

Growth and Yield Responses of Potatoes to
Formulated *Trichoderma atroviride*
Seed-piece Treatment

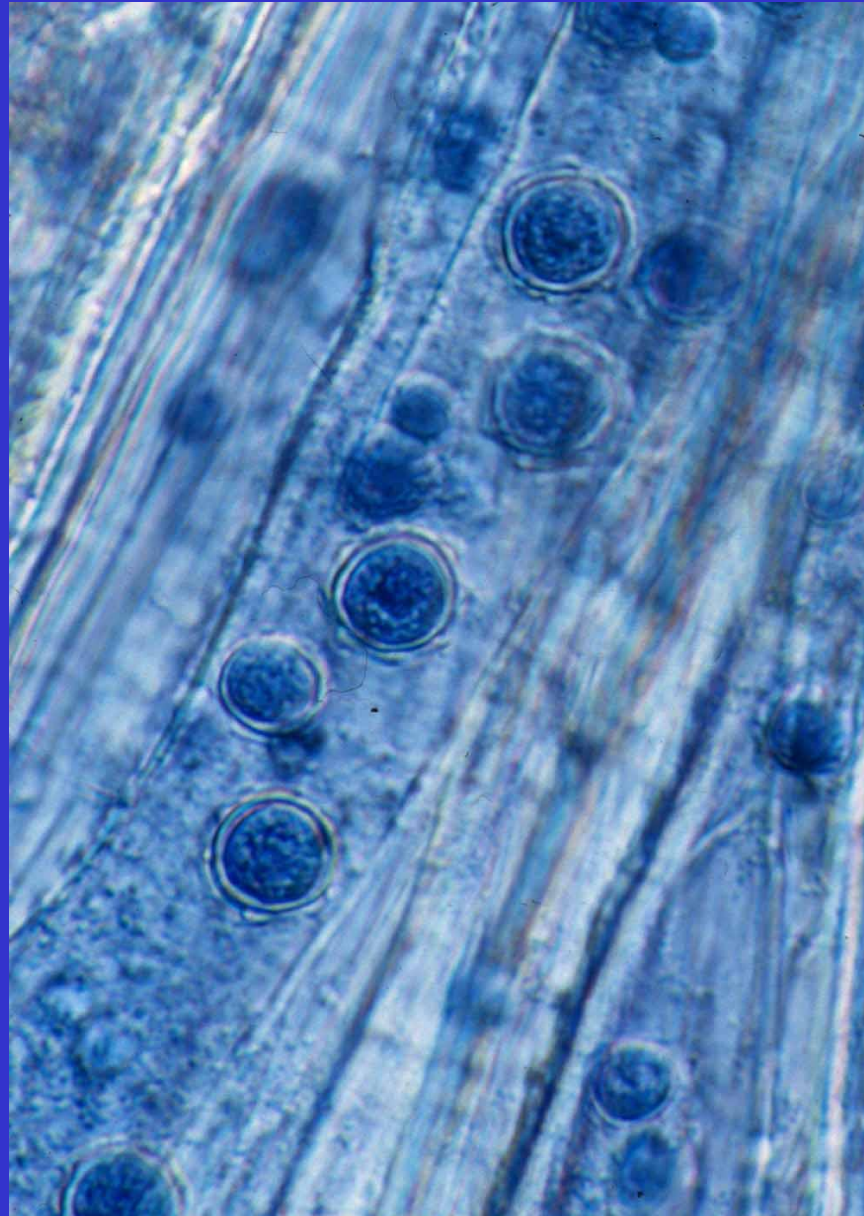
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Trichoderma atroviride
chlamydospores in root
cells.



Growth and Yield Responses of Potatoes to Formulated *Trichoderma atroviride* Seed-piece Treatment, North Pole, Alaska

Variable	Treatments, Means	
	Blank control	<i>T. atroviride</i>
Plant weight, fresh(g)	482.57	1003.78
Plant weight, dry(g)	73.18	175.06
Main stems, #/plant	2.30	3.70
Side shoots, #/plant	25.10	40.90
Root mass, fresh(g)	24.91	54.91
Root mass, dry(g)	4.80	13.38
Stolen, #/plant	17.20a	17.90a
Total #potatoes	10.70b	13.80b
Potato yield(g)	553.39	1273.93
Marketable #potatoes (>113g)	1.90	5.70

Means followed by the same letter are not significantly different ($p \geq 0.05$), according to independent-samples t-tests.



Seed piece treated with formulated *Trichoderma atroviride*

Untreated control

Conclusions

- Diseases were not found on potato tubers in any of the treatments.
- Seed-piece treatment with formulated *Trichoderma atroviride* greatly promotes the growth and the development of potatoes and significantly increases the yield.
- Potato plants grown from treated seed-pieces have significantly larger biomass and root-mass.

Conclusions

- No significant difference was found on the total number of stolons and potato tubers. However, potato tubers seems to develop faster in treated plants.
- Treated plants produced significantly larger potato tubers.
- In Alaska where growing season is short, seed-piece treatment with formulated *T. atroviride* potentially could enable growers to harvest their seed potatoes 1-2 weeks earlier.