

Increased potato yield with the application of biostimulant Mycorrcin

Ross MacDiarmid BioStart Limited

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Key words

Potato, increased yield, Mycorrcin

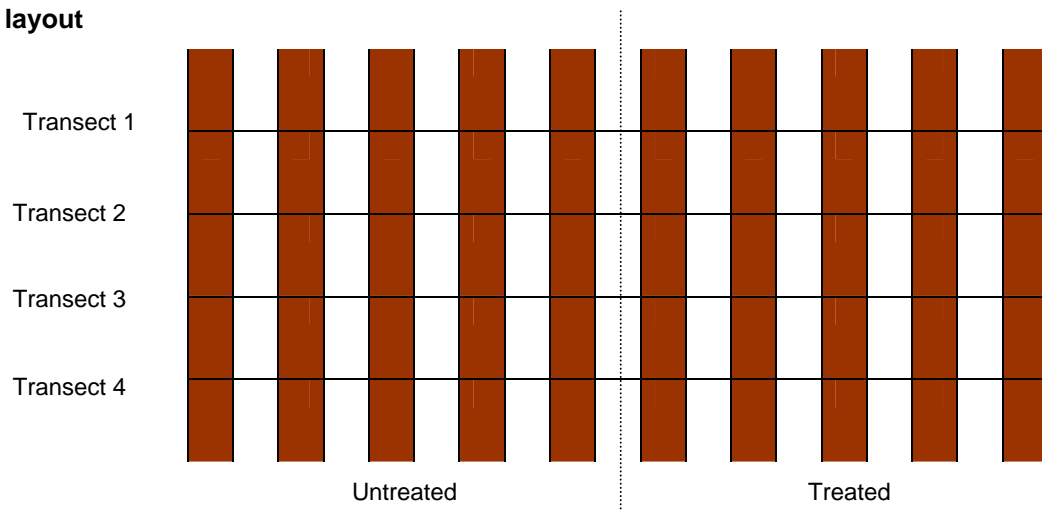
Overview

- This trial looked into the impact of Mycorrcin on increasing yield in a potato crop
- The treatment used was:
 - 1. Standard fertiliser program
 - 2. Mycorrcin 5lt/ha at post emergence
- At harvest the block was transacted by 4 evenly spaced lines. Eight sample plots in each transect line, four treated and four control. Each plot within bot the treated and control areas was five rows apart. Each sample plot consisted of six plants and had a 1.45m row length at 0.8m centres.
- Marketable and reject potato numbers and weights were recorded.



Trial plots being dug, weighed counted and graded in the field.

Block layout



Results



Fewer potatoes were harvested from the untreated block and on average they were smaller.



There were more potatoes harvested from the treated block and on average they were heavier.

Untreated

	Total No.	Total weight kg	Marketable No.	Marketable weight kg	Reject No.	Reject weight kg
Transect1	50	8.3	32	7.3	18	1.0
	67	9.9	64	9.8	3	0.1
	70	7.2	46	6.6	24	0.6
	55	10.9	39	9.2	16	1.7
Transect 2	70	8.2	61	7.9	9	0.3
	53	9.0	51	9.0	2	0.0
	55	9.5	53	9.5	2	0.0
	82	11.7	70	11.3	12	0.4
Transect 3	65	7.6	58	7.4	7	0.2
	59	10.1	45	9.7	4	0.4
	72	11.8	61	11.5	11	0.3
	57	8.2	43	8.0	14	0.2
Transect 4	62	9.8	57	9.7	5	0.1
	52	10.5	52	10.5	0	0.0
	62	11.4	58	11.3	4	0.1
	71	9.6	55	8.9	16	0.7
Total	992	156.6	845	147.6	147	6.0

Treated

	Total No.	Total weight kg	Marketable No.	Marketable weight kg	Reject No.	Reject weight kg
Transect1	62	7.7	57	7.6	5	0.1
	68	12.6	59	12.1	9	0.5
	75	11.5	64	11.3	11	0.2
	53	12.6	46	11.8	7	0.8
Transect 2	87	9.9	61	9.8	26	1.1
	78	12.7	64	11.3	14	1.4
	64	13.0	52	12.3	12	0.7
	54	8.0	43	7.3	11	0.7
Transect 3	67	9.7	57	9.5	10	0.2
	75	8.8	55	8.0	20	0.8
	76	11.3	56	10.9	20	0.4
	59	11.3	52	10.7	7	0.6
Transect 4	56	8.3	45	8.0	11	0.3
	66	11.8	51	10.8	15	1.0
	61	11.2	53	11.0	8	0.2
	84	15.0	79	14.9	5	0.1
Total	1085	176.1	894	167.2	191	8.9

Summary

	Untreated	Treated	%
Total No.	992	1085	+9%
Total weight kg	156.6	176.1	+12%
Average weight/potato kg	0.158	0.162	+3%
Marketable No.	845	894	+6%
Marketable weight kg	147.6	167.2	+13%
Average marketable weight/potato kg	0.175	0.187	+7%
Reject No.	147	191	+30%
Reject weight kg	6.0	8.9	+48%
Average reject weight/potato kg	0.041	0.047	+15%

Return on investment

- Return on investment has been extrapolated to a hectare basis

	Untreated	Treated
Total commercial grade kg/ha	79,476kg	90,079kg
Price/kg	\$0.40	\$0.40
Gross return	\$31,790.00	\$36,031.00
Cost of BioStart program/ha	\$0.00	\$88.25
Net return	\$31,790.00	\$35,942.75
Difference		+\$4,152.75

Conclusion

The Mycorrcin treatment resulted in the following:

- The 12% increase in total yield weight translated into a 13% increase in marketable weight.
- The treatment increased reject numbers and weight. However a large number of these rejects were rejected because of their small size and could have been marketed as 'Gourmet Potatoes'. Taking this into consideration both the number and total weight from the treated area would have increased and the number and total weight of rejects would have decreased.
- Based on the sample plot field gradings the treatment increased net return by \$4,152.75 per hectare.