

## REGIONAL QUALITY

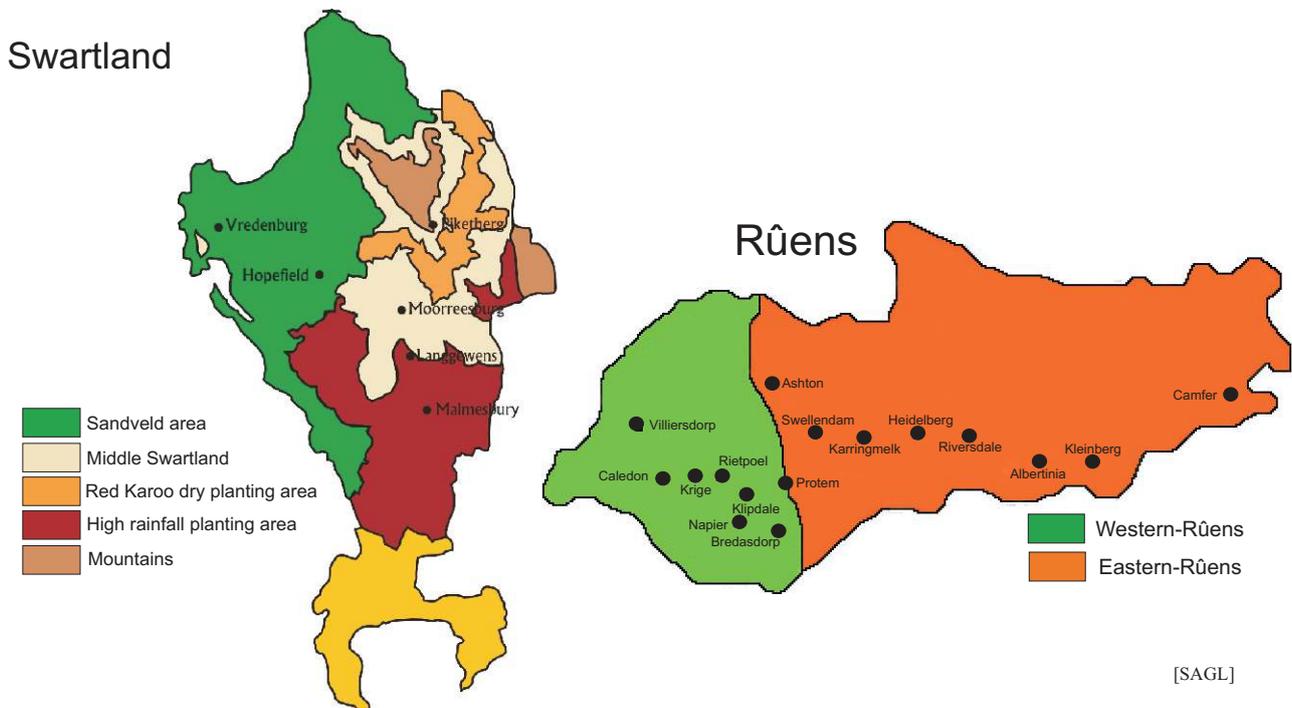
### WINTER RAINFALL AREA (Western Cape)

Production regions 1 to 6 fall within the winter rainfall area (Western Cape Province), Regions 1 to 4 are the Swartland area and regions 5 and 6 the Rûens area. These areas experienced normal weather conditions during the season. The Western Cape had the highest production of all the provinces this season, namely 645 000 tons (CEC).

The hectolitre mass averaged 78.5 kg/hl (the previous season 77.6 kg/hl). The thousand kernel mass averaged 35.8 gram, which is better than the previous season's 34.7 gram. There were no falling number problems experienced this season, with the average falling number being 401 seconds.

