

2014 Standard Seed Treatment (2700 Series)

Location: Inkster, ND
Plot design: 2 rows X 30 ft. X 4 reps; RCBD
Planting date: June 6, 2014
Row width: 36 inches
Plant spacing: 14 inches
Cultivar: Russet Burbank
Fertilizer: Broadcast: 61#N, 200#K, 30#S, 1.5#B; May 17
Starter: 29#N, 100#P; June 6
Sidedress: 70#N; June 16
Herbicide: Prowl (2 pts/a) + Sencor (0.5 lb/a) + Matrix (1.5 oz/a); June 16
Insecticide: Admire Pro (8.7 oz/a); IF at plant
Coragen (5 oz/a); July 28
Asana (9 oz/a); August 8
Blackhawk (3.3 oz/a); August 27

In-furrow appl. method: In-furrow treatments applied using a planter-mounted CO₂ sprayer with single nozzle directed at seed piece (6501 tips, 8 GPA).

Fungicide application dates:

July 11	Manzate (2 lbs/a)
July 17	Echo Zn (2.125 pt/a)
July 25	Headline (9 oz/a) + Manzate (2 lbs/a)
July 30	Echo Zn (2.125 pt/a)
August 5	Manzate (2 lbs/a)
August 12	Echo Zn (2.125 pt/a)
August 22	Scala (7 oz/a) + Manzate (2 lbs/a)
August 27	Initiate 720 (1.5 pt/a)
Sept. 2	Manzate (2 lbs/a)

Vinekill: Hard Frost; October 4
Harvest: October 20, 23
Grade: November 4 - 5
Post-harvest tuber evaluation: December 31 – January 2 (72 - 74 DAH)

Stand: Number emerged of 25 planted: June 26, July 1, July 8 (20, 25, 32 DAP)

Data: Field ratings: July 15 (39 DAP)

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

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

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

% Stems girdled: % of stems girdled with Rhizoctonia

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

% Stolons girdled: % of stolons girdled with Rhizoctonia

Yield: total yield in hundredweight (cwt)

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

Post-harvest tuber evaluation: 25 tuber sample from each treatment of each rep rated for % rhizoc of tuber surface.

2014 Standard Seed Treatment
Inkster Series 2700

Treatment		Rate	Schedule
2701	Non-treated	-	-
2702	Spirato 480 FS	0.08 fl oz / cwt	Seed
2703	ST-Methly 540 FS Spirato 480 FS	0.35 fl oz / cwt + 0.08 fl oz / cwt	Seed
2704	ST-Methly 540 FS Spirato 480 FS	0.5 fl oz / cwt + 0.08 fl oz / cwt	Seed
2705	ST-Methly 540 FS Spirato 480 FS	0.7 fl oz / cwt + 0.08 fl oz / cwt	Seed
2706	Maxim 4 FS	0.08 fl oz / cwt	Seed
2707	WE1042-2	1 lb /cwt	Seed
2708	WE1043-1	1 lb /cwt	Seed
2709	Maxim 4 FS + WE 1052-1	0.08 fl oz / cwt + 800 ml/ 100 L	Seed
2710	Maxim 4 FS + WE 1042-2	0.08 fl oz / cwt + 1 lb /cwt	Seed
2711	Ernesto Silver + WE 1042-2	0.3 fl oz/ cwt + 1 lb /cwt	Seed
2712	Priaxor	8.1 fl oz/ A	In-furrow
2713	Priaxor + OR 079	8.1 fl oz/ A + 16 oz/A	In-furrow
2714	Priaxor + OR 079	8.1 fl oz/ A + 32 oz/A	In-furrow
2715	OR 079	16 oz/A	In-furrow
2716	OR 079	32 oz/A	In-furrow
2717	Maxim 4 FS + Quadris	0.08 fl oz/cwt + 9 fl oz/A	Seed In-furrow
2718	Moncut	0.79 oz/1000 row feet	In-furrow
2719	6% Mancozeb	1 lb /cwt	Seed

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Rep IV

Tower 4

2710	2716	2704	2715	2718	2717	2707	2719	2706	2713	2708	2705	2702	2712	2703	2701	2711	2709	2714
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Rep III

2706	2714	2705	2719	2709	2713	2712	2702	2718	2707	2710	2704	2715	2701	2717	2708	2716	2703	2711
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Rep II

2716	2712	2702	2704	2711	2708	2718	2715	2701	2709	2703	2714	2713	2719	2710	2707	2706	2717	2705
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Rep I

2715	2709	2710	2701	2714	2706	2703	2717	2705	2719	2704	2716	2707	2711	2718	2702	2712	2708	2713
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Tower 3

