

## **REGIONAL QUALITY SUMMARY**

### **WINTER RAINFALL AREA**

#### **(Western Cape)**

Production regions 1 to 6 fall within the Winter rainfall area (Western Cape Province). Region 1 is Namaqualand, regions 2 to 4 are the Swartland area and regions 5 and 6 the Rûens area. Wheat is planted from the second half of April until the middle of June and harvested during October to December.

The hectolitre mass averaged 78.6 kg/hl compared to the previous season's 81.7 kg/hl. The thousand kernel mass averaged 40.8 gram, 1.2 g lower than the previous season. The average falling number was 341 seconds. Three samples of the western Rûens region had falling number values below 220 seconds. The average whole wheat protein content of 10.7% (12% mb) (10.8% in 2012/2013) was the lowest of the different production areas, confirming a trend observed over previous seasons.

The screenings of 1.67% was little higher than the previous season's 1.44%. The Bühler extraction averaged 72.4% (average of wheat grades B1 to B4 and UT), similar to 2012/2013. The average wet colour of the flour was -2.9 KJ units and the dry colour L\* value (indicating lightness) 94.14. This colour indicates a very white flour that is preferred by millers and bakers. Both the wet and dry colour compares very well with the previous season.

The average wet and dry gluten values namely 28.1% and 10.0% (14% mb) respectively correlated well with the flour protein content of 10.0% (12% mb). The gluten index was 83. The average farinogram absorption was 59.8% and the development time 3.7 minutes, the shortest of the three regions. The average alveogram strength was 32.2 cm<sup>2</sup>, slightly lower, but still comparing well with the previous season. The alveogram P/L value was 0.81 compared to the 1.01 of 2012/2013. The average strength on the extensogram was 73 cm<sup>2</sup>. The mixogram peak time (Bühler mill) averaged 2.6 minutes. The 100-gram baking test showed an excellent relationship between protein content and bread volume.

### **SUMMER RAINFALL AND IRRIGATION AREA**

#### **(Free State)**

The number of tons produced in production regions 21 to 28, which fall within the Free State Province, continue to decrease. The drought conditions experienced in the Western as well as Southwestern parts attributed to the decline. Early planting commences in June and continues until August. Harvesting takes place from November to January.

The average hectolitre mass was 79.2 kg/hl. The physical characteristic thousand kernel mass (37.0 g) was slightly higher than the previous season's 36.2 g. The average screenings was 1.35%. The average whole wheat protein content increased from 11.7% the previous season to 12.7% (12% mb) this season. Despite the fact that 50% of the samples which gave the lowest falling number values overall in this survey originated in the Free State production regions, the average falling number of 308 seconds was still within the ideal range.

The wet gluten content (14% mb) was 30.6% and the dry gluten 10.8%. The gluten index was 89. The average Bühler extraction percentage in the Free State was 72.2% (72.4% previous season). The Kent Jones flour colour was -2.5 KJ units (-2.7 KJ units in the previous season) and the L\* value 93.74 (previously 93.61).

The average farinogram water absorption was 60.9%, slightly lower than in 2012/2013. The development time averaged 6.1, the longest of the three areas. The average alveogram strength of 44.6 cm<sup>2</sup> and extensogram strength of 111 cm<sup>2</sup> was the highest of the three regions, as can be expected as this region also had the highest protein content. These results, including the gluten, indicate that the Free State regions produced wheat with the strongest rheological (dough) quality.

The mixogram (Bühler) peak time of 3.1 minutes, gave the Free State the longest average mixogram peak time of the different production areas. The 100-gram baking test showed that the relationship between protein content and bread volume was excellent between the different grades.

## **IRRIGATION AREAS**

### **(Northern Cape, North West, Mpumalanga, Gauteng, Limpopo and KwaZulu-Natal)**

Production regions 10 - 11, 12 – 20, 29 – 33, 34, 35 and 36 falls within the Irrigation areas. The irrigation areas are divided into the cooler central areas and the warmer northern areas.

The irrigation wheat had the highest weighted average hectolitre mass of 80.9 kg/hl. The thousand kernel mass was 39.0 g. The average falling number was 349 seconds and the screenings averaged 1.36%. Four samples from Mpumalanga had falling numbers below 220 seconds. Whole wheat protein content averaged 12.0% equal to 2012/2013.

The average Bühler extraction percentage was 74.0. The Irrigation areas gave on average almost 2% higher extraction than the winter and summer rainfall areas.

The dry colour L\* value 94.01 and the Kent Jones wet colour value -3.1 KJ units equaled the previous season. The wet and dry gluten contents were 29.9% and 10.4% respectively and the gluten index 86. The average farinogram water absorption was 59.9% (60.4% during previous season), with an average farinogram development time half a minute longer than in 2012/2013.

The average alveogram strength was 37.8 cm<sup>2</sup> and the average P/L 0.61 (36.8 cm<sup>2</sup> and 0.67 respectively the previous season). Lower P/L values are indicative of dough being more extensible (having higher L values) than dough with higher P/L values. The average extensogram strength was 96 cm<sup>2</sup>. The average mixogram (Bühler) peak time was 2.8 minutes which was slightly longer than the previous two seasons. The relationship between protein content and 100 g bread volume was also shown to be excellent.

Please see the RSA Crop Production map on the next page as well as the regional results provided on pages 21 to 48.