

# South African

## Commercial Wheat Quality of the 2023/2024 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 2023/24 season's commercial wheat crop was set at 2 050 000 tons, almost 3% lower than the previous season. A total area of 537 950 hectares was utilised for wheat production during this season and the average yield was 3.81 tons per hectare (Figures obtained from the CEC).

The whole wheat protein average of 11.8% decreased by 0.3% compared to the previous season. The percentage samples from this crop survey with a protein content equal or higher than 12.5% (minimum protein content for Super Grade) was 28% (44% and 37% during the previous two seasons respectively). The hectoliter mass averaged 80.7 kg/hl, 0.9 kg/hl higher than the previous season. 4% of the samples reported values below the minimum requirement of 76 kg/hl for Super Grade, Grade 1 and Grade 2. The ten-year national average is 80.3 kg/hl.

The average falling number this season was 375 seconds. Only 1% (4) of the samples analysed gave falling number values below 250 seconds and of these only one sample was below 220 seconds. The average mixogram peak time was 3.1 minutes compared to the 3.3 minutes of the previous season. The ten-year average is 3.0 minutes.

## Introduction

This report provides the results of the twenty-sixth 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/dam 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 analysed 335 samples to provide a proportional representation of the production of wheat in all the different production regions.

The samples were graded 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, 65 samples in total, 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.