

## REGIONAL QUALITY

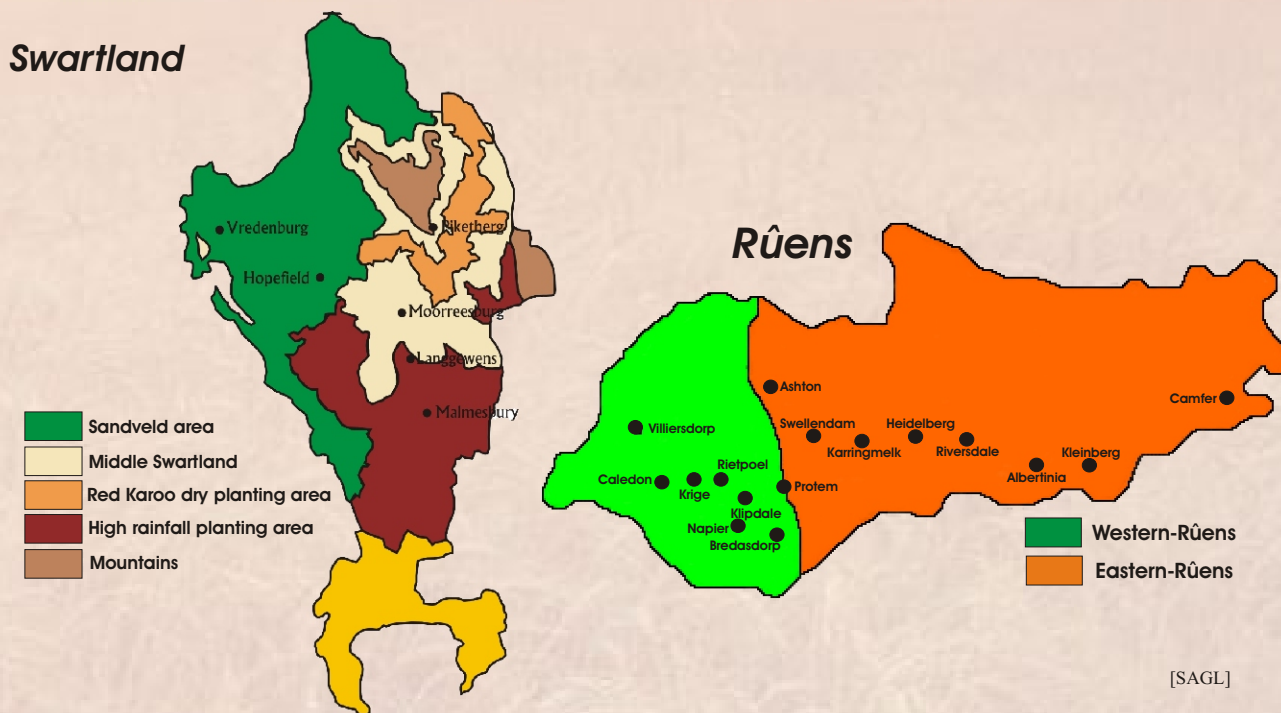
### WINTER RAINFALL AREA (Western Cape)

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. No samples were received from region 1 for this season. The Western Cape had the second highest production of all the provinces this season, namely 712 500 tons (CEC).

The hectolitre mass averaged 77.3 kg/hl (the previous season 78.5 kg/hl). The thousand kernel mass averaged 38.0 gram, which is better than the previous season's 35.8 gram. The Western Cape had a normal year regarding rainfall except for little rain in the Swarland area during harvest resulting in isolated cases of pre-harvest sprouting. The average falling number was 365 seconds.

The protein averaged 11.13 % (12 % mb) and is a little lower than the previous season (11.53 %). The average protein in the Swartland was 11.10 % (11.6 % the previous season) and the average protein in the Rûens was 11.20 % (the same as in 2005/2006). The hectolitre mass of the Swartland and Rûens was 77.8 kg/hl and 76.4 kg/hl respectively.

### Winter Rainfall Area (Western Cape Province)



The screenings of 1.80 % were higher than the previous season's 1.53 %. The screenings in the Swartland averaged 1.83 % and that of the Rûens 1.74 %. The Bühler extraction averaged 74.8 % (average of wheat grades B1 to B4, UT and COW) and the average colour of the flour was -1.2 KJ units. Both these characteristics equaled that of the wheat in the Free State, but were 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 2.6 minutes. The average farinogram absorption was 61.0 %. The average strength of the alveogram was 32.8 cm<sup>2</sup> and the average strength of the extensogram was 72 cm<sup>2</sup>, compared to the Free State (89 cm<sup>2</sup>) and 80 cm<sup>2</sup> in the irrigation areas.

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 810 000 tons (CEC).

The physical characteristics such as hectolitre mass (78.7 kg/hl), thousand kernel mass (35.9 gram) were better than the previous season's 77.5 kg/hl and 34.3 gram respectively. The screenings were higher (1.64 %) than the previous season's 1.50 %. The average protein dropped to 11.71 % (12 % mb) from an average of 13.95 % the previous season.

