



Carrots | Trial Sheet

Mycorrcin



How it Works

Biostart Mycorrcin is a soil biostimulant that activates beneficial soil microbes, which stimulate healthy root growth and development leading to higher nutrient uptake, faster crop establishment and greater yield.

Carrot Trial

The trial was conducted in Ohakune on a commercial crop of Soprano variety carrots. Seed was sown in 1.72m beds with four plant rows per bed at 1.5 million seeds/ha. The Biostart treated beds received 6 L/ha of Mycorrcin applied after sowing.

Results

Increased seedling survival

The application of Mycorrcin increased the total number carrot seedlings that survived to maturity by 15%.



Biostart-treated

Untreated

Figure 1. Uniformity



Reduced rejects

There was a 58% reduction in the amount of reject and XL carrots (less 11 T/ha) harvested from the Biostart treated plots which contributed to increased size uniformity and higher yield (**Figure 1**).

Increased size uniformity

The higher carrot density in the Mycorrcin-treated beds reduced the individual carrot weight for the marketable carrots by 8% from 146 to 134 g. This higher carrot density led to more uniformly sized carrots, meaning more of them fall into the First-Grade category (**Figure 1**).



Increased marketable yield

Overall, the application of Mycorrhizae made a statistically significant increase in marketable carrot yield of 13% (19 T/ha), increasing from 147 T/ha up to 165 T/ha. (Figure 2).



The reduction of rejects was largely due to a 17% higher yield of first grade carrots (22 T/ha) being harvested and a reduction in the amount of XL carrots (-3.3 T/ha) harvested (Table 1).

Reduced Violet root rot

Fewer of the reject carrots were affected by Violet Root Rot (VRR, -2.6 T/ha) in Biostart-treated plots compared to the standard plots.

Conclusion

The Biostart programme of Mycorrhizae in a commercial carrot crop had higher seed germination, more first grade carrots, and fewer rejects which lead to improved marketable carrot yield and profitability.



Table 1. Carrot Numbers (/ha)						
Carrot Grade	Standard	Biostart	Difference	Difference by %	Stats	
First grade	932,178	1,172,490	240,312	26%	0.005	
XL	75,582	62,016	-13,566	-18%	0.430	
Rejects	93,024	58,140	-34,884	-38%	0.424	
Violet Root Rot	31,008	13,566	-17,442	-56%	0.111	
TOTAL	1,131,792	1,306,212	174,420	15%	0.007	