to maize and maize products.



Introduction

During the 2025 harvesting season, a representative sample of each delivery of maize at the various grain intake points was taken according to the prescribed grading regulation and sampling protocol provided. The sampling procedure for the samples used in this survey is described on page 91. 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 458 white and 542 yellow maize samples.



Graph 1: Provincial contribution to the production of the 2024/25 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 and combined deviations.

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 Bühler MCKA maize mill, while 50% of the samples were also milled on the Roff laboratory maize mill for comparison purposes. The whiteness index of all the milled maize meal samples was determined.

Mycotoxin analyses were performed on 350 samples representative of white and yellow maize produced per region.

Please refer to pages 91 – 95 for the methodologies followed.

The maize crop quality survey is performed annually by the Southern African Grain Laboratory NPC (SAGL). SAGL was established in 1997 on request of the Grain Industry. SAGL is an ISO 17025 accredited testing laboratory and participates in a number of proficiency testing schemes, both nationally and internationally, as part of our ongoing quality assurance procedures to demonstrate technical competency and international comparability.

The results of this, the 28th survey, as well as previous years' surveys are available on the SAGL website (www.sagl.co.za). The report, in an easy to page format, is also available on the website. Hard copy reports are distributed to industry stakeholders and interested parties.

Crop quality results are summarised and reported on a per region, per colour and from this report going forward, also a per province basis. In addition to the quality information, production figures (obtained from the Crop Estimates Committee (CEC)) relating to hectares planted, tons produced and yields obtained on a national as well as provincial basis, over an eleven-season period, are provided in this report. SAGIS (South African Grain Information Service) supply and demand figures over several years are provided in table and graph format, also import and export data. Information on maize processed per province as well as the manufacture, import and export of maize products is also included in this report. The national grading regulations as published in Government Gazettes of 16 February 2024 as well as 1 March 2024, are provided on pages 100 to 110.

The long-term goal of this quality survey is the annual determination of the quality of the commercial maize crop on a national level. This valuable data set reveals general tendencies, highlights quality differences in the commercial maize produced in different local production regions for local market requirements and provides important information on the quality of commercial maize intended for export. During seasons when maize is imported for domestic use, the quality of the imported maize can be compared to that of locally produced maize.

The quality data generated is also referred to by various role players in the maize industry, adds value to research projects and serves as the basis for discussions when maize grading regulations have to be revised.

With funding from the Maize Trust, a data mining project on thirteen season's crop quality data was conducted and the results transferred to a Geographic Information System (GIS) map system, reflecting all the maize producing areas of South Africa. These maps are updated annually.

Production

The final figure for the 2024/25 season's commercial maize crop, as overseen by the National Crop Estimates Liaison Committee (CELC), is 16 650 000 tons (Graph 2). This is the second largest crop following the all-time high record crop of 16 820 000 tons produced in the 2016/17 season. This season's crop is also almost 24% higher than the previous 10-year crop average (2014/15 - 2023/24) of 13 470 350 tons. White maize's contribution to the total production was 8 450 000 tons (50.8%) and that of yellow maize 8 200 000 tons (49.2%).

The national Crop Estimates Committee's (CEC) estimated total production figures were revised, using the South African Grain Information Services' (SAGIS) published figures of actual deliveries as basis for the calculations. Figures from the maize utilisation survey, conducted by the Department of Agriculture and the National Crop Statistics Consortium (NCSC) to determine on-farm usage and retentions, were added to the SAGIS delivery figures to calculate the final crop production figures.