

Fertilization and Irrigation of Maluma at ZZ2

by

Pieter Pieterse and Burtie van Zyl

Fertilization:

Fertilization of Maluma is the same as for Hass. It consists of the application of N, K, Ca, Zn and B. Where possible it is applied with Fulvic acid through the irrigation system.

N Fertilization:

- Apply 225 kg N/ha annually
 - The application are adapted in relation to the leaf N levels.
 - Approximately 50 kg N is applied in 10 m³ compos/ha/y
 - Is being applied as fertigation or by hand
 - N is usually applied in the form of Ammonium sulphate.

Potassium fertilization:

- The need for Potassium is calculated in accordance with the concentration of it in the soil. Try to maintain the K status in die soil between 5% and 9% of the total CEC. We apply a further quantity of K to put back the amount of K removed by 30 tons of crop

Calcium fertilization:

- Apply as a mixture of gypsum and lime. Try to get the Ca concentration in light soils (<30% clay) to 70% of the CEC and 75% in heavy soils (>30% clay).

Zn fertilization:

- Apply 1 l Zink nitrate/ha per week for 32 weeks of the year. Apply a further 4 leave sprays of 1.5l Zinkmax/ha.

B Fertilization:

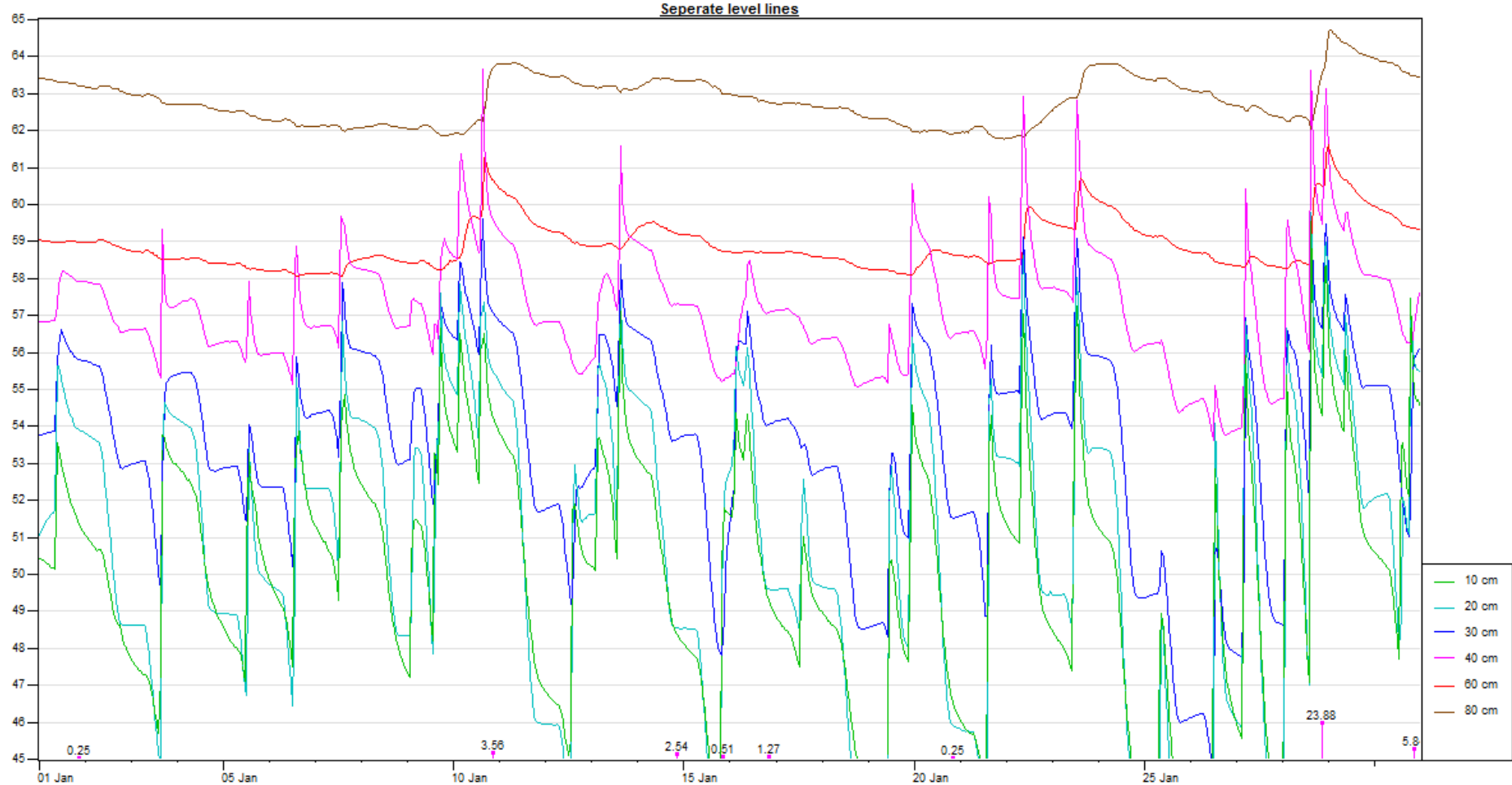
- Apply 1 – 2 kg Spraybor/ha/month. Also do 4 leave sprays of 1.5kg Spraybor/ha.

