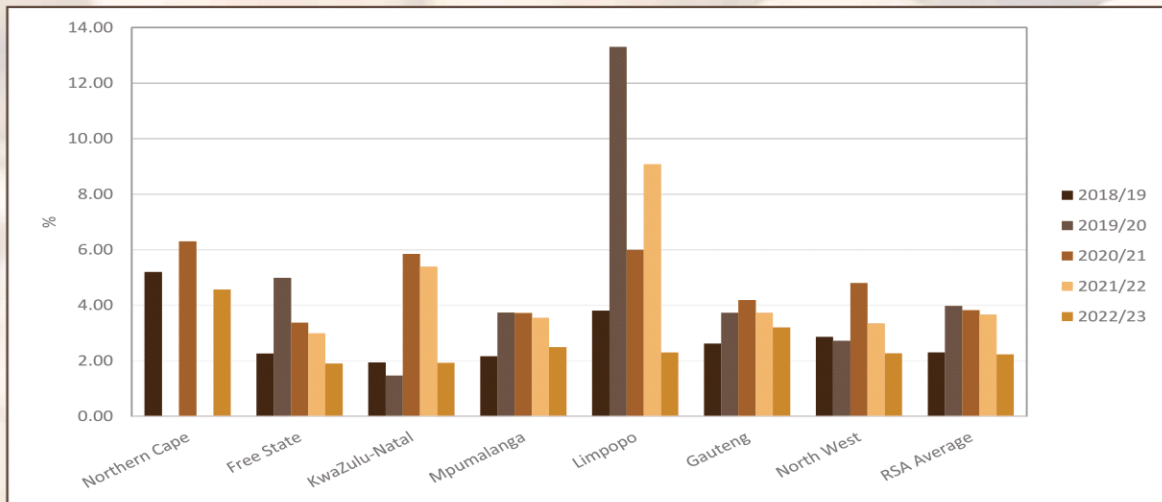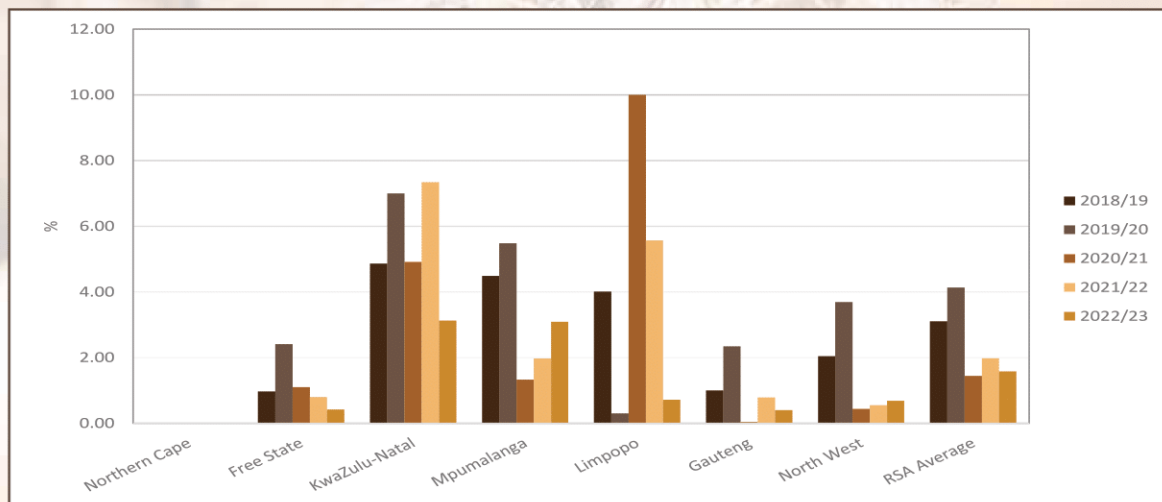Graph 19: Average percentage defective soybeans on the 4.75 mm round hole sieve per province over five seasons



Graph 20: Average percentage soiled soybeans per province over five seasons

Test weight does not form part of the grading regulations for soybeans in South Africa. An approximation of the test weight of South African soybeans is provided in Table 2 for information purposes. The standard working procedure of the Kern 222 instrument, as described in ISO 7971-3:2019, was followed. The g/1 L filling mass of the soybean samples was determined and divided by two. The test weight was then extrapolated by means of the following formulas obtained from the Test Weight Conversion Chart for Soybean of the Canadian Grain Commission: $y = 0.1898x + 2.2988$ (291 to 350 g/0.5 L) and $y = 0.1895x + 2.3964$ (351 to 410 g/0.5 L). Please see Graph 21 for a comparison of the test weight per province over the last five seasons.

| Table 2: Approximation of test weight per province over three seasons | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Test weight, kg/hl | | | | | | | | |
| Province | 2022/23 Season | | | 2021/22 Season | | | 2020/21 Season | | |
| | Weighted average | Range | No. of samples | Weighted average | Range | No. of samples | Weighted average | Range | No. of samples |
| Northern Cape (Regions 10 - 11) | 70.1 | 70.0 - 70.2 | 2 | - | - | - | 71.7 | 71.6 - 71.7 | 2 |
| Free State (Regions 21 - 28) | 71.2 | 64.3 - 73.2 | *65 | 71.6 | 69.8 - 73.3 | **36 | 71.7 | 68.9 - 75.0 | **59 |
| KwaZulu-Natal (Region 36) | 70.2 | 69.0 - 72.1 | 9 | 68.6 | 65.7 - 71.1 | 14 | 69.8 | 67.7 - 71.2 | 10 |
| Mpumalanga (Regions 29 - 33) | 70.7 | 68.3 - 73.4 | 64 | 70.9 | 67.4 - 73.1 | 65 | 71.5 | 66.5 - 73.2 | *65 |
| Limpopo (Region 35) | 67.4 | - | 1 | 68.8 | 63.7 - 72.7 | 3 | 71.8 | - | 1 |
| Gauteng (Region 34) | 70.3 | 68.7 - 71.3 | 3 | 71.6 | 70.7 - 72.3 | 9 | 71.2 | 70.3 - 71.8 | 5 |
| North West (Region 12 - 20) | 71.0 | 68.6 - 72.8 | 29 | 71.2 | 68.7 - 74.2 | 21 | 71.5 | 70.8 - 71.9 | 5 |
| RSA | 70.9 | 64.3 - 73.4 | 173 | 70.9 | 63.7 - 74.2 | 148 | 71.5 | 66.5 - 75.0 | 147 |

* One sample with an outlier value was not taken into account for calculation purposes.
**Two samples with outlier values were not taken into account for calculation purposes.