

# South African

## COMMERCIAL WHEAT QUALITY FOR THE 2018/2019 SEASON



### Acknowledgements

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- South African Grain Information Service (SAGIS) for providing supply and demand figures relating to wheat and wheat products.

### Summary

The 2018/2019 season's commercial wheat crop was set at 1 868 000 tons, which is 333 000 tons (21.7%) higher than the previous season's crop. A total area of 503 350 hectares was utilized for wheat production and the average yield was 3.71 tons per hectare (Figures obtained from the CEC).

The whole wheat protein average of 12.1% decreased by 0.5% compared to the previous season. The percentage samples with a protein content exceeding 12.0%, decreased from 63.5% in 2017/2018 to 53.7% this season. This decrease can be attributed to the severe drought conditions experienced in the Western Cape last season that lead to above average protein values being observed. During the 2016/2017 season this percentage was 47.8%. The average hectoliter mass of 81.3 kg/hl was higher than the 80.7 kg/hl of the 2017/2018 season, with only 2% of the samples below the minimum Grade 1 requirement of 77 kg/hl.

The average falling number this season was 397 seconds. Five of the samples analysed gave falling number values below 250 seconds and of these only one was below 220 seconds. The average mixogram peak time of 2.8 minutes compared well with the 2.7 minutes of the previous three seasons. The ten-year average is 2.9 minutes.

### Introduction

This report provides the results of the twenty-first 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 by the commercial grain storage companies.

A sub-sample of each of these grading samples was collected in a container according to class and grade per silo bin/bag/bunker at each depot. This composite sample was then divided and a 3 kg sample was forwarded to SAGL for the annual wheat crop quality survey. SAGL received and analysed 337 samples to provide as best possible a proportional representation of the production of wheat in all the different production regions.

The samples were graded, visual cultivar identification performed and the thousand kernel mass determined. Sub-samples were milled on a Quadromat Junior mill for mixograph analyses. Composite samples per class and grade for each production region were milled on a Bühler MLU 202 laboratory mill. Moisture, protein, ash and colour determinations were done and RVA analyses conducted. Rheological analyses, 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. The amino acid profiles of a selection of samples were also determined.