Irrigation practices

- Use DFM probes to determine the irrigation needs. Irrigation scheduling will vary with soil types and irrigation systems.
- We use Drip en Microsystems.
- Drip systems are more effective than Microsystems and also 50% less labour intensive.

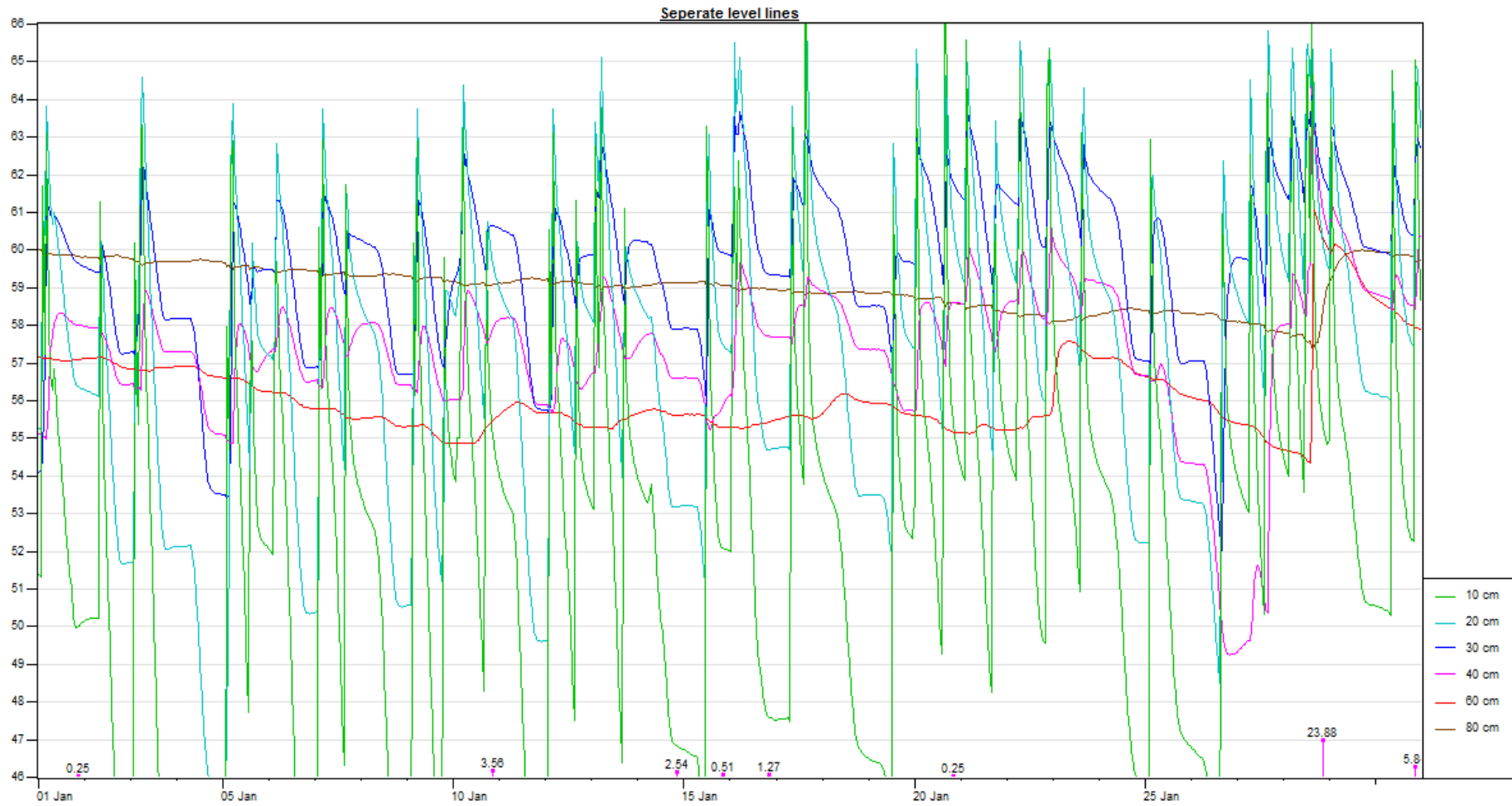
Markland 2.3 – Jan 2015 (drip)

