

Case Study: Braham Produce, Virginia

Growers: Andrew and Zurri Braham

Type of Production: Climate controlled soil based polyhouses

Crops Grown: Coloured Capsicums – Red, Green, Yellow, Orange

Technology Implemented: Netafim High Tech Computerised Irrigation and Fertigation Scheduling

World First Technology: The Netafim system that Braham Produce installed is primarily designed for use under hydroponic crops. Braham Produce grows its crops using soil under polyhouses. The installed system is designed to pH stabilise the irrigation water and fertilizer mix so that it is readily used by the plants.

The machine was unable to maintain a stable pH level and as a result, Netafim's Israeli technicians had to rewrite the software that the machine was using to match the Australian conditions. The new software is now working very well and a new crop cycle will test the outcomes. This machine is a one of a kind and will form the basis for all new machines sold that deal with polyhouse crops grown in soil around the world.

Outcomes

- Irrigation applied more often in smaller quantities.
- Fertiliser as liquid injected with irrigation water.
- Nutrient balances corrected via leaf tests on crop every three weeks.
- Fertiliser applied directly used by plants and not stored in the soil. This has meant a cost saving and increased efficiency of fertiliser applied and used by the plants.
- Irrigation scheduling increased crop yields by 1.6 times when applied to 2/3 of crop growing cycle.
- Fertigation allowed plants to have a 99% reduction in the incidence of Blossom Rot and fruit abortion. This meant that all flower blossoms have had a 95% increase in chance of producing healthy fruit.
- Individual fruit were bigger and heavier with thicker walls.
- Levels of plant disease were reduced by 85% with a 98% reduction in spraying of fungicides.
- Postharvest storage in cool room was 2 weeks longer without signs of deterioration of product quality.
- The plants were able to survive and flourish when environmental temperatures went over 37°C with fruit wastage dropping from 15% to 5 - 8% due to burn marks.
- Plant / Crop lifespan has been increased by an extra 1 month and this has increased the overall crop yields. This has also allowed fruit to be sold out of the normal growing season when prices are much higher due to decreased fruit supply in the market place.

Summary: The irrigation / fertigation scheduling has meant that more premium quality fruit has been able to grown longer realising increased returns to Braham Produce.



Healthy fruit produced from more blossoms.



Big heavy shiny fruit in the cool room after picking.



Maximising crop potential and lifespan – Plants at maximum height and production.

Plant height 2.9m