

South African COMMERCIAL WHEAT QUALITY FOR THE 2017/2018 SEASON



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Summary

The commercial wheat crop of the 2017/2018 season was set at 1.535 million tons which is 375 000 tons (19.6%) lower than the previous season's crop. A total area of 491 600 hectares was utilized for wheat production and the average yield was 3.12 tons per hectare (Figures obtained from the CEC).

The whole wheat protein average of 12.6% increased by 0.6% compared to the previous season, the ten-year national average is 11.9%. The percentage of samples having protein contents higher than 12.0% increased from 47.8% last season to 63.5%. During the 2015/2016 season this percentage was 68.2%. The average hectoliter mass was 80.7 kg/hl, slightly lower than the 81.5 kg/hl of the 2016/2017 season. The hectoliter mass of 10% of the samples was below the minimum Grade 1 requirement of 77 kg/hl, compared to the 4% of the previous season.

The average falling number this season was 371 seconds. Five of the samples analysed gave falling number values below 250 seconds and of these four were below 220 seconds. The average mixogram peak time of 2.7 minutes was equal to the previous two seasons and slightly lower than the ten-year average of 2.9 minutes.

Introduction

This report provides the results of the twentieth annual wheat crop quality survey performed 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.

During the harvesting season (October to December for the southern production regions and November to January for the Northern production regions), a representative sample of each delivery of wheat was taken according to the prescribed wheat regulation.

A sub-sample of each of these grading samples was collected in a bin according to grade and class per silo bin at each silo. This composite bin sample was then divided and a 3 kg sample was sent to SAGL for the annual wheat crop quality survey. SAGL received and analysed 304 samples to provide as best possible a proportional representation of the production of wheat in all the different production regions.

Cultivar identification was performed on these samples and sales figures of seed sold by the commercial grain silo owners were requested. The samples were graded and the thousand kernel mass determined. Sub-samples were milled on a Quadromat Junior mill for mixograph analyses.

Composite samples were made up per class and grade for each production region and milled on a Bühler MLU 202 laboratory mill. Moisture, protein, ash and colour determinations were done and RVA analyses conducted. Rheological tests, namely gluten, mixogram, farinogram, alveogram, extensogram and 100-gram baking tests, were then performed. Multi-mycotoxin analyses were performed on 40 samples randomly selected to represent the different production regions. Amino acid analyses were also performed on a selection of samples.