

2012 Standard Seed Treatment (2700 Series)

Location: Inkster, ND
Plot design: 2 rows X 30 ft. X 4 reps; RCBD
Planting date: May 23, 2012
Row width: 36 inches
Plant spacing: 14 inches
Cultivar: Russet Burbank

Fertilizer: Broadcast: 190#N, 200#K, 61#P, 33#S; April 23

Herbicide: Prowl (2 pts/a) + Sencor (0.5 lb/a) + Matrix (1.5 oz/a); June 7

Insecticide: Admire Pro (8.7 oz/a) + Ultra Flourish (12.2 oz/a); IF at plant
Coragen (5 oz/a) July 11, August 10

Fungicide application dates:

July 3	Bravo Zn (2.125 pt/a)
July 12	Manzate (2 lbs/a)
July 17	Bravo Zn (2.125 pt/a)
July 27	Headline (9 oz/a) + Manzate (2 lbs/a)
July 31	Bravo Zn (2.125 pt/a)
August 6	Endura (2.5 oz/a) + Manzate (2 lbs/a)
August 13	Bravo Zn (2.125 pt/a)
August 20	Scala (7 oz/a) + Manzate (2 lbs/a)
August 27	Bravo Zn (2.125 pt/a)
Sept. 4	Manzate (2 lbs/a)

Vinekill: Reglone (2 pts/a) + NIS 90-10 (1 pt/100gal); Sept. 13
Killing frost, September 22

Harvest: October 15

Grade: October 30

Post-harvest tuber evaluation: January 29, 2013; 106 DAH

Stand: Number emerged of 25 planted: June 15 (23 DAP), June 22 (30 DAP)

Data: Field ratings: July 16 (54 DAP), August 13 (82 DAP)

Vigor: 1-4; 1 = low, 4 = high

Decay: Percent decay of seed piece; 0 = no decay, 100 = complete decay

Stems: total number of stems

Stems with Rhizoctonia: number of stems with visible lesions due to Rhizoctonia

Stolons: total number of stolons

Stolons with Rhizoctonia: number of stolons with visible lesions due to Rhizoctonia

Yield: total yield in hundredweight (cwt)

Grade: Commercial grade by Ag World Support Systems, Grand Forks, ND

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		Stand 30 DAP		
Treatment		Rate	Application	22-Jun-12
2701	Non-treated	-	-	97.0
2702	Confidential			97.5
2703	Confidential			98.0
2704	Confidential			98.5
2705	Confidential			96.0
2706	Confidential			99.0
2707	Vertisan EC	0.7 fl oz / 1000 row ft	In-furrow	99.0
2708	Vertisan EC	1.15 fl oz / 1000 row ft	In-furrow	95.5
2709	Vertisan EC	1.6 fl oz / 1000 row ft	In-furrow	97.0
2710	Fontelis + Dithane F45	0.15 fl oz / cwt + 0.9 fl oz / cwt	Seed	98.0
2711	Fontelis + Dithane F45	0.3 fl oz / cwt + 0.9 fl oz / cwt	Seed	97.5
2712	Fir Bark	0.5 lb / cwt	Seed	98.0
2713	Emesto Silver + Fir Bark	0.31 fl oz / cwt + 0.5 lb / cwt	Seed	98.0
2714	Admire Pro Emesto Silver + Fir Bark	8.7 fl oz / a 0.31 fl oz / cwt + 0.5 lb / cwt	In-furrow Seed	96.5
2715	EverGol Prime + Admire Pro	0.41 fl oz / 1000 row ft + 8.7 fl oz / a	In-furrow	
2716	WE1042-2	1 lb / cwt	Seed	98.5
2717	WE1043-1	1 lb / cwt	Seed	97.5
2718	WE1224-1	1 lb / cwt	Seed	98.5
2719	WE1044-1	1 lb / cwt	Seed	100.0
2720	Maxim 4FS + WE1042-2	0.08 fl oz / cwt + 1 lb / cwt	Seed	99.0
2721	Penthiopyrad	0.5 g ai / cwt	Seed	97.5
2722	Penthiopyrad	1 g ai / cwt	Seed	99.5
2723	Penthiopyrad	2.5 g ai / cwt	Seed	97.5
2724	Penthiopyrad	5 g ai / cwt	Seed	97.5
2725	Penthiopyrad	14 g ai / cwt	Seed	95.5
2726	Maxim 4FS	0.08 fl oz / cwt	Seed	96.5
2727	Maxim 4FS	0.08 fl oz / cwt	Seed	98.5
2728	Quadris	0.8 fl oz / 1000 row ft	In-furrow	96.5
2729	Quadris	0.8 fl oz / 1000 row ft	In-furrow	97.0
2730	Maxim MZ	8 oz / cwt	Seed	96.5
2731	Maxim Mz	8 oz / cwt	Seed	97.0
2732	Quadris	0.8 fl oz / 1000 row ft	In-furrow	97.5
	Moncut	0.79 oz / 1000 row ft	In-furrow	96.0
	Moncoat MZ	1 lb / cwt	Seed	
	6% Mancozeb	1 lb / cwt	Seed	
SD _{p> 0.05}				NS

