



## Livestock Farm Free State South Africa

### Evaluation of Phyto-C<sub>3</sub><sup>™</sup> Maize 2020 -2021

#### **Description of Maize production:**

1. 7 centre irrigation systems.
2. 3 pivot points of 25ha each and 1 pivot point of 66ha and 2 pivot point of 16ha
3. Ground type - Loam soil
4. Maize type - Pioneer 33H58BR as well as Mosanto DKC7276BR
5. Plant population / hectare - 40,000 stands
6. Crop row interval - 3 foot rows

#### **Phyto-C<sub>3</sub><sup>™</sup> application: - Single 25ha Pivot**

1. Single pivot revolution 10.7 hours to do a full 360 ° degree circuit
2. Irrigation water flow rate 240,000 liters of water per hour
3. Fertilizer feed rate per pivot point - 100 liters per hour
4. The fertilizer is mixed with water in two 10 000 liter tanks and metered into the pivot irrigation feed.
5. The current cost of fertilizer is R4666,00 (USD 311.00) per hectare per season.
6. Phyto-C<sub>3</sub><sup>™</sup> distributed via the pivot irrigation system.
7. 5 liters of PhtoCat diluted in 10 000 liters of water and pumped into the irrigation water for 10.7 hours = (5 / (10.7 X 240 000)) X 1 000 000 = 2 ppm Phyto-C<sub>3</sub><sup>™</sup> in the irrigation water.
8. The Phyto-C<sub>3</sub><sup>™</sup> treatment was independent of the fertilizer.
9. Phyto-C<sub>3</sub><sup>™</sup> treatment program:
  - a. 3 separate applications, each application lasting 10.7 hours.
    - i. First application at planting 0 weeks
    - ii. Second application at 4 weeks
    - iii. Third application at 8 weeks
  - b. Rainfall during the growth period - 360mm
10. Fertilizer mixture / application:
  - a. Maize starts 150 liters per ha
  - b. Maize Topdressing 150 lit / ha
  - c. Maize Topdressing 170 lit / ha
  - d. Maize Topdressing 200 lit / ha
  - e. Maize Topdressing 160 lit / ha
  - f. Maize Topdressing 70 lit / ha

#### **Crop yield:**

Crop yield determination / method

Head per ha = (number of heads per 100m) x (number of rows)

Ton Per ha = (heads per ha) x weight of kernels per head

Crop yield:

Crop yield per land with Phyto-C<sub>3</sub><sup>™</sup> and fertilizer treatment - 13.28 tons per ha

Crop yield per land only fertilizer treatment - 12.11 tons per ha

