Onions | Trial Sheet

Increasing onion yield with Biostart products

How it Works

Biostart Mycorrcin is a soil biostimulant that activates beneficial microbes in your soil, stimulating 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 to maintain green leaf area and improve the ability of plants to withstand environmental stress.

Onion Trials

Trials conducted in the Auckland region showed that the application of **Mycorrcin** and **Foliacin**:

1. Increases Onion Yield and Bulb Size

Commercial red onion crop trials in the Auckland area demonstrated that applying **Mycorrcin** once post-emergence and **Foliacin** three times over the growing period increases yields. The total yield was increased by 6.4 T/ha (7.8%) from 81.4 to 87.8 T/ha (Figure 1a). The plant number was lower in the BioStart treated plots (-5.8%), therefore the yield increase can be attributed to a 14.5% increase in bulb size.

An early red onion trial in Pukekohe, using the cultivar Red Planet, examined the impact of a **Mycorrcin** and **Foliacin** program. **Mycorrcin** was applied at sowing (5 L/ha) and four weeks later (5 L/ha). **Foliacin** was applied at 0.5 L/ha, with three post-emergent herbicide applications and five fungicide applications. **Mycorrcin** and **Foliacin** increased yield by 8 T/ha or 17% over untreated (Figure 1b). The **Mycorrcin** and **Foliacin** program increased average bulb weight by 15%, from 105 to 121 g.

A commercial grower trial in Pukekohe over the 2018/19 season studied the effect of **Foliacin** treatment on red onions (Sweet Red Improved). Two beds were treated three times with **Foliacin** at 1 L/ha. At harvest two standard and two treated beds were harvested by the grower and yield recorded per bed. The **Foliacin** treatments produced an 19% increase in yield (Figure 1c).

2. Increases Commercial Return

In Trial 1 and 3 the application of **Mycorrcin** and **Foliacin** increased gross profit per hectare by $4,546/ha and $5,812, respectively (Table 1), whereas in Trial 2 the application of **Foliacin** increased profitability by $7,582.

Figure 1a. Effect of Mycorrcin and Foliacin on Red Onion Total Yield (T/Ha) Pukekohe 2007

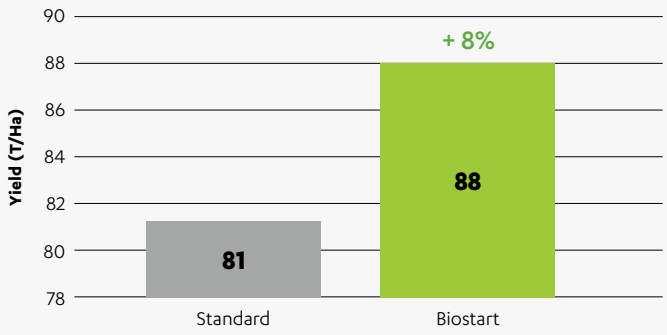

Figure 1b. Effect of Mycorrcin and Foliacin on Red Onion Total Yield (T/Ha) Pukekohe 2019

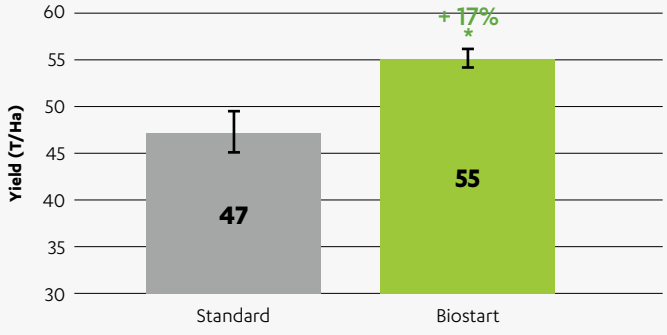

Figure 1c. Effect of Foliacin on Red Onion Yield (T/Ha) Pukekohe 2019

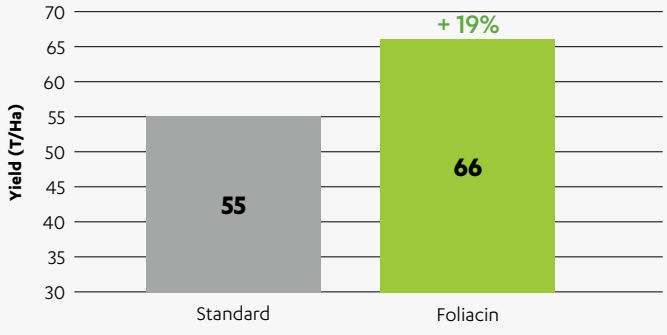

Table 1. Impact of Mycorrcin on Gross Return

	Trial 1		Trial 2		Trial 3	
	Standard	Biostart	Standard	Biostart	Standard	Biostart
Gross Yield (T/Ha)	81	88	47	55	55	66
Return - Onions	$61,050	$65,850	$35,250	$41,250	$41,468	$49,238
Input Cost - Mycorrcin		$113		$188		
Input Cost - Foliacin		$141		$188		$188
Gross Return	$61,050	$65,597	$35,250	$41,062	$41,468	$49,050
Increase		**$4,546**		**$5,812**		**$7,582**
Red Onion Return $750/T						

3. Retains green leaf for longer

Foliacin delivers higher yields through maintaining healthier canopies. In two Auckland trials with red onions the application of **Foliacin** improved green leaf retention at harvest. This allows crops to last longer in the ground (Figure 2).

4. Improves root growth

The application of **Mycorrcin** (2 x 5 L/ha) on a commercial red onion crop worked to improve the root growth by 46% during bulb development (Figures 3 and 4).

Figure 3. Effect of Mycorrcin on Red Onion Root Weight Pukekohe 2019

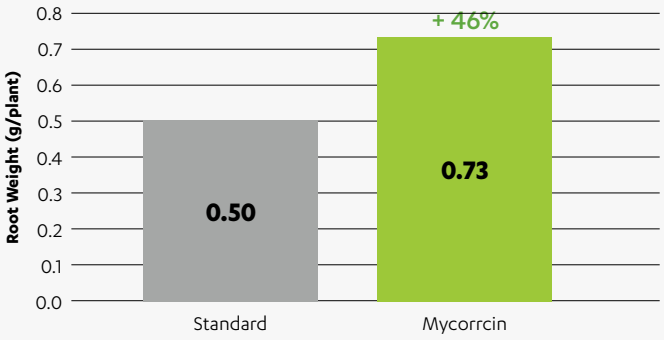

Figure 2. Untreated and Foliacin-Treated Red Onion Plants, Pukekohe

Figure 4. Untreated and Mycorrcin-Treated Red Onion Roots