



Biostart nursery trial

KIWIFRUIT

AIM

The aim of this trial was to evaluate the effect of Biostart Mycorrcin on stem diameter and root growth of kiwifruit plants grown in a commercial nursery.

PRODUCT



Mycorrcin

Mycorrcin is a soil biostimulant known for enhancing root growth and branching as well as mycorrhizal fungi root associations which assist the plant in taking up more nutrients from the soil and improves soil structure.

TRIAL DESIGN

The trial was conducted in 2016 at a commercial kiwifruit nursery in the Bay of Plenty on Bruno rootstock vines.

Plants were grown in mounded soil covered with black plastic and irrigated using a T-Tape irrigation system. The same fertiliser programme was applied to both the Mycorrcin-treated plants and the untreated control group to ensure consistent growing conditions.

Application Rate

Mycorrcin was applied as a soil drench to the trial block on 14 January and 25 March.

The Mycorrcin was diluted at a rate of 1:100, with 0.5 L of solution applied per plant.

Assessment

In September 2016, 40 untreated vines and 40 Mycorrcin-treated vines were assessed. The trial design consisted of four replicates of 10 plants, sampled across the nursery. Measurements included stem diameter and root mass.

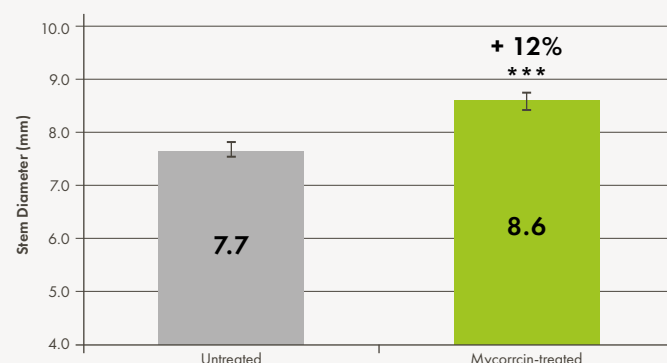


RESULTS

Stem Diameter

Mycorrcin-treated vines had stems that were 12% larger in diameter than untreated controls (8.6 mm vs 7.7 mm; Figure 1). This increase in diameter resulted in a 26% increase in stem cross-sectional area, rising from 46 mm² (control) to 58 mm² (treated).

FIGURE 1. Stem diameter comparison
Effect of Mycorrcin on Kiwifruit Nursery Plant Stem Diameter





Root Weight

Mycorrcin-treated vines produced 67% greater root mass than untreated plants (100 g vs 60 g; Figure 2). At lifting, it was observed that treated vines were noticeably more difficult to remove from the ground, reflecting their larger and more developed root systems. Root mass was visibly greater in treated plants compared with controls.

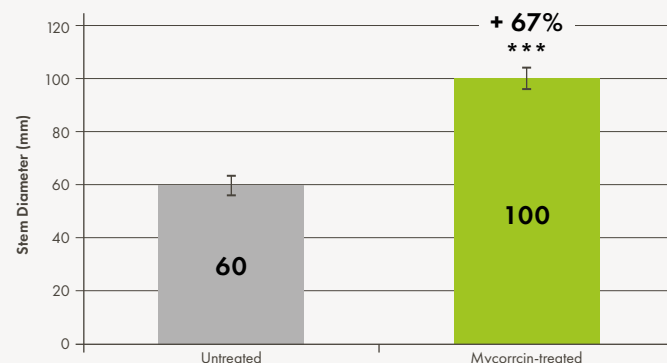
CONCLUSION

The use of Mycorrcin in this kiwifruit nursery trial resulted in:

- 67% increase in root mass
- 26% increase in stem cross-sectional area.

In addition to measurable growth improvements, Mycorrcin-treated plants were visibly stronger and healthier than untreated controls. ¹

FIGURE 2. Root weight comparison
Effect of Mycorrcin on Kiwifruit Nursery Plant Root Mass



Photos of the root mass from an untreated kiwifruit vine compared to a Biostart-treated vine.



Untreated



Biostart-treated