The Free State had normal weather conditions during spring and summer but Central Free State and the Eastern Free State experienced some rain during harvesting, which resulted in some samples with low falling number values as well as field fungi.

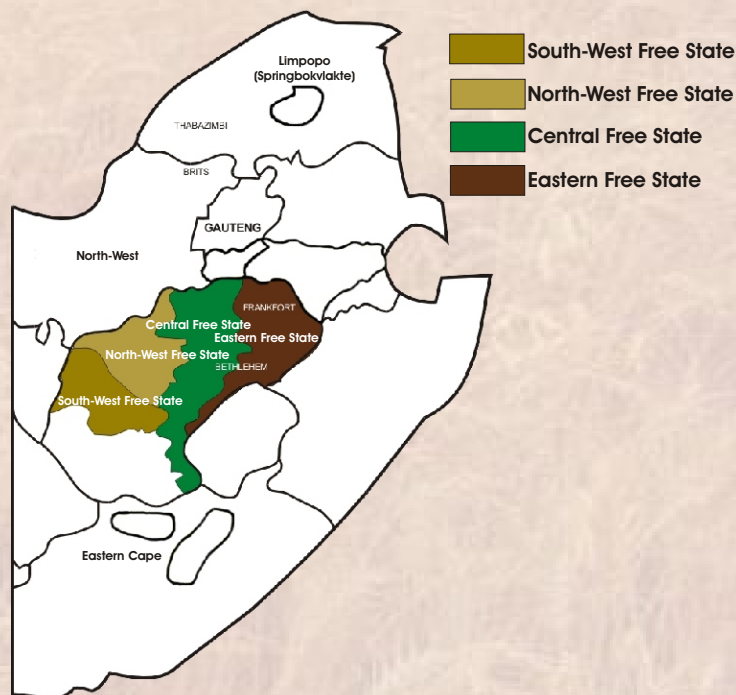
The mixogram (Quadromat) peak time was 3.0 minutes (3.1 minutes previous season), giving the Free State the longest average mixogram peak time of the different regional qualities.

The average Bühler extraction percentage in the Free State was the lowest in all the regions, namely 74.5 % (74.4 % previous season). The Kent Jones flour colour was -1.2 KJ units (-1.1 KJ units in previous season). The wheat of the Free State usually yields a little darker flour than the other regions but all three main producing areas yielded an average colour of -1.2 KJ units this season.

The average farinogram water absorption was 61.6 % (63.2 % the previous season), also the same as the other regions. The wheat from the Free State usually tends to give a stronger dough than the other regions, but averaged more or less the same than the other regions with a farinogram development time of 3.5 minutes, alveogram strength of 41.8 cm<sup>2</sup> and an extensogram strength of 89 cm<sup>2</sup>.

The 100-gram baking test showed that the relationship between protein content and bread volume was ranging from good, questionable to poor, between the different grades.

### 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 192 300 tons during this season. No samples were received from the Eastern Cape or KwaZulu-Natal regions.

The average hectolitre mass was 79.1 kg/hl (78.4 kg/hl the previous season). This is more or less the same as in the irrigation areas. The thousand kernel mass was the second highest with an average of 37.8 g (winter rainfall area 38.0 g).

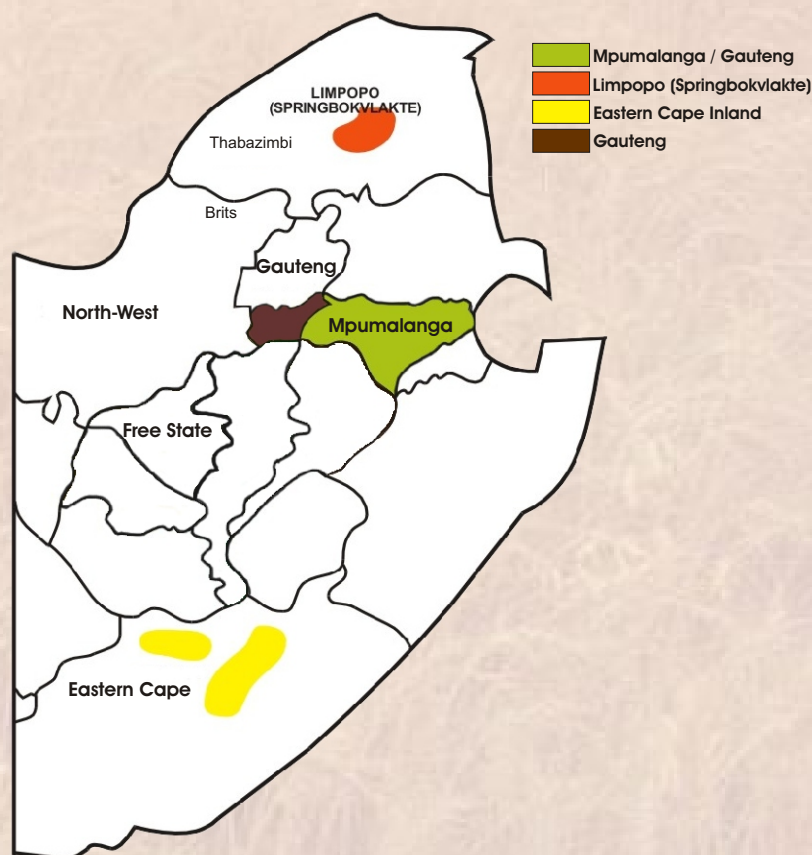
The average falling number was 358 seconds. The average percentage screenings was 2.0 %. The average protein content was 11.66 % (12 % mb), which is 0.8 % lower than the previous year.

