



Mycorrcin

Trial Sheet SweeTango Apples, Hawkes Bay 2020

Mycorrcin increased both tree height, trunk cross-sectional area and developed more feathered branches.

Background

The establishment and the resilience of new plantings both rely on strong root growth. **Mycorrcin** is a soil biostimulant that activates beneficial soil microbes, including mycorrhizal fungi, that are key to healthy root development.



Multiple trials have demonstrated that applying **Mycorrcin** leads to better root development and establishment of newly planted trees. This trial measures the impact of applying **Mycorrcin** and **Digester** to newly planted apple trees.

Trial Description

The trial was located n Longlands Road, Havelock North, Hawkes Bay.

The bare-rooted SweeTango apple saplings (grafted on to M9 rootstock) were planted in August 2015 in a commercial orchard. The planting density was 3 m x 1.2 m and trees were trained using the standard central leader method. The soil type is a Longlands silt loam and all trees received the same standard fertiliser programme throughout the trial.

A **Mycorrcin** programme was started one year after planting and continued for three years using the following treatment regime:

Trial Assessment

In August 2018, 30 four-year-old trees from the untreated and **Mycorrcin**-treated blocks were assessed for the following:

- Trunk cross-section area – measured 300 mm above the ground using callipers
- Tree height – measured using a tape measure to the top of the growing tip
- Number of feathers – branches capable forming fruit-bearing branches next season were counted for each tree.

All the data was statistically analysed using a student t-test.



| Mycorrcin New Apple Planting Program | | | | |
|--------------------------------------|-----------|-----------|---------------|-----------|
| Product application | Spring | Summer | | Autumn |
| | Green tip | Fruit set | Colour change | Leaf fall |
| Mycorrcin | 6 L/ha | 2 L/ha | 4 L/ha | |
| Digester | | | | 4 L/ha |



Figure 1. Effect of Mycorrcin on Tree Height
SweeTango, Hawkes Bay 2019

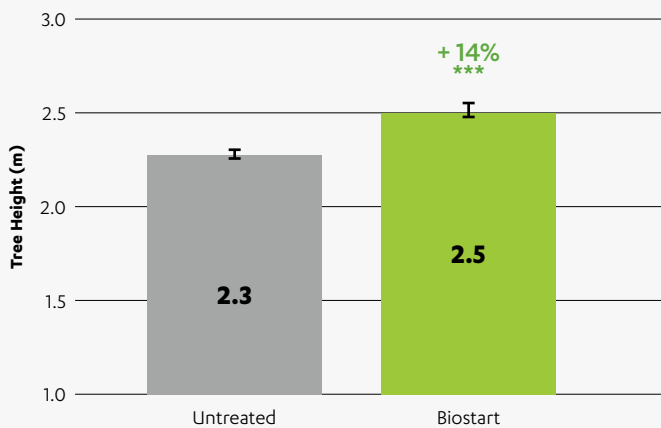


Figure 2. Effect of Mycorrcin on Trunk Cross-Sectional Area
SweeTango, Hawkes Bay 2019

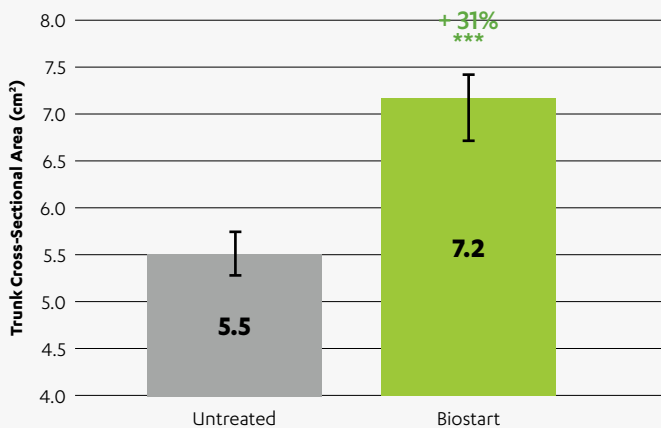
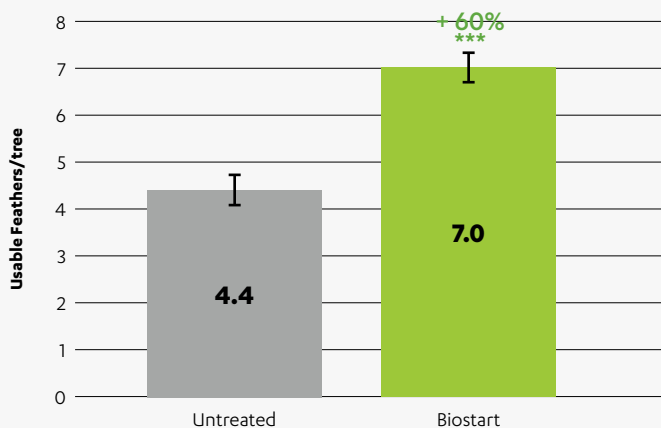


Figure 3. Effect of Mycorrcin on Usable Feathers per Tree
SweeTango, Hawkes Bay 2019



Trial Results

Tree height was statistically significantly increased by 14% ($P < 0.001$) as a result of the **Mycorrcin** treatment (Figure 1). The **Mycorrcin** treatment statistically significantly increased ($P < 0.001$) trunk cross-sectional area (measured at 300 mm) by 31% (Figure 2). Taller trees with bigger trunks can carry more apples leading to higher yields in subsequent years.

The application of **Mycorrcin** increased the number of feathers per tree by 60% ($P < 0.001$; Figure 3) indicating that the **Mycorrcin**-treated trees are likely to bear more fruit in the following season.

Conclusion

The **Mycorrcin** programme increased both tree height and trunk diameter, as well as developing more feathered branches per tree. Combined, this produced taller and more robust trees that are capable of carrying more fruit in the following years, increasing returns to the grower.

Figure 4. Effect of Mycorrcin on SweeTango apple trees, Hawkes Bay