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				Rhizoctonia 51 DAP					
Treatment		Rate	Application	% stem Rhizoc	% stem girdled	% stolon with Rhizoc	% stolon girdled	vigor	decay
2701	Non-treated	-	-	60.0	37.5	11.8	7.5	3.2	83.0
2702	Confidential			50.2	5.7	6.3	1.0	3.7	57.0
2703	Confidential			46.0	11.6	13.3	5.0	3.6	49.5
2704	Confidential			22.2	1.7	3.6	0.0	3.2	51.5
2705	Confidential			35.7	3.3	5.2	0.0	3.7	53.3
2706	Confidential			32.5	6.7	3.4	0.0	2.9	42.0
2707	Vertisan EC	0.7 fl oz / 1000 row ft	In-furrow	81.4	41.0	35.1	18.1	3.3	79.0
2708	Vertisan EC	1.15 fl oz / 1000 row ft	In-furrow	68.8	25.8	13.7	3.5	3.4	87.3
2709	Vertisan EC	1.6 fl oz / 1000 row ft	In-furrow	75.4	50.9	38.9	13.9	3.1	86.5
2710	Fontelis + Dithane F45	0.15 fl oz / cwt + 0.9 fl oz / cwt	Seed	55.8	2.9	13.9	4.9	3.6	54.3
2711	Fontelis + Dithane F45	0.3 fl oz / cwt + 0.9 fl oz / cwt	Seed	41.8	8.2	7.9	2.5	3.7	61.0
2712	Fir Bark	0.5 lb / cwt	Seed	56.8	42.5	30.2	16.2	3.7	89.5
2713	Emesto Silver + Fir Bark	0.31 fl oz / cwt + 0.5 lb / cwt	Seed	42.6	8.1	7.5	3.8	3.4	69.3
	Admire Pro	8.7 fl oz / a	In-furrow						
2714	Emesto Silver + Fir Bark	0.31 fl oz / cwt + 0.5 lb / cwt	Seed	31.9	0.0	0.6	0.0	3.5	57.5
	EverGol Prime + Admire Pro	0.41 fl oz / 1000 row ft + 8.7 fl oz / a	In-furrow						
2715	WE1042-2	1 lb / cwt	Seed	35.3	14.3	5.7	0.7	3.4	75.5
2716	WE1043-1	1 lb / cwt	Seed	48.4	21.7	18.7	7.9	3.8	75.0
2717	WE1224-1	1 lb / cwt	Seed	70.9	21.6	37.8	23.1	3.6	77.3
2718	WE1044-1	1 lb / cwt	Seed	47.3	20.5	14.1	10.3	3.6	69.8
2719	Maxim 4FS + WE1042-2	0.08 fl oz / cwt + 1 lb / cwt	Seed	48.7	9.5	4.2	1.0	3.2	41.5
2720	Penthiopyrad	0.5 g ai / cwt	Seed	42.9	6.3	4.9	0.0	3.3	33.0
2721	Penthiopyrad	1 g ai / cwt	Seed	37.1	2.5	4.1	0.0	3.3	28.5
2722	Penthiopyrad	2.5 g ai / cwt	Seed	54.2	0.0	5.9	1.3	3.1	38.0
2723	Penthiopyrad	5 g ai / cwt	Seed	31.5	3.8	2.5	0.0	3.5	58.0
2724	Penthiopyrad	14 g ai / cwt	Seed	36.3	2.8	5.7	3.0	3.1	41.3
2725	Maxim 4FS	0.08 fl oz / cwt	Seed	41.6	14.2	2.4	0.0	3.7	61.8
2726	Maxim 4FS	0.08 fl oz / cwt	Seed	36.3	15.7	1.4	0.0	3.2	51.3
2727	Quadris	0.8 fl oz / 1000 row ft	In-furrow	54.4	28.3	19.7	4.4	3.2	63.3
2728	Maxim MZ	8 oz / cwt	Seed	56.4	11.8	14.7	5.6	3.7	61.0
2729	Maxim Mz	8 oz / cwt	Seed	40.6	1.3	8.1	0.0	3.7	65.3
2730	Quadris	0.8 fl oz / 1000 row ft	In-furrow	66.9	30.8	25.7	5.3	3.6	80.5
2731	Moncoat MZ	1 lb / cwt	Seed	40.2	7.5	2.5	0.0	3.1	58.3
2732	6% Mancozeb	1 lb / cwt	Seed	49.6	29.7	19.0	5.0	3.5	54.5
LSD	p> 0.05			24.0	17.7	14.5	9.4	0.4	25.7

