

Mycorrcin

Trial Sheet

Ambrosia 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 on an Longlands Road, Havelock North, Hawkes Bay.

The bare-rooted Ambrosia apple saplings (grafted on to M9 rootstock) were planted in August 2016 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 month after planting and continued for three years using the following treatment regime:

Trial Assessment

In August 2019, 30 three-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 growing tip
- The number of feathers – branches capable of forming fruit-bearing branches next season were counted for each tree.

All the of 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
Ambrosia, Hawkes Bay 2019

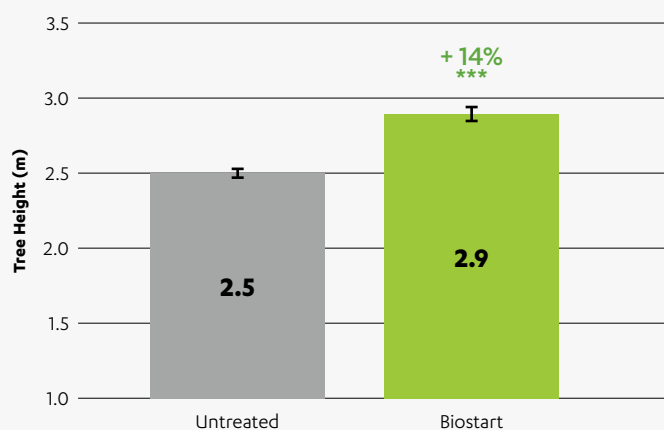


Figure 2. Effect of Mycorrcin on Trunk Cross-Sectional Area
Ambrosia, Hawkes Bay 2019

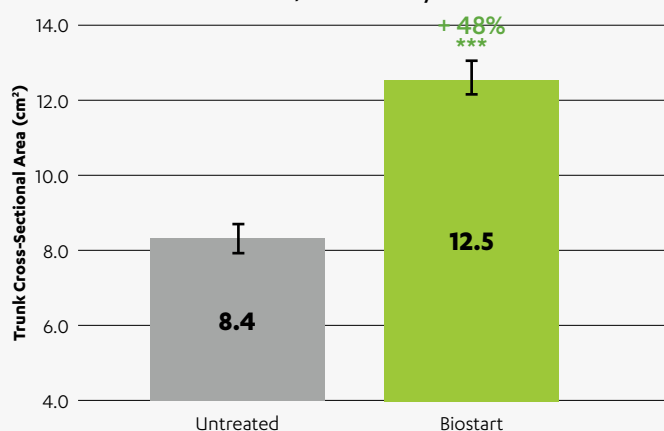
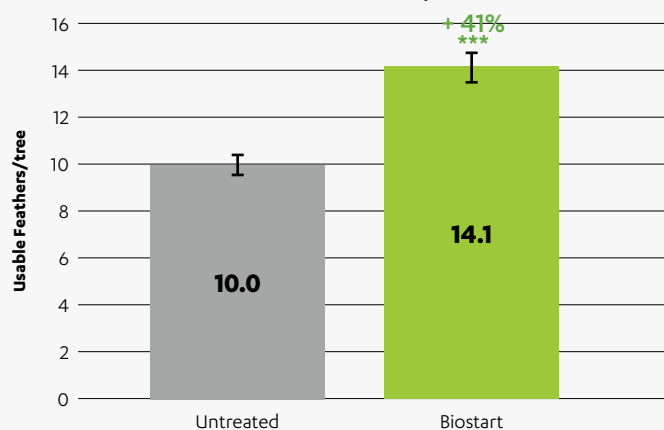


Figure 3. Effect of Mycorrcin on Usable Feathers per Tree
Ambrosia, Hawkes Bay 2019



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 48% (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 41% ($P < 0.001$) (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 capable of carrying more fruit in the following years, thereby increasing returns to the grower.

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

