

QUALITY 2003 / 2004

Grain quality

Full grading was done and the physical grain quality was not as good as the previous year because of the dry weather conditions during this season.

The hectolitre mass averaged 77,2 kg/hl (78,6 kg/hl last season). The average thousand kernel mass was 33,5 g (13 % mb) (35,4 g the previous season). The irrigation areas gave an average thousand kernel mass of 36,8 g while the Free State area gave the lowest average thousand kernel mass of 32,0 g.

The protein average was 12,9 % (12 % mb) (11,6% the previous season) with all the regions giving averages between 10,7 % (normal weather conditions) to 14,9 % (drought-stricken area).

No falling number problems or any other abnormalities in the other grading factors were experienced.

The average milling extraction in the laboratory on the Bühler MLU 202 was 74,2 %. On average the extraction percentage of the grade 1 bread wheat was about 1% higher than the average extraction percentage of the grade 4 bread wheat. The Western Cape gave an average extraction on grade 1 of 74,5 % and the Free State 74,4 %. Higher average extractions were obtained from the grade 1 irrigation wheat (75,3 %) and other summer rainfall areas (75,8 %). (Please note that the Bühler laboratory mill usually gives approximately 2% less extraction than can be obtained commercially.)

The average screenings through a 1,8 mm screen were 2,0 % (1,35 % the previous season) with the highest average percentage of 2,47 in the Western Cape and the lowest average percentage of 1,89 in the Irrigation areas.

Dough quality

The dough properties are typical of South African wheat.

The flour colour averaged a good -0,8 KJ units with the flour of the irrigation wheat giving the whitest average colour of -1,2 KJ units.

The mixogram peak time (quadromat) averaged 2,8 minutes (2,9 minutes the previous season) with the wheat from the other summer rainfall areas and the Free State having the longest peak times and averaging 2,9 minutes and the wheat from the irrigation areas averaging 2,6 minutes. This average mixogram peak time (2,8 minutes) is more or less in line with the 10-year average.

The average farinogram water absorption for grade 1 wheat was 62,3 %. The Western Cape grade 1 wheat averaged 61,1 %, Free State grade 1 wheat 62,8 % while the grade 1 wheat from the irrigation areas and the other summer rainfall areas gave averages of 62,2 % and 63,0 % water absorption respectively. On average the farinogram water absorption percentage of the grade 1 bread wheat was about 2 % higher than the average water absorption of the grade 4 bread wheat. The average farinograph development time of all the grades was 4,2 minutes and stability was 6,4 minutes.

The baking tests showed a very good relationship between protein content and bread volume. The irrigation wheat showed an excellent relationship.

Alveogram strengths were good while the extensograph extensibility were a little bit short.