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	Rate	Application	Cooperator	Total Yield (cwt/a)	Total Marketable (>4oz) %	Unusable %	< 4oz %	4-6oz %	6-10oz %	10 oz + %	Hollow Heart %	Internal Defects %
Non-treated	-	-	Control	391.6	76.2	15.4	8.4	16.3	28.5	31.4	0.0	0.0
Confidential				442.0	73.1	14.0	12.9	22.8	28.0	22.3	0.9	0.9
Confidential				413.6	70.7	14.8	14.5	16.3	31.5	22.9	0.6	0.6
Confidential				456.3	67.9	18.5	13.6	15.2	31.8	20.9	0.6	0.6
Confidential				476.6	67.0	17.9	15.0	20.7	29.0	17.3	0.0	0.0
Confidential				419.6	69.7	18.8	11.5	18.5	29.7	21.5	0.0	0.0
Vertisan EC	0.7 fl oz / 1000 row ft	In-furrow	DuPont	430.5	68.3	19.4	12.3	18.2	24.0	26.1	0.0	0.0
Vertisan EC	1.15 fl oz / 1000 row ft	In-furrow	DuPont	416.4	69.4	19.2	11.3	19.3	29.8	20.3	1.6	1.6
Vertisan EC	1.6 fl oz / 1000 row ft	In-furrow	DuPont	451.4	69.2	20.6	10.2	21.7	32.2	15.3	0.4	0.4
Fontelis + Dithane F45	0.15 fl oz / cwt + 0.9 fl oz / cwt	Seed	DuPont	437.4	63.4	23.4	13.2	22.1	26.5	14.8	1.8	1.8
Fontelis + Dithane F45	0.3 fl oz / cwt + 0.9 fl oz / cwt	Seed	DuPont	404.9	81.5	5.0	13.6	20.9	31.1	29.5	0.0	0.0
Fir Bark	0.5 lb / cwt	Seed	BCS	446.2	74.6	12.6	12.9	28.1	21.9	24.6	1.4	1.4
Ernesto Silver + Fir Bark	0.31 fl oz / cwt + 0.5 lb / cwt	Seed	BCS	385.4	88.7	1.5	9.8	30.0	32.3	26.4	0.0	0.0
Admire Pro	8.7 fl oz / a	In-furrow										
Ernesto Silver + Fir Bark	0.31 fl oz / cwt + 0.5 lb / cwt	Seed										
EverGol Prime + Admire Pro	0.41 fl oz / 1000 row ft + 8.7 fl oz / a	In-furrow	BCS	432.8	72.8	13.5	13.7	30.1	24.6	18.1	1.8	1.8
WE1042-2	1 lb / cwt	Seed	WE	454.1	71.5	14.7	13.8	23.0	29.8	18.7	0.5	0.5
WE1043-1	1 lb / cwt	Seed	WE	431.2	77.6	9.3	13.1	27.0	29.9	20.7	0.7	0.7
WE1224-1	1 lb / cwt	Seed	WE	444.8	69.6	12.8	17.7	21.8	34.2	13.6	2.5	2.5
WE1044-1	1 lb / cwt	Seed	WE	440.6	68.7	15.8	15.5	21.3	30.7	16.7	3.9	3.9
Maxim 4FS + WE1042-2	0.08 fl oz / cwt + 1 lb / cw	Seed	WE	427.5	63.2	19.9	17.0	28.3	22.3	12.6	0.7	0.7

