

Biostart N and Mycorrcin Kale Trial

Increased Kale DM yield by 21%
Southland 2015–2016



Southern Technical Services conducted an independent trial in Riversdale, Southland using Biostart N, nitrogen-fixing bacteria, and Mycorrcin, a soil microbial activator, on Kale. The trial showed that Biostart N and Mycorrcin increased DM yield in Kestrel Kale by 21%.

Trial Design

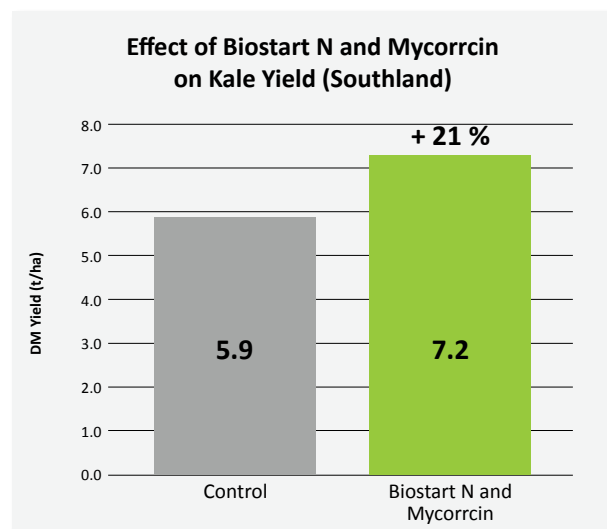
Trials were conducted in paddocks planted on a commercial dairy farm located in Riversdale, Northern Southland. All growing conditions were the same for treated and untreated areas of the paddock.

- The trials were treated within days of being sown in October 2015.
- Sixteen 1m² sites were marked in the paddock and 8 of these were treated on 31 October 2015 within days of sowing with 2 L/ha Mycorrcin and 100mL/ha of Biostart N. The trials were harvested in May 2016.

Kale Trial Yield Results

The Kale was cut at 100mm from ground and DM determined on the plant material (soft stem and leaf)

- Biostart N increased DM yield by 1.2 T/ha or 21%
- Based on 20 cents/kg DM this is an additional \$248/ha for a cost of \$82/ha



Note: Kestrel Kale matures between 150 and 220 growing days. There were 196 growing days in this trial. The final yield for both the control and treated areas would have been effected by lack of irrigation and the “edge effect” of the trial site.

2016 Kale Trial Yield and \$ Returns	Control	Biostart N + Mycorrcin	Increase	%
Mean DM Yield (t/ha)	5.9	7.2	1.2	21%
Yield increase value @ 20 cent/kg DM			\$248.33	
Input Cost exc. GST				
BioStart N			\$44.00	
Mycorrcin			\$37.50	
Returns			\$166.83	

Note: Input costs for both trials are based on BioStart 2019 RRP excluding GST. Input cost exclude application costs.

Application Note

It takes time for the population of Biostart N nitrogen fixing bacteria to establish in the soil, but once this is achieved nitrogen is produced at a consistent rate for use by the plant for growth.

BioStart N and Mycorrcin should be applied as soon as possible at sowing. Soils and climatic conditions will differ, results will vary. For more detailed application instructions contact BioStart on 0800 274 5245.

Available from leading rural retailers.

Call New Zealand: **0800 274 5245** to order. www.biostart.co.nz

Biostart N and Mycorrcin Fodder Beet Trial

Increased Fodder Beet DM yield by 7.4%
Southland 2015–2016



Southern Technical Services conducted an independent trial in Riversdale, Southland using Biostart N, nitrogen-fixing bacteria, and Mycorrcin, a soil microbial activator, on Fodder Beet. The trial showed that Biostart N and Mycorrcin increased DM yield in Brigadier Fodder Beet by 7.4%.

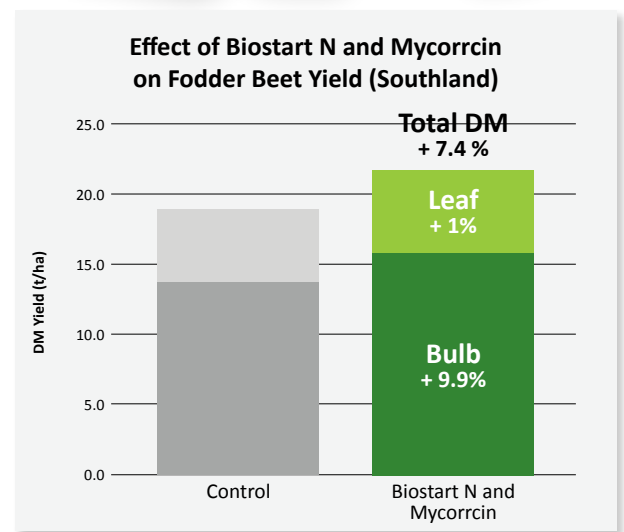
Trial Design

The trial was conducted by Southern Technical Services over the 2015/16 season at the same time as the Kale trial with the same trial design. Refer to Kale trial overleaf for details.

Fodder Beet Yield Results

The DM was determined on both the leaf and bulb then combined for Total DM

- Biostart N increased DM yield by 1.5 T/ha or 7.4%
- Based on 20 cents/kg DM this is an additional \$296/ha for a cost of \$82/ha



2016 Fodder Beet Trial Yield and \$ Returns	Control	Biostart N + Mycorrcin	Increase	%
Bulb DM (kg/ha)	14.4	15.9	1.42	9.9%
Leaf DM (kg/ha)	5.5	5.5	0.05	1.0%
Mean DM Yield (kg/ha)	19.9	21.4	1.48	7.4%
Yield increase value @ 20 cent/kg DM			\$295.68	
Input Cost				
BioStart N			\$44.00	
Mycorrcin			\$37.50	
Returns			214.18	

Note: Input costs for both trials are based on BioStart 2019 RRP excluding GST. Input cost exclude application costs.

Biostart N

Biostart N contains the active ingredient Azotobacter chroococcum, a nitrogen fixing bacteria which occurs naturally in our soils and converts atmospheric nitrogen to plant-available ammonium nitrogen in the soil for sustained plant growth. By applying Biostart N you can increase the number of nitrogen fixing bacteria in your soil. Biostart N is a biological product which works in sync with the plants growth periods and can be used to compliment conventional nitrogen fertiliser programs.

Mycorrcin

Mycorrcin stimulates the activity of soil microbes, both bacteria and fungi, that are essential for making nutrients such as nitrogen, phosphorous and sulphur available to the plant. Biostart trials have consistently shown that adding Mycorrcin enhances the activity of Biostart N.

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