The protein averaged 11.53 % (12 % mb) and is 1.19 % lower than the previous season (12.72 %). The average protein in the Swartland was 11.6 % (13.1 % the previous season) and the average protein in the Rûens was 11.2 % (11.9 % in 2004/2005). The hectolitre mass of the Swartland and Rûens was 78.0 kg/hl and 80.2 kg/hl respectively.

### Winter Rainfall Area (Western Cape Province)



The screenings of 1.53 % were lower than the previous season's 1.63 %. The screenings in the Swartland averaged 1.49 % and that of the Rûens 1.70 %. The Bühler extraction averaged 75.4 % (average of wheat grades B1 to B4, UT and COW) and the average colour of the flour was -1.9 KJ units. Both these characteristics were better than that of the wheat in the Free State, but not as good as the wheat from the other rainfall areas, and the Vaal and Orange River irrigated wheat.

The dough quality was the same as in the previous season. The mixogram peak time (Quadromat mill) averaged 2.7 minutes. The average farinogram absorption was 61.9 %. The average strength of the alveogram was 33.7 cm<sup>2</sup> (Free State Province was 50.9 cm<sup>2</sup>) and the average strength of the extensogram was 84 cm<sup>2</sup>, which is weaker than the wheat from the Free State (131 cm<sup>2</sup>).

The 100-gram baking test showed a very good relationship between protein content and bread volume.

## SUMMER RAINFALL AREA (Free State)

Production regions 21 to 28, which fall within the Free State Province, had the second highest production, namely 570 000 tons (CEC).

The physical characteristics such as hectolitre mass (77.5 kg/hl), thousand kernel mass (34.3 gram) and screenings (1.50 %) were better the previous season's 76.3 kg/hl, 32.0 gram and 2.17 % respectively.

The Central and Western Free State had very little spring and summer rainfall which resulted in a high protein content (14.7 % on a 12 % mb) and shrunken kernels. The Eastern Free State had normal weather conditions during spring and summer but experienced some rain during harvesting, which resulted in some samples with low falling number values.

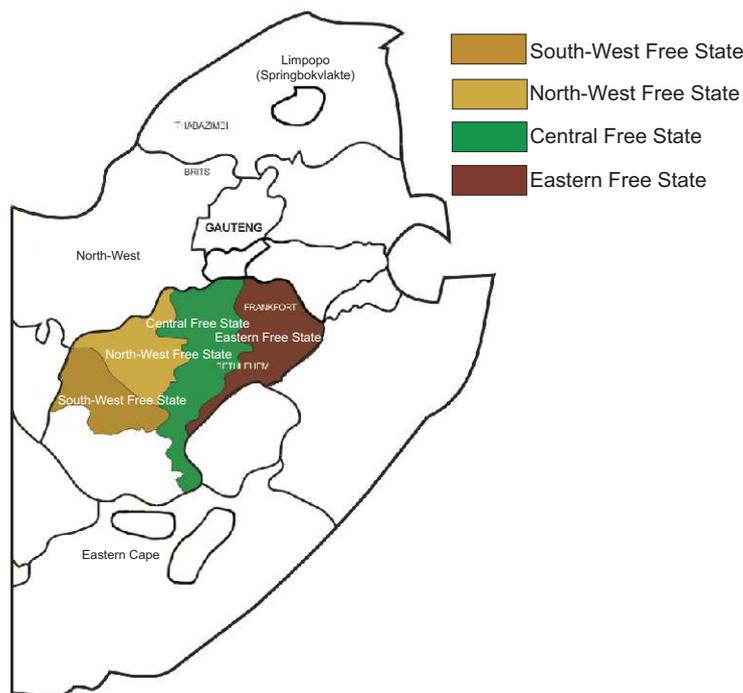
The mixogram (Quadromat) peak time was 3.1 minutes (3.3 minutes previous season), giving the Free State the longest average mixogram peak time of the different regional qualities.

The average Bühler extraction percentage in the Free State was the lowest in all the regions, namely 74.4 % (73.6 % previous season). The Kent Jones flour colour was -1.1 KJ units (-0.6 KJ units in previous season), which yields a little darker flour than the other regions.