	Rate	Application	Cooperator	Total Yield (cwt/a)	Total Marketable (>4oz) %	Unusable %	< 4oz %	4-6oz %	6-10oz %	10 oz + %	Hollow Heart %	Internal Defects %
Penthiopyrad	0.5 g ai / cwt	Seed	Sumitomocorp	419.7	66.2	18.4	15.4	25.9	19.3	21.0	0.0	0.0
Penthiopyrad	1 g ai / cwt	Seed	Sumitomocorp	462.1	67.7	17.6	14.6	22.4	28.9	16.4	0.0	0.0
Penthiopyrad	2.5 g ai / cwt	Seed	Sumitomocorp	443.2	69.1	17.2	13.7	18.9	34.5	15.7	0.6	0.6
Penthiopyrad	5 g ai / cwt	Seed	Sumitomocorp	409.1	73.7	14.6	11.8	27.4	31.4	14.9	0.3	0.3
Penthiopyrad	14 g ai / cwt	Seed	Sumitomocorp	431.3	66.8	22.8	10.4	24.0	30.8	12.0	1.2	1.2
Maxim 4FS	0.08 fl oz / cwt	Seed	Control	426.7	75.0	13.1	11.9	19.9	35.2	19.9	0.9	0.9
Maxim 4FS	0.08 fl oz / cwt	Seed In-furrow	Control	425.5	69.6	18.0	12.4	25.4	23.7	20.5	0.0	0.0
Quadris	0.8 fl oz / 1000 row ft		Control	434.2	75.0	16.3	8.8	15.4	32.5	27.1	1.2	1.2
Quadris	0.8 fl oz / 1000 row ft	In-furrow	Control	434.2	75.0	16.3	8.8	15.4	32.5	27.1	1.2	1.2
Maxim MZ	8 oz / cwt	Seed	Control	447.5	80.4	8.4	11.2	20.9	36.0	23.5	0.0	0.0
Maxim Mz	8 oz / cwt	Seed	Control	436.8	81.5	7.0	11.5	27.6	34.2	19.7	0.5	0.5
Quadris	0.8 fl oz / 1000 row ft	In-furrow	Control	436.8	81.5	7.0	11.5	27.6	34.2	19.7	0.5	0.5
Moncut	0.79 oz / 1000 row ft	In-furrow	Control	408.6	76.0	15.7	8.3	17.9	26.1	32.0	2.3	2.3
Moncoat MZ	1 lb / cwt	Seed	Control	423.2	80.8	8.2	11.1	17.9	34.0	28.9	6.6	6.6
6% Mancozeb	1 lb / cwt	Seed	Control	434.7	66.8	22.8	10.4	19.9	31.6	15.3	7.0	7.0
LSD _{p> 0.05}				NS								