

Late Blight Tuber Rot Control (4000 Series)

- Location:** Prosper, ND
- Plot Design:** 10 X 30 ft. rows; 4 replications, RCBD, all ten rows sprayed, data taken from center rows. Russet Burbank spreader rows were planted between each treatment.
- Planting Date:** May 23, 2005
- Row Width:** 36 inches
- Plant Spacing:** 12 inches
- Soil Temperature:** 61F
- Cultivar:** Red LaSoda
- Emergence:** June 12
- Fertilizer:** 400 lb/a; 32-10-10
- Herbicide:** Treflan (1.0 lb/a); Pre-plant incorporated
Prowl (2 pt/a) + Sencor (3.0 oz/a) + Matrix (1.5 oz/a); June 21
- Insecticide:** Admire (18oz/a); in-furrow at planting
Asana (6.0 oz/a); July 21, August 5, 22
- Inoculation Method:** Late Blight: Greenhouse reared plants (six weeks old) were inoculated with US-8 (A2). When sporulating lesions developed, two infected plants were transplanted into the center of each four-row Russet Burbank border on August 2. A suspension of 1×10^4 zoospores/ml was sprayed onto the foliage of the Russet Burbank spreader rows of all treatments in all replications on the evenings of August 4, and 18. This was repeated on August 20, but inoculum was sprayed directly onto the Red Lasoda plots.
- Fungicide application dates:** July 15, 21, 29, August 5, 10, 22, 29
September 10, 16, 21
- Fungicide Application Method:** Fungicides were applied using a 3 point mounted sprayer. (35 gpa; 30 psi; 11005 XR nozzles)
- Vinekill:** Reglone (2.0 pt/a) + LI700 (2.0 pt/100 gal); September 21, 26
- Harvest:** October 9, 10
- Grade:** None; severe tuber rot at harvest
- Post harvest Tuber Evaluation:** November 17, 39 Days After Harvest

Treatment	Rate	Schedule	Late Blight (% Severity)									AUDPC	RAUDPC
			7/12	7/19	7/27	8/18	8/30	9/8	9/15	9/21			
4006 Dithane	2.0 lb / a	1-4,6,7	0.0	0.0	0.0	0.0	0.2	3.2	7.5	21.3	138.8	0.063	
Dithane +	2.0 lb / a +	5,8,9											
Reason +	4.0 oz / a +												
Bond	0.1% v/v												
4007 Dithane	2.0 lb / a	1-7	0.0	0.0	0.0	0.0	0.1	3.5	10.1	26.9	174.9	0.079	
Reason +	8.2 oz / a +	8,9											
Bond	0.1% v/v												
4008 Dithane	2.0 lb / a	1-7	0.0	0.0	0.0	0.0	0.1	7.8	14.4	48.8	302.1	0.137	
Gavel	2.0 lb / a	8,9											
4009 Polyram	2.0 lb / a	1-3,5,6,8,9	0.0	0.0	0.0	0.0	0.2	35.0	75.0	92.5	1046.0	0.475	
Forum	6.0 oz / a	4,7											
4010 Polyram	2.0 lb / a	1-7	0.0	0.0	0.0	0.0	0.1	19.9	53.8	74.4	732.0	0.333	
Forum	6.0 oz / a	8,9											
4011 Polyram	2.0 lb / a	1-4,6,7	0.0	0.0	0.0	0.0	0.1	36.4	52.5	85.6	889.6	0.404	
Forum	6.0 oz / a	5,8,9											
4012 Polyram	2.0 lb / a	1-3,5,6,8,9	0.0	0.0	0.0	0.0	0.1	13.2	59.4	78.8	727.8	0.331	
Forum	6.0 oz / a	4,7,10+3 days											
4013 Dithane	2.0 lb / a	1-6	0.0	0.0	0.0	0.0	0.1	8.9	7.5	32.5	218.0	0.099	
Dithane +	2.0 lb / a +	7-9											
Ranman	2.75 fl oz / a												
4014 Manzate	2.0 lb / a	1,2,4,6,8	0.0	0.0	0.0	0.0	0.1	5.5	23.8	50.0	349.0	0.159	
TM 459 +	4.0 fl oz / a +	3,5,7,9											
TM 473	1.76 fl oz / a												
LSD _{P=0.05}			.	.	.	.	NS	12.6	14.8	19.5	298.3	0.136

NOTE: Vine dessication at application #10

Late Blight Tuber Rot Control - Prosper Series 4000
Yield and Grade

Treatment	Rate	Schedule	Total Yield (cwt/a)	# Rotten Tubers at Harvest	% Rotten Tubers 40 DAH
4001	Manzate	1-7	372.8	27.4	16.8
	Manzate + SuperTin	8,9			
	Manzate + SuperTin + Reglone	10			
	Manzate + SuperTin + Reglone				
	Manzate + SuperTin + Reglone				
4002	Manzate	1-6	366.1	35.4	29.5
	Manzate + Kocide 4.5LF	7-9			
	Manzate + Kocide + Reglone	10			
	Manzate + Kocide + Reglone				
4003	Manzate	1-6	406.8	27.1	16.6
	Manzate + Curzate	7-9			
	Manzate + Curzate + Reglone	10			
	Manzate + Curzate + Reglone				
	Manzate + Curzate + Reglone				
4004	Manzate	1-9	386.4	45.8	31.8
	Manzate + Reglone	10			
	Manzate + Reglone				
4005	Dithane	1-7	430.9	36.8	26.8
	Dithane + Reason + Bond	8,9			
	Dithane + Reason + Bond				
	Dithane + Reason + Bond				

Treatment	Rate	Schedule	Total Yield (cwt/a)	# Rotten Tubers at Harvest	% Rotten Tubers 40 DAH
4006 Dithane	2.0 lb / a	1-4,6,7	392.6	30.5	34.0
Dithane + Reason + Bond	2.0 lb / a + 4.0 oz / a + 0.1% v/v	5,8,9			
4007 Dithane	2.0 lb / a	1-7	394.4	30.4	26.8
Reason + Bond	8.2 oz / a + 0.1% v/v	8,9			
4008 Dithane	2.0 lb / a	1-7	396.0	34.4	18.8
Gavel	2.0 lb / a	8,9			
4009 Polyram	2.0 lb / a	1-3,5,6,8,9	361.5	37.6	24.6
Forum	6.0 oz / a	4,7			
4010 Polyram	2.0 lb / a	1-7	340.2	40.4	29.7
Forum	6.0 oz / a	8,9			
4011 Polyram	2.0 lb / a	1-4,6,7	328.6	39.9	24.6
Forum	6.0 oz / a	5,8,9			
4012 Polyram	2.0 lb / a	1-3,5,6,8,9	362.6	33.3	19.2
Forum	6.0 oz / a	4,7,10+3 days			
4013 Dithane	2.0 lb / a	1-6	428.1	24.1	21.8
Dithane + Ranman	2.0 lb / a + 2.75 fl oz / a	7-9			
4014 Manzate	2.0 lb / a	1,2,4,6,8	393.8	23.0	24.0
TM 459 + TM 473	4.0 fl oz / a + 1.76 fl oz / a	3,5,7,9			
LSD _{P=0.05}			NS	NS	NS

NOTE: Vine dessication at application #10