

## **REGIONAL QUALITY SUMMARY**

### **WINTER RAINFALL AREA**

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

Production regions 1 to 6 fall within the Winter rainfall area (Western Cape Province). Wheat is planted from the second half of April until the middle of June and harvested during October to December.

The hectolitre mass averaged 79.8 kg/hl compared to the previous season's 78.6 kg/hl. The thousand kernel mass averaged 39.7 gram, 1.1 g lower than the previous season. The average falling number was 379 seconds. None of the 136 samples from the Winter rainfall area had a falling number lower than 250 seconds. The average whole wheat protein content of 11.1% (12% mb) (10.7% in 2013/2014) was the lowest of the three production areas, a trend observed over previous seasons as well.

The screenings of 1.85% was a little higher than the previous season's 1.67%, the highest of the three areas and 0.30% higher than the national average for 2014/2015. The mixogram peak time (Quadromat mill) averaged 2.7 minutes, the shortest of the three areas. The Bühler extraction averaged 72.8% (average of wheat grades B1 to B4 and UT), similar to 2013/2014. The average dry colour of the flour was -3.6 KJ units and the dry colour L\* value (indicating lightness) 94.03. This colour indicates a white/light flour that is preferred by millers and bakers. Both these values compares with previous seasons. The average ash content was 0.59% (db).

The flour protein content averaged 10.1%. The average wet and dry gluten values namely 27.3% and 9.3% (14% mb) were respectively 0.8% and 0.7% lower than the previous season. The gluten index was 88. The average farinogram absorption was 59.4% and the development time 4.6 minutes, the shortest of the three areas. The average alveogram strength was 33.1 cm<sup>2</sup>, slightly higher, but still comparing well with the previous season. The alveogram P/L value was 0.59 compared to the 0.81 of 2013/2014, indicating dough with a higher distensibility. The average strength on the extensogram was 80 cm<sup>2</sup>. The mixogram peak time on the Bühler milled flour averaged 2.4 minutes. The 100-gram baking test showed an excellent relationship between protein content and bread volume.

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

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

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 (36.8 g) was slightly lower than the previous season's 37.0 g and 2.0 g lower than the RSA average. The average screenings was 1.41%. The average whole wheat protein content decreased slightly from 12.7% the previous season to 12.4% (12% mb) this season. This protein is the highest of the three production areas, although only 0.3% higher than the irrigation areas. The falling number increased on average from 308 seconds in 2013/2014 to 352 seconds. One of the four samples reporting falling numbers lower than 250 seconds this season, originated in the Free State.

The mixogram (Quadromat) peak time of 3.2 minutes, was similar to the previous season. The average Bühler extraction percentage in the Free State was 73.3% (72.2% previous season). The Kent Jones flour colour was -3.1 KJ units (-2.5 KJ units in the previous season) and the L\* value 93.63 (previously 93.74). The average ash content was 0.58% and the average flour protein content 10.9%. The wet gluten content (14% mb) was 29.5% and the dry gluten 9.9%, both approximately 1% lower than last season. The gluten index was 86.

The average farinogram water absorption of 59.8% was lower than the previous season's 60.9% but slightly higher than the other two areas. The development time averaged 5.1 minutes. The average alveogram strength of 37.7 cm<sup>2</sup> and extensogram strength of 99 cm<sup>2</sup> was also lower than in the 2013/2014 season. The Bühler milled flour had an average peak time of 2.7 minutes. The 100-gram baking test showed that the relationship between protein content and bread volume was very good between the different grades.

## **IRRIGATION AREAS**

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

The irrigation areas are divided into the cooler central areas and the warmer northern areas. Planting commences in July and continues until August. Harvesting takes place from November to January.

The irrigation wheat had the highest weighted average hectolitre mass of 81.2 kg/hl. The thousand kernel mass was 39.2 g. Both these averages are slightly higher than the previous season. The average falling number was 367 seconds (equal to the national average) and the screenings averaged the lowest of the three areas at 1.22%. Two samples from Mpumalanga and one from Limpopo had falling numbers below 250 seconds.

The whole wheat protein content was on average 12.1% and the flour's protein content 11.1%. The average mixogram (Quadromat) peak time was slightly longer than that of the Free State and averaged 3.3 minutes, the longest of the three areas. The average Bühler extraction percentage was 73.9, similar to last season and again the highest of the three production areas.

The dry colour L\* value was 93.68 and the Kent Jones wet colour value -3.3 KJ units. The wet and dry gluten contents were 29.6% and 10.0% respectively and the gluten index 88. The average farinogram water absorption was 59.4% (59.9% during previous season) and the farinogram development at 6.0 minutes, the longest of the three areas.

The average alveogram strength was 42.1 cm<sup>2</sup> and the average P/L 0.57 (37.8 cm<sup>2</sup> and 0.61 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 111 cm<sup>2</sup>. The mixogram peak time averaged 3.0 minutes. Based on the average values, the irrigation wheat had the strongest rheological (dough) quality. The relationship between protein content and 100 g bread volume was also shown to be excellent.

Please see the regional results provided on pages 28 to 55.