

Avocado | Trial Sheet

Mycorrcin improves new planting growth



How it Works

Biostart Mycorrcin is a soil biostimulant that activates naturally occurring beneficial microbes present in soils.

Activating these microbes stimulates new root growth and branching leading to better plant establishment. This improves the nutrient availability and uptake by the plant, including calcium and phosphate, and gives the plant greater overall resilience.

Mycorrcin has been found to improve fruit flavour, reduce rejects and improve fruit size and uniformity in a range of crops. Avocado tree roots are covered with a thick layer of organic matter from which the surface feeding roots gather nutrients.

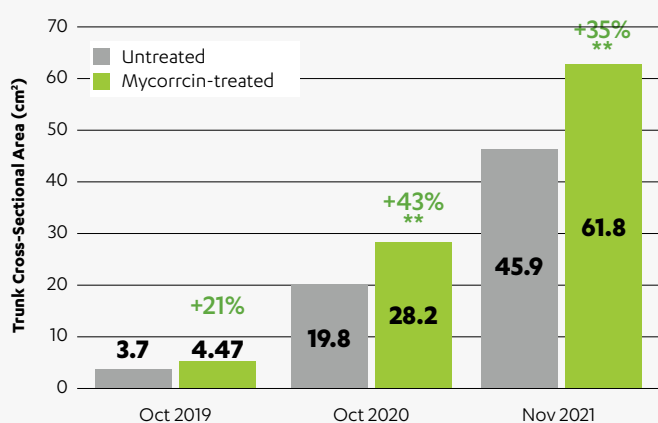
Trial Design

The aim of this trial was to measure the impact of regular Mycorrcin applications on the establishment of a new avocado orchard.

A new avocado orchard was established in Maungatapere, Northland, in 2018. Hass on Zutano root stock trees were planted on 2 November 2018 in an 8 x 8m staggered lay out. Mycorrcin was diluted 1:150 (750 mL/100 L) and applied at 2 L/tree on 7 November, with similar applications being made in autumn (April 2019, 2020 and 2021) and the following spring (October 2019, 2020 and 2021). These applications were made to coincide with the spring and autumn root growth flushes in avocado trees.



Figure 1. Effect of Mycorrcin on Trunk Cross-Sectional Area in Hass Avocado Trees, Northland



Results

Ten untreated and Mycorrcin-treated trees were assessed regularly for trunk cross-sectional area (TCA) over 36 months after planting. At 11, 23 and 36 months after planting application of Mycorrcin increased the TCA of avocado trees by 21%, 43% and 35%, respectively (Figure 1).

The Mycorrcin-treated trees had better structure with bigger branches being distributed evenly along the main trunk. As a result the Mycorrcin-treated trees were more consistent in size and shape, whereas the untreated trees were less even in size. This impacted on fruit bearing and yield.

COVID-19 prevented Biostart from assessing yield, but the Grower observation from the first harvest at 33 months was that the Mycorrcin-treated trees had ~20% more fruit and the fruit was more consistently of the correct size and therefore easier to pick.

Conclusion

Regular Spring and Autumn applications of Mycorrcin reduced transplantation shock, improved the uniformity of young trees, and increased TCA. The Mycorrcin-treated trees have a better shape and are better set up to fruit in the coming years.