The average mixogram (Quadromat) peak time was 2.7 minutes (2.8 minutes the previous season).

The average Bühler extraction was 75.6 %, with an average colour of -1.3 KJ units (76.4 % and -2.1 KJ units the previous season). The farinogram average water absorption was 61.8 % (62.4 % the previous season) and had an average development time of 3.5 minutes.

The average alveogram strength was 36.5 cm<sup>2</sup>, with an average P/L value of 0.84, and the average extensogram strength was 86 cm<sup>2</sup>.

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



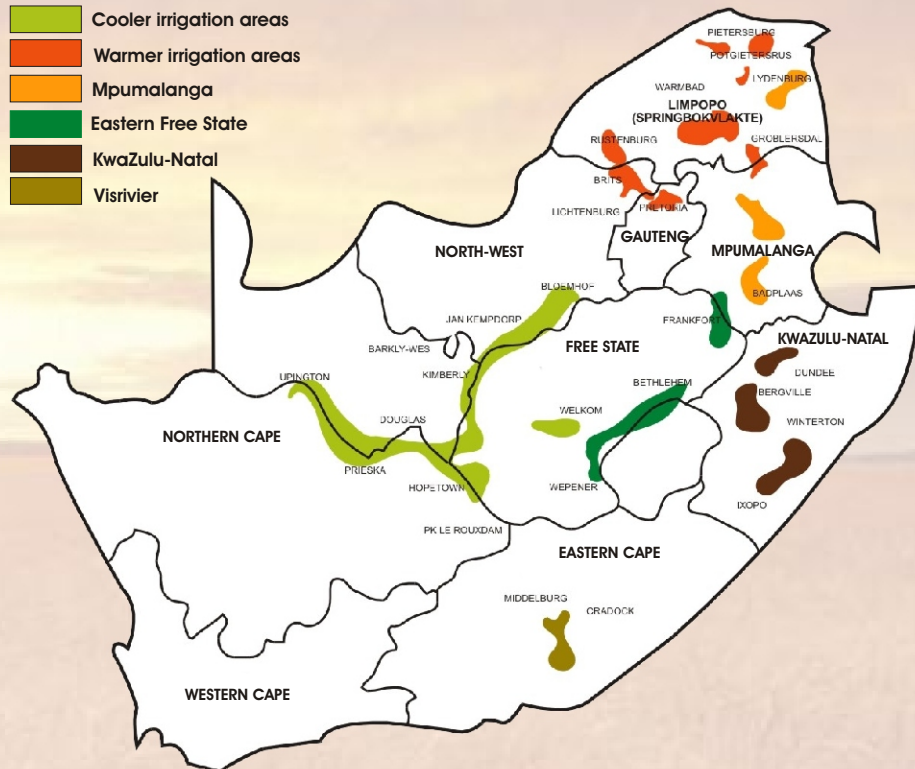
(Regional maps kindly provided by the Small Grains Institute, ARC)



## IRRIGATION AREAS

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

### Irrigation areas in South Africa



The average hectolitre mass was 79.2 kg/hl (75.7 kg/hl the previous season) and the thousand kernel mass was 37.6 g (35.8 g the previous season). The average falling number was 358 seconds. The average screenings was 1.96 % and the protein averaged 11.46 % (12 % mb) and were both a little lower than the 2.06 % screenings and the 11.56 % (12 % mb) protein of the previous season.

The average mixogram (Quadromat) peak time was 2.6 minutes which was the same as the previous season.

The average Bühler extraction percentage was 75.6 (76.0 % in previous season), with an average flour colour of -1.2 KJ units.

The average farinogram water absorption was 61.2 % (61.9 % during previous season), with an average farinogram development time of 3.4 minutes.

The average alveogram strength was 35.1 cm<sup>2</sup> and the average P/L was 0.81 (37.9 cm<sup>2</sup> and 0.71 cm<sup>2</sup> respectively the previous season).

The average extensogram strength was 80 cm<sup>2</sup>. The relationship between protein content and bread volume was shown to be excellent, very good and good by the 100-gram baking test.