Block separate level lines: (16296) Markland 2.3 / Maluma Hass



Driehoek Jan 2015 (Micros)

Block separate level lines: (7006) Driehoek 2 /

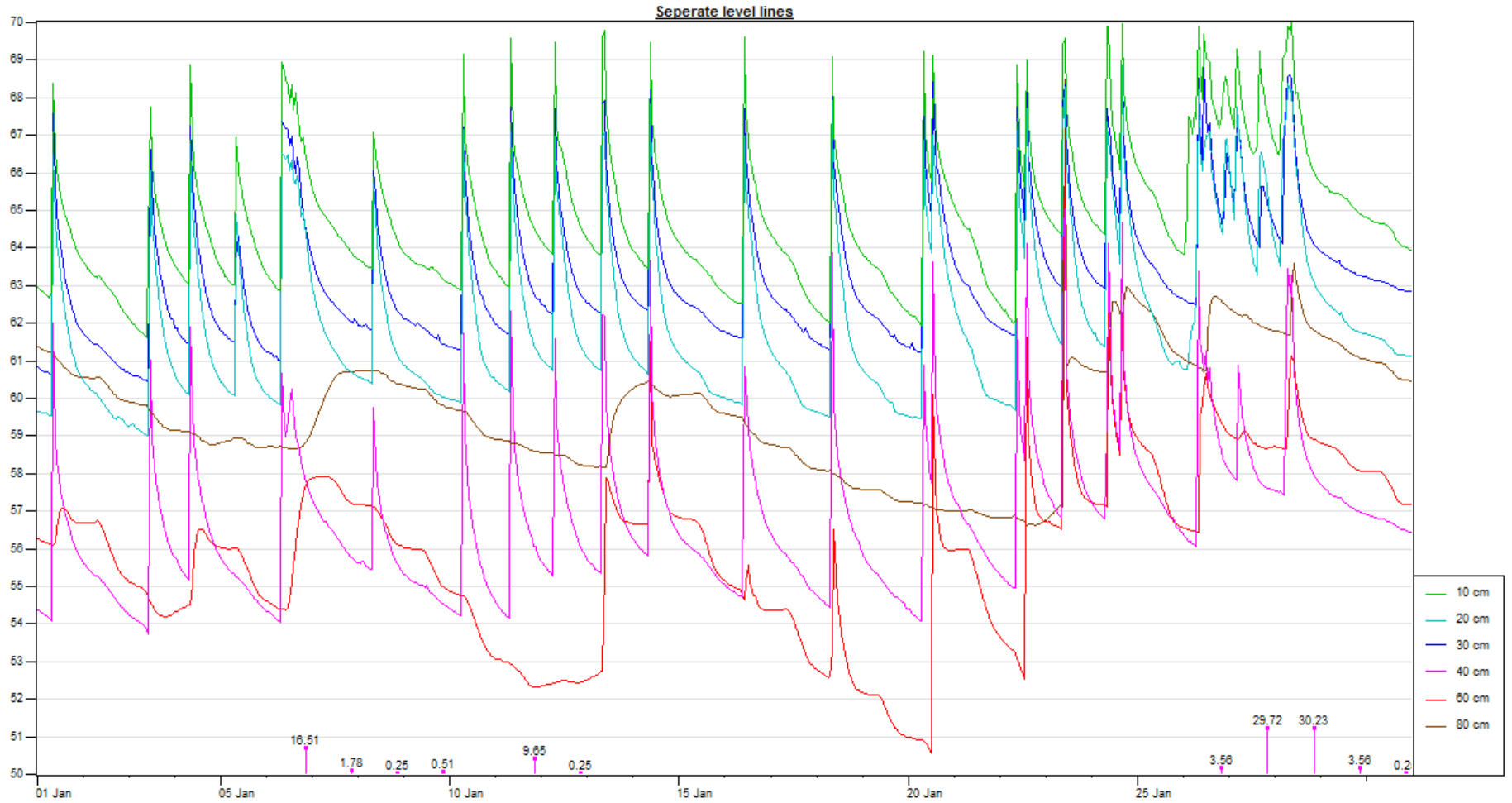


The water requirement of Maluma is higher than that of Fuerte en Pinkerton, but almost the same as common Hass.

