



Evaluation of fungicides for control of pink rot in potato

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PROJECT GOALS: to identify fungicide and fungicide combinations effective at controlling pink rot in potato.

METHODS:

1. Cultures of *Phytophthora erythroseptica*, causal agent of pink rot, were grown in the laboratory and inoculum prepared with vermiculite and applied at planting and hilling.
2. Field plots were established at Cornell University Freeville NY farm. Soil type is classified as Howard gravelly loam.
3. Pink rot susceptible and commonly grown table stock cultivar 'Yukon Gold' was grown.
4. Fungicides, Helena ProPhyt, and Presidio (Valent) were used as described in **Table 1**.
5. Healthy and pink rot infected tubers were weighed at harvest and 7 wks after storage at 45F. For each treatment total percentage of pink rot was determined: (total disease weight/total disease weight + total healthy weight) x 100. Data was analyzed with the statistics program SAS.

Table 1. Fungicide application time, rate; weight (lb) healthy and rotten tubers and percentage infected with pink rot.

Sequence	In-furrow treatment (Rate/1000 ft) & date applied	Foliar applications (Rate/acre) and number of applications, 2 wks apart. Starting at 7/13/09*	Mean wt (lb/20ft row) tubers rotten due to pink rot at harvest and after 7 wks in storage	Mean healthy wt (lb/20ft row)	Mean percentage disease at harvest and after 7 wks in storage
1. Control	None	none	15.8 a	24.44	39.3 a
2	Presidio (0.28fl oz) 5/22/09	none	10.8 ab	31.67	25.8 ab
3	Presidio (0.28 fl oz) 5/22/09	ProPhyt (10 pt) x 1	10.9 ab	35.6	23.5 ab
4	None	ProPhyt (10 pt) x 4	7.9 b	27.5	22.8 ab
5	Presidio (0.28 fl oz) 5/22/09	ProPhyt (10 pt) x 2	9.9 ab	33.9	22.0 ab
6	None	ProPhyt (10 pt) x 2	9.25 ab	37.05	20.25 b
7	None	Presidio 4 fl oz x 4	6.6 b	35.05	16.25 b
8	Presidio (0.28 fl oz) 5/22/09	Presidio 4 fl oz x 2	7.9 b	36.08	18.0 b
SE.			1.8	3.4 <i>ns</i>	4.2

*Tubers were larger than the desired dime size, but it had been too wet to allow us to get in and hill and spray at an earlier date. Within columns, if the same letter follows means there is not significant difference at P=0.05 with Tukey-Kramer test, ns = no significant differences. For the mean percentage data these comparisons were made with the transformed data.



Inoculum preparation

Inoculation and in-furrow fungicide applications took place at planting May 21 2009

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