EVALUATION OF FUNGICIDES APPLIED FOR CONTROL OF PINK ROT ON POTATO, 2003

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Location: San Luis Valley Research Center, Center, CO
Cultivar: Russet Norkotah selection 8, cut seed, 2-4 oz.
Objective: To evaluate the efficacy of various fungicides in preventing of pink rot in potato.
Application: In-Furrow treatments were applied using an R & D CO_2 charged backpack sprayer at 35 PSI, with two XR 8002VS nozzle, at 10 gallons/acre as a directed in-furrow application. Foliar treatments were applied using an R & D CO_2 charged backpack sprayer at 35 PSI, with two XR 8002VS nozzles, at 20 gallons/acre.

Program	Infurrow		Foliar (Foliar applications began on July 8, 2003)		
	Products	Rate	Products	Rate	Itinerary/Week
1.	Control, no treatment	-	Control, no treatment	-	-
2.	Reason SC	300 g.ai./Ha	Reason SC + Bond	300 g.ai./Ha + 2.57 fl.oz./A	2,4
			Bravo WS	1260 g.ai./Ha	3,5
3.	Previcur SC	1020	Previcur SC + Bravo	1020 g.ai./Ha + 840 g.ai./Ha	2,4
			Bravo WS	1260 g.ai./Ha	3,5
4.	Ridomil Gold 480 EC	1710	Ridomil Gold 480 EC	1710 g.ai./Ha	2,4
			Bravo WS	1260 g.ai./Ha	3,5
5.	None	None	Reason SC + Bond	300 g.ai./Ha + 2.57 fl.oz./A	2,4
			Bravo WS	1260 g.ai./Ha	3,5
6.	None	None	Reason SC + Bond	300 g.ai./Ha + 2.57 fl.oz./A	1,3
			Bravo WS	1260 g.ai./Ha	2,4
7.	Reason w/Tops MZ Seed treatment		Reason SC + Bond	300 g.ai./Ha + 2.57 fl.oz./A	2,4
			Bravo WS	1260 g.ai./Ha	3,5
8.	Reason SC	300 g.ai./Ha	Reason SC + Bond	300 g.ai./Ha + 2.57 fl.oz./A	2,4
			Bravo WS	1260 g.ai./Ha	3,5

Planted: May 13, 2003
Plot Design: Randomized complete block
Plot Size: 2 - 20 foot rows per treatment per replication
Plant Spacing: 12 inches
Row Spacing: 34 inches
Replications: Four
Irrigation: Solid set sprinkler, rate based on ET
Fertilizer: 80N-60P-40K-25S-2.5Zn, preplant, 10N through sprinkler after tuber set
Herbicide: Matrix, 1.5 oz./A + Eptam, 4.5 pt./A
Insecticide: None
Fungicide: None
Vine Killer: Beat vines on September 2, 2003
Harvested: September 18 & 19, 2003

DATA

Disease: Percent tubers with pink rot at harvest, at grading and during storage. The plot was flooded to induce pink rot on August 20th & 29th.
Yield: 2-20 foot row per treatment per replication, total yield expressed as cwt/A.
Grade: By hand, percent tubers by weight in pounds < 4 oz., 4-10 oz., > 10 oz., US #2's, and culls.

Table 1. Effects of products applied at planting and in season for control of pink rot on tuber yield and quality in the cultivar Russet Norkotah Selection 8, San Luis Valley, Colorado, 2003

