

Maize quality (summary)

The maize quality of the three main maize-producing provinces was more or less the same. The physical characteristics of the white maize were overall marginally better than those of the yellow maize.

Free State

This province produced 36 % of all the commercial maize in South Africa, of which 65 % was white maize and 35 % yellow maize.

The average percentage total defective kernels was 5,5 %. North West had 6,5 % and Mpumalanga 5,7 %.

The maize produced in the Free State averaged a hectolitre mass of 77,6 kg/hl. (North West was 77,6 kg/hl and Mpumalanga 77,1 kg/hl.) The white maize in the Free State averaged 78,1 kg/hl and the yellow maize 76,5 kg/hl.

The 100 kernel weight averaged 34,4 g, with the white maize averaging 35,2 g and the yellow maize 32,7 g. (Mpumalanga and North West averaged 34,7 g and 34,2 g respectively.)

Stress cracks were more or less the same in the Free State (4,6 %) than in the other two provinces. (North West was 4,8 % and Mpumalanga was 4,7 %.)

The average milling index was the same as North West (101), followed by Mpumalanga with 97,4.

The average Fumonisin content was the highest of the three provinces at 1,33 ppm.

North West

This province produced 25 % of all the commercial maize grown in South Africa, of which 76 % was white maize and 24 % yellow maize.

The defective kernels above the 6.35 mm sieve averaged 4.4 %, that is higher than the 3.5 % of the Free State and Mpumalanga. The defective kernels below the 6.35 mm sieve for all three regions were more or less the same.

The Free State gave the highest average protein of 9,0 % (db), followed by North West (8,8 %) and Mpumalanga (8,4 %).

The average milling index was 101,0.

The average Fumonisin content was 1,04 ppm.

Mpumalanga

This province produced 25 % of the total commercial maize production in South Africa, of which 40 % was white maize and 60 % yellow maize.

This province had the largest kernel size with an average of 27,8 % of the maize having kernels > 10 mm. (The Free State was 26,3 % and North West 23,9 %.)

The maize kernels produced in Mpumalanga and Free State were less breakable (1,1 %) during handling and storage. (North West had a breakability of 1,2 %.)

The white maize from Mpumalanga gave the highest average whiteness index of 18,1 (sifted 87:13). (The Free State had an average of 16,1 and Mpumalanga 16,7.)

In all three provinces the white maize gave a higher average fat content and protein content than the yellow maize. The starch content between white and yellow maize in these three regions averaged between 75,0 % to 75,8 %.

Mpumalanga had an average of 0,88 ppm Fumonisin present.