

SOUTH AFRICAN

COMMERCIAL WHEAT QUALITY FOR THE 2010/2011 SEASON

Acknowledgements

With gratitude to:

- The Winter Cereal Trust for its financial support in conducting this survey.
- The Grain Silo Industry and its members for their cooperation in providing the samples to make this survey possible.
- The National Chamber of Milling and its members for providing samples of wheat delivered directly to the mills.

Introduction

The final wheat production of 1 430 000 tons for the 2010/2011 season, was 27 % lower than the previous season's 1 958 000 tons. This is 26,6 % lower than the 10 year average of 1 948 591 tons (2001/2002 to 2010/2011 seasons). A total area of 558 100 hectares was utilized for wheat production. (Figures obtained from the Crop Estimates Committee).

The whole wheat protein average was 12.1 % compared to the 11.7 % of the previous season and the ten year average of 12.0 %. The average hectolitre mass was 80.3 kg/hl. The hectolitre mass of this season's samples was determined according to ISO 7971-3 by means of the Kern 222 instrument. This method was accredited by SANAS during 2010. The average mixogram peak time of 3.0 minutes was similar to the previous two seasons' 2.9 minutes.

The percentage of samples in this survey graded as B1 increased from 33 % the previous season to 44 % this season. The main contributing factors being the change in instrument for the hectolitre mass determination and higher protein levels. The low rainfall experienced during the planting and growing periods in parts of the production regions like the Southern Cape and Free State resulted in lower yields and higher protein levels. Preharvest sprouting and low falling numbers observed in parts of the Free State was due to late rains towards the end of October 2010.

Differences in the flour and dough qualities between the winter rainfall, summer rainfall and irrigation areas were observed as in previous seasons. The overall flour and dough quality were good.

During the harvesting season, a representative sample of each delivery of wheat is taken

A sub-sample of each of these grading samples is collected in a bin according to grade and class per silo bin at each silo. This composite bin sample is then divided and a 3 kg sample is sent to the Southern African Grain Laboratory (SAGL) for the annual wheat crop quality survey. SAGL analysed all 372 samples received, to represent the production of wheat in all the different production regions. The number of samples analysed was significantly less than in previous seasons (480 samples) due to the decrease in wheat production.

The samples were fully graded and thousand kernel mass was done. Small samples were milled on the Quadromat mill, followed by a mixograph analysis.

Cultivar identification was done on these samples and sales figures of seed sold by the commercial grain silo owners were obtained.

Composite samples were made up per class and grade for each production region and milled on the Bühler mill. Rheological tests, namely gluten, mixogram, farinogram, alveogram, extensogram and 100-gram baking tests, were then performed.

The results (as averages per region) are made available weekly on the SAGL website (www.sagl.co.za) as soon as the first samples are received. The hard copy reports are distributed to all interested parties and can also be downloaded from the website.

Summaries comparing the quality of the local wheat for the 2008/2009 and 2010/2011 as well as the 2009/2010 and 2010/2011 seasons are provided.