Soil differences has a great influence on irrigation scheduling. On a soil with a high silt content should be irrigated less frequently.

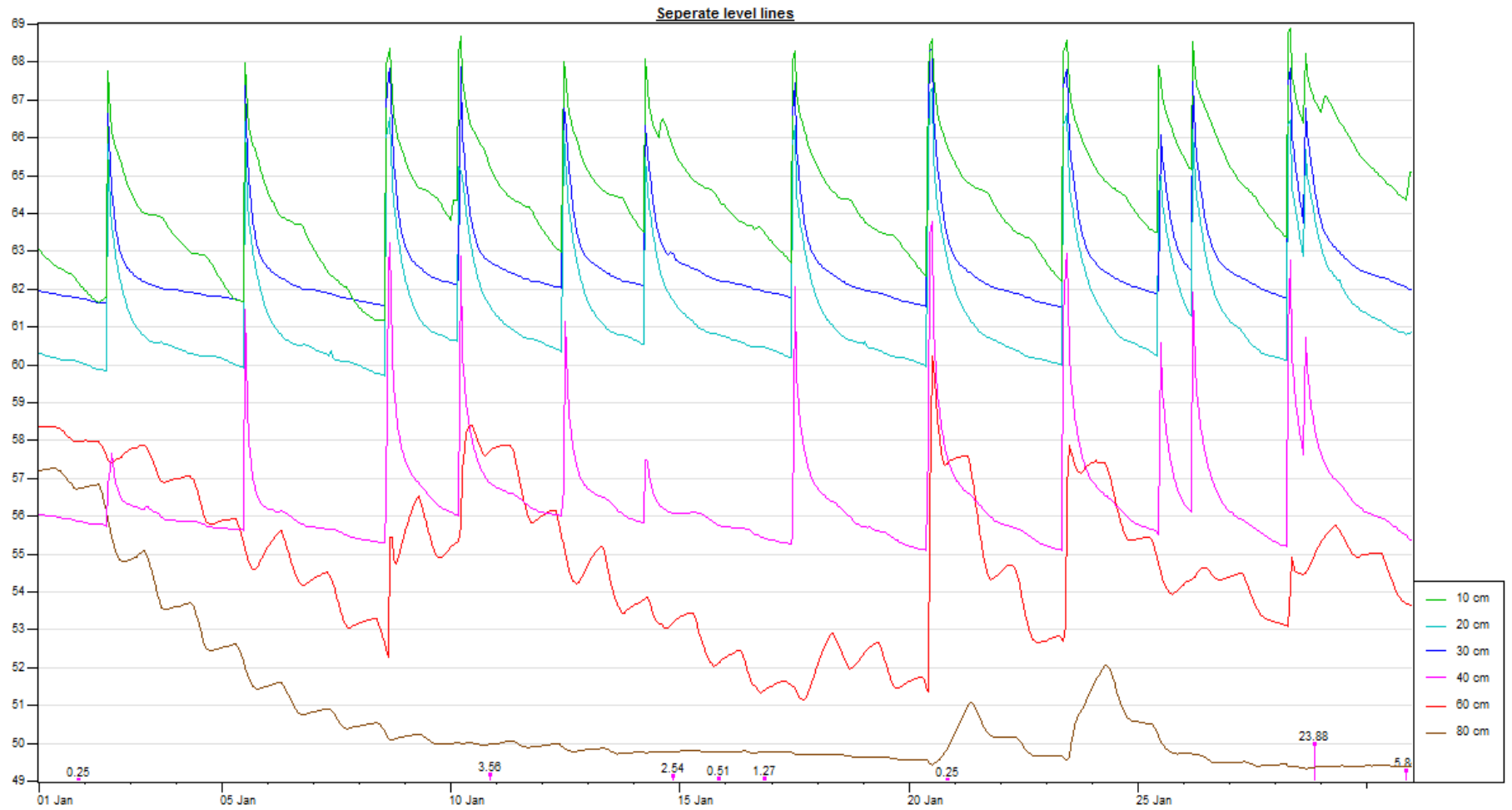
Boschhoek 14 Jan 2014

Block seperate level lines: (13515) Bschk 14 /



Boschhoek 14 Jan 2015

Block separate level lines: (13515) Bschk 14 /



Be careful for too high N applications

Balance the cations in the soil

Be careful for over irrigation (soil types)

Drip is “better” than micro’s