Program	Infurrow	Foliar (Applications began on July 8, 2003)		Percent[a]					
	Products/Rate	**Products/Rate**	**Itinerary/Week**	< 4 oz.	4-10 oz.	> 10 oz.	US #2s	Culls	Cwt/A[b]
1.	Control, no treatment	Control, no treatment	-	10.7	48.7	35.6	3.9	1.2	376.3
2.	Reason @ 300 g.ai./Ha	Reason @ 300 g.ai./Ha	2,4	11.3	51.8	30.8	3.3	2.8	389.2
		Bond @ 2.57 fl.oz./A	2,4						
		Bravo WS @ 1260 g.ai./Ha	3,5						
3.	Previcur @ 1020 g.ai./Ha	Previcur @ 1020 g.ai./Ha	2,4	12.4	49.2	32.9	3.7	1.9	399.7
		Bravo WS @ 840 g.ai./Ha	2,4						
		Bravo WS @ 1260 g.ai./Ha	3,5						
4.	Ridomil Gold @ 1710 g.ai./Ha	Ridomil Gold @1710 g.ai./Ha	2,4	11.2	48.6	35.2	3.9	1.1	412.2
		Bravo WS @ 1260 g.ai./Ha	3,5						
5.	None	Reason @ 300 g.ai./Ha	2,4	9.9	49.6	34.3	4.1	2.2	411.4
		Bond @ 2.57 fl.oz./A	2,4						
		Bravo WS @ 1260 g.ai./Ha	3,5						
6.	None	Reason @ 300 g.ai./Ha	1,3	11.1	49.9	31.4	5.4	2.2	379.8
		Bond @ 2.57 fl.oz./A	1,3						
		Bravo WS @ 1260 g.ai./Ha	2,4						
7.	Reason w/Tops MZ Seed treatment	Bravo WS @ 1260 g.ai./Ha	2,4	9.6	50.2	34.1	3.0	3.1	398.8
		Bond @ 2.57 fl.oz./A	2,4						
		Bravo WS @ 1260 g.ai./Ha	3,5						
8.	Reason @ 300 g.ai./Ha	Reason @ 300 g.ai./Ha	2,4	10.7	50.3	32.7	3.6	2.6	421.3
		Bond @ 2.57 fl.oz./A	2,4						
		Bravo WS @ 1260 g.ai./Ha	3,5						
LSD(P=0.05)				NS	NS	NS	NS	NS	NS

[a] Based on tuber weight in pounds, mean of four replications.

[b] Total yield expressed as hundred weight per acre, 2-20 foot rows per treatment per replication, mean of four replications.

Table 2. Effects of products applied at planting and in season for control of pink rot in the cultivar Russet Norkotah Selection 8, San Luis Valley, Colorado, 2003

Program	Infurrow	Foliar (Applications began on July 8, 2003)		Incidence of tuber rot[a]	Incidence of tuber rot during stroage[b]
	Products/Rate	Products/Rate	Itinerary/Week		
1.	Control, no treatment	Control, no treatment	-	4.9	0.0
2.	Reason @ 300 g.ai./Ha	Reason @ 300 g.ai./Ha	2,4	0.3	1.2
		Bond @ 2.57 fl.oz./A	2,4		
		Bravo WS @ 1260 g.ai./Ha	3,5		
3.	Previcur @ 1020 g.ai./Ha	Previcur @ 1020 g.ai./Ha	2,4	0.4	2.6
		Bravo WS @ 840 g.ai./Ha	2,4		
		Bravo WS @ 1260 g.ai./Ha	3,5		
4.	Ridomil Gold @ 1710 g.ai./Ha	Ridomil Gold @1710 g.ai./Ha	2,4	0.0	0.0
		Bravo WS @ 1260 g.ai./Ha	3,5		
5.	None	Reason @ 300 g.ai./Ha	2,4	0.3	1.8
		Bond @ 2.57 fl.oz./A	2,4		
		Bravo WS @ 1260 g.ai./Ha	3,5		
6.	None	Reason @ 300 g.ai./Ha	1,3	1.4	0.0
		Bond @ 2.57 fl.oz./A	1,3		
		Bravo WS @ 1260 g.ai./Ha	2,4		
7.	Reason w/Tops MZ Seed treatment	Bravo WS @ 1260 g.ai./Ha	2,4	1.2	0.0
		Bond @ 2.57 fl.oz./A	2,4		
		Bravo WS @ 1260 g.ai./Ha	3,5		
8.	Reason @ 300 g.ai./Ha	Reason @ 300 g.ai./Ha	2,4	0.6	0.0
		Bond @ 2.57 fl.oz./A	2,4		
		Bravo WS @ 1260 g.ai./Ha	3,5		
LSD(P=0.05)				NS	NS

[a] Mean percent by weight of tubers showing water rot at harvest and at grading, four replications.
[b] Mean percent by weight of tubers showing water rot during tuber storage, four months post harvest, four replications.