biostart®

Broccoli
Trial Sheet
Increasing Broccoli Yield with BioStart Products

How it works

Biostart Mycorrcin is a soil biostimulant that activates beneficial soil microbes, which stimulates healthy root growth and development leading to enhanced nutrient uptake and better crop establishment.

Biostart Foliacin is a foliar-applied plant health stimulant that helps plants to withstand environmental stress.

Broccoli Trial Results

Trials showed that **Mycorrcin** and **Foliacin** reduced transplantation shock, improved uniformity and increased the percentage of marketable heads in commercial broccoli crops.

All trials were conducted on commercial broccoli crops in Pukekohe, Auckland. All plants received the same standard fertiliser programme throughout the trial.

Figure 1a

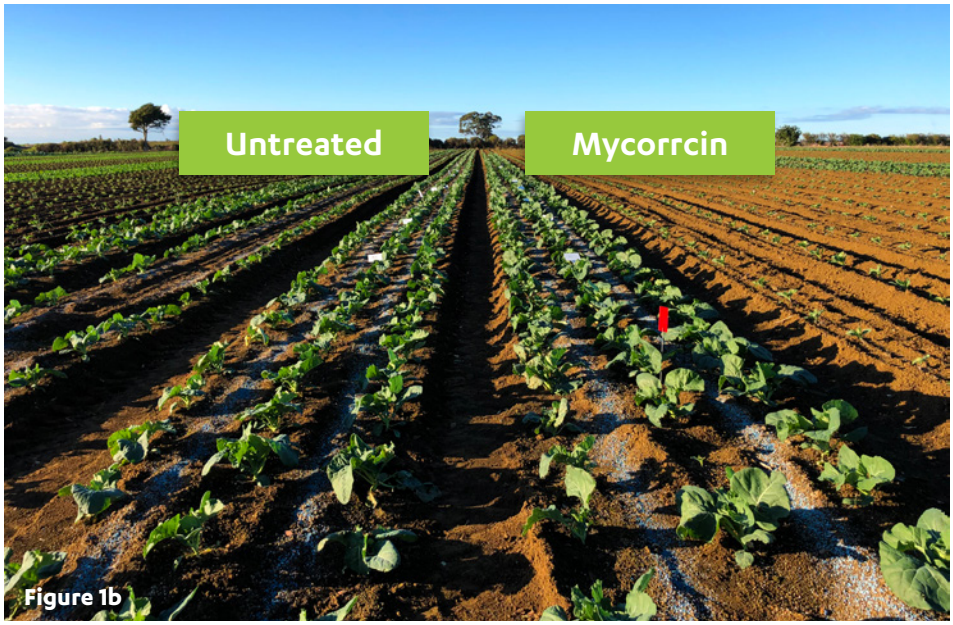

Figure 1b

1. Improves broccoli plantlet establishment

Broccoli plantlets were drenched with a 1:100 **Mycorrcin** solution in the nursery four weeks prior to planting and transplanted into a seed bed to which 6 L/ha of **Mycorrcin** was applied on the day of planting.

The **Mycorrcin** pre-soaked plantlets developed larger roots and were bigger and stronger in the nursery (Figure 1a). The **Mycorrcin**-treated plants also established more rapidly in the field (Figure 1b) and this led to both yield and head size benefits by harvest time.

2. Improves broccoli head size

Mycorrcin application in the nursery (soaking trays in 1:100 **Mycorrcin** solution) and to the seed bed (6 L/ha) increased broccoli head size at harvest.

In two independent trials **Mycorrcin** treatment statistically significantly ($P < 0.001$) increased broccoli head size by 17 and 18%, respectively (Figure 2), leading to an improved yield. The increased broccoli head size would have allowed an earlier harvest date.

In trial two, the number of total heads harvested was increased from 83% for Standard programme to 94% for the **Mycorrcin** treated beds.

3. Decreases time to harvest and increases yield

A commercial broccoli crop received a full BioStart Programme through the growing season: **Mycorrcin** (soaking trays in 1:100 **Mycorrcin** solution and apply 6 L/ha to the seed bed) and three foliar applications of **Foliacin** (1 L/ha).

At the first harvest, more of the **Mycorrcin** and **Foliacin** treated plants were harvested in the first cut (33% versus 9% of Standard crop), showing that the BioStart programme improved the maturity and uniformity of the crop (Figure 3). The head diameter of the BioStart-treated broccoli was 26% larger than the standard plants (Figure 4).

The total heads harvested from the **Mycorrcin** and **Foliacin** treated plants was 98% of the planted crop, compared to 83% of the Standard Crop: an increase of 16%.

This provides a significant return to the grower.

Figure 2. Effect of Mycorrcin on Broccoli Head Size at harvest

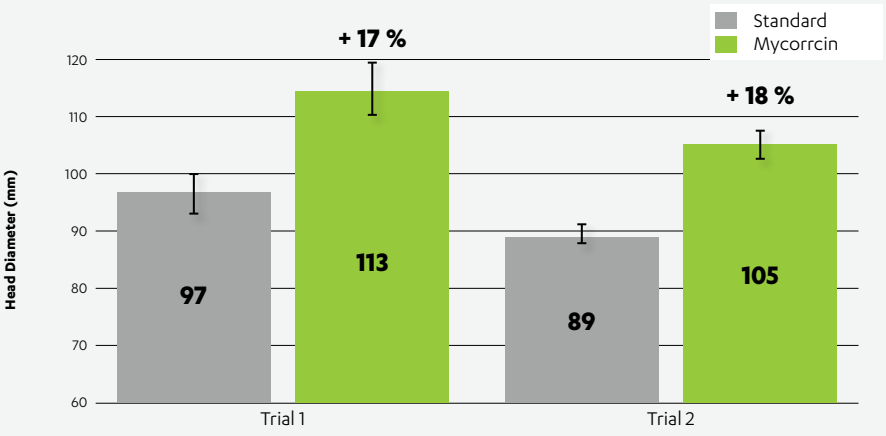

Figure 3. Effect of Mycorrcin and Foliacin on the Percentage of Broccoli Heads Cut per Harvests

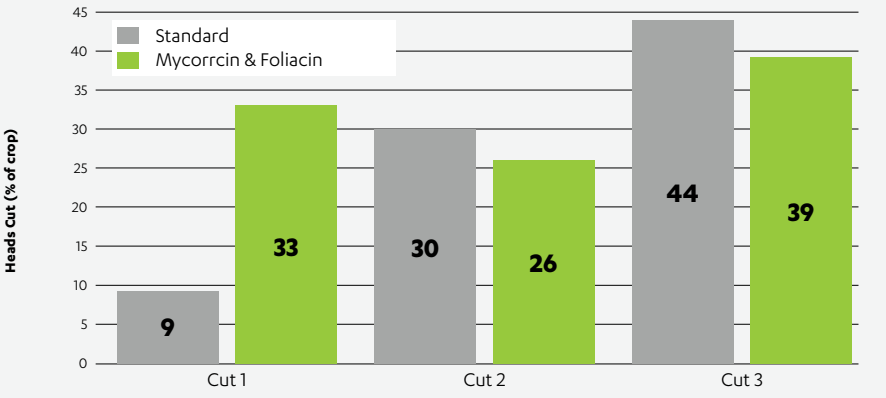

Figure 4. Effect of Mycorrcin and Foliacin on Broccoli Head Diameter