The average farinogram water absorption was 63.2 % (61.7 % the previous season), beating the other regions by about 1 %. The wheat from the Free State tends to give a stronger dough than the other regions, with a farinogram development time of 6.2 minutes, alveogram strength of 50.9 cm<sup>2</sup>, and an extensogram strength of 131 cm<sup>2</sup>.

The 100-gram baking test showed that the relationship between protein content and bread volume was very good, however, it was not as good as the wheat from the other regions.

## FREE STATE



## SUMMER RAINFALL AREA (Mpumalanga, Limpopo, Gauteng and Eastern Cape)

Other summer rainfall regions, excluding the Free State, are mainly regions 30, 32, 33 (Mpumalanga), 34 (Gauteng) and 35 (Limpopo). They produced in total about 73 000 tons during this season. No samples were received from the Eastern Cape region.

The average hectolitre mass was 78.4 kg/hl (79.3 kg/hl the previous season). This is more or less the same as in the winter rainfall area. The thousand kernel mass was the highest, i.e. an average of 37 g.

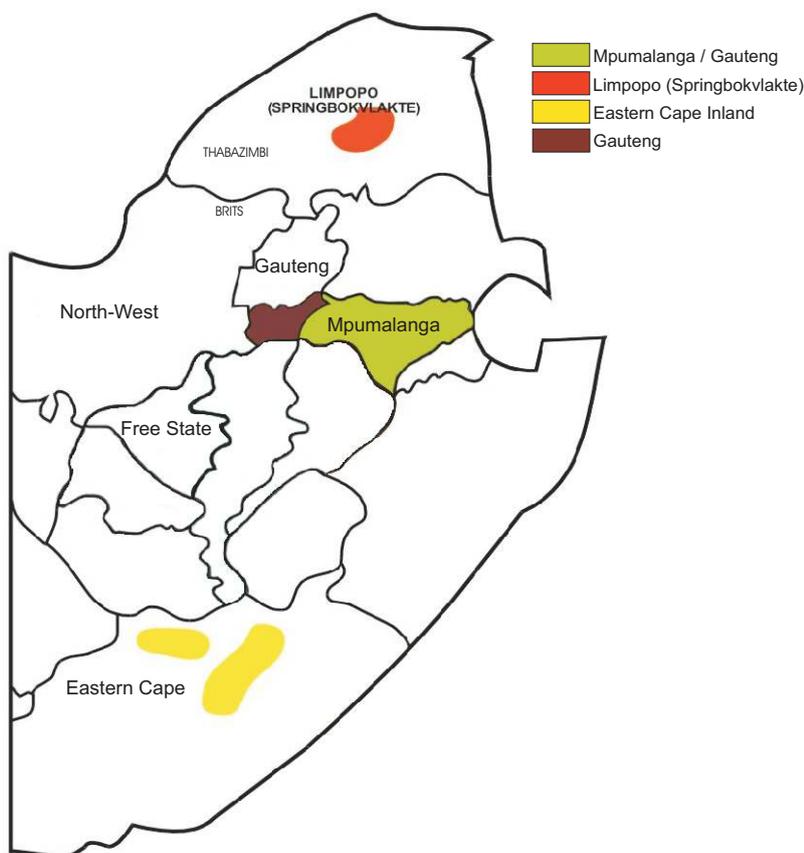
The average falling number was 414 seconds. The average percentage screenings was 1.83 %. The average protein content was 12.50 % (12 % mb).

The average mixogram (Quadromat) peak time was 2.8 minutes (2.6 minutes the previous season).

The average Bühler extraction was 76.4 %, with an average colour of -2.1 KJ units (75.6 % and -1.5 KJ units the previous season). The farinogram had a good average water absorption of 62.4 % (61.6 % the previous season) and an average development time of 5.3 minutes.

The average alveogram strength was 39.8 cm<sup>2</sup>, with an average P/L value of 0.78, and the average extensogram strength was 110 cm<sup>2</sup>.

The 100-gram baking test showed an excellent relationship between protein content and bread volume.

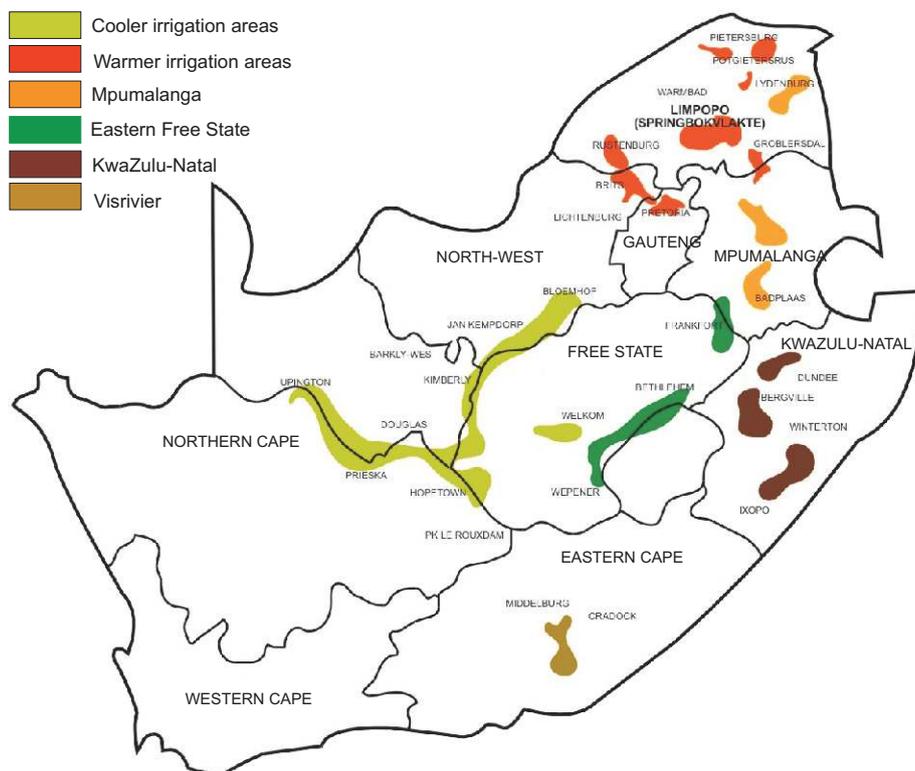


(Regional maps kindly provided by the Small Grains Institute, ARC)

## IRRIGATION AREAS

(Vaal and Orange River plus other irrigation areas. See map.)

Irrigation areas in South Africa



The average hectolitre mass was 75.7 kg/hl (78.9 kg/hl the previous season) and the thousand kernel mass was 35.8 g (37.7 g the previous season). The average falling number was 329 seconds. The average screenings were 2.06 % and the protein averaged 11.56 % (12 % mb) compared to 1.82 % and 11.78 % (12 % mb) the previous season.

The average mixogram (Quadromat) peak time was 2.6 minutes compared to 2.7 minutes of the previous season.

The average Bühler extraction percentage was 76.0 (75.4 % in previous season), with an average flour colour of -2.1 KJ units.

The average farinogram water absorption was 61.9 % (60.0 % during previous season), with an average farinogram development time of 4.7 minutes.

The average alveogram strength was 37.9 cm<sup>2</sup> and the average P/L was 0.71 (32.7 cm<sup>2</sup> and 0.59 respectively the previous season).

The average extensogram strength was 107 cm<sup>2</sup>. The relationship between protein content and bread volume was shown to be excellent by the 100-gram baking test.

## UTILITY GRADE AND CLASS OTHER WHEAT

This is the first survey to include quality analyses on wheat downgraded to Utility grade (UT) or Class Other Wheat (COW).