2014 Standard Seed Treatment Inkster Series 2700

Treatment		Rate	Schedule	26-Jun	1-Jul	8-Jul
2701	Non-treated	-	-	23.9	23.6	22.5
2702	Spirato 480 FS	0.08 fl oz / cwt	Seed	24.1	24.1	22.8
2703	ST-Methly 540 FS Spirato 480 FS	0.35 fl oz / cwt + 0.08 fl oz / cwt	Seed	24.3	24.6	23.0
2704	ST-Methly 540 FS Spirato 480 FS	0.5 fl oz / cwt + 0.08 fl oz / cwt	Seed	23.9	24.6	23.3
2705	ST-Methly 540 FS Spirato 480 FS	0.7 fl oz / cwt + 0.08 fl oz / cwt	Seed	24.1	23.5	22.3
2706	Maxim 4 FS	0.08 fl oz / cwt	Seed	24.0	24.1	23.3
2707	WE1042-2	1 lb /cwt	Seed	24.0	24.0	23.3
2708	WE1043-1	1 lb /cwt	Seed	24.4	24.3	23.5
2709	Maxim 4 FS + WE 1052-1	0.08 fl oz / cwt + 800 ml/ 100 L	Seed	24.1	24.1	22.5
2710	Maxim 4 FS + WE 1042-2	0.08 fl oz / cwt + 1 lb /cwt	Seed	24.3	23.6	22.0
2711	Emesto Silver + WE 1042-2	0.3 fl oz/ cwt + 1 lb /cwt	Seed	24.5	24.4	23.4
2712	Priaxor	8.1 fl oz/ A	In-furrow	24.5	24.1	22.8
2713	Priaxor + OR 079	8.1 fl oz/ A + 16 oz/A	In-furrow	24.6	24.5	23.0
2714	Priaxor + OR 079	8.1 fl oz/ A + 32 oz/A	In-furrow	24.8	24.5	22.5
2715	OR 079	16 oz/A	In-furrow	23.6	23.0	21.5
2716	OR 079	32 oz/A	In-furrow	22.9	23.4	21.8
2717	Maxim 4 FS + Quadris	0.08 fl oz/cwt + 9 fl oz/A	Seed In-furrow	24.0	24.9	22.3
2718	Moncut	0.79 oz/1000 row feet	In-furrow	24.9	23.5	22.9
2719	6% Mancozeb	1 lb /cwt	Seed	24.5	24.6	23.9
LSD $p > 0.05$				0.98	0.96	NS

2014 Standard Seed Treatment Inkster Series 2700

Treatment		Rate	Schedule	% Stem Rhizoc	% Stem Girdled	% Stolon Rhizoc	% Stolon Girdled	% Decay	Vigor
2701	Non-treated	-	-	39.7	26.0	9.5	6.1	9.8	2.6
2702	Spirato 480 FS	0.08 fl oz / cwt	Seed	20.0	6.1	4.2	2.9	1.5	2.9
2703	ST-Methly 540 FS Spirato 480 FS	0.35 fl oz / cwt + 0.08 fl oz / cwt	Seed	12.5	7.4	2.4	1.4	0.0	2.3
2704	ST-Methly 540 FS Spirato 480 FS	0.5 fl oz / cwt + 0.08 fl oz / cwt	Seed	15.5	3.7	1.6	0.5	5.5	2.9
2705	ST-Methly 540 FS Spirato 480 FS	0.7 fl oz / cwt + 0.08 fl oz / cwt	Seed	18.1	10.7	2.7	1.2	2.3	2.7
2706	Maxim 4 FS	0.08 fl oz / cwt	Seed	15.4	4.7	0.4	0.4	0.0	3.1
2707	WE1042-2	1 lb /cwt	Seed	18.2	8.0	3.8	1.6	0.3	2.8
2708	WE1043-1	1 lb /cwt	Seed	31.1	18.5	7.6	3.4	1.8	2.4
2709	Maxim 4 FS + WE 1052-1	0.08 fl oz / cwt + 800 ml/ 100 L	Seed	8.6	1.3	2.3	1.2	6.0	3.3
2710	Maxim 4 FS + WE 1042-2	0.08 fl oz / cwt + 1 lb /cwt	Seed	25.4	9.2	2.7	1.7	5.5	3.1
2711	Emesto Silver + WE 1042-2	0.3 fl oz/ cwt + 1 lb /cwt	Seed	31.5	0.6	1.2	1.2	7.8	2.4
2712	Priaxor	8.1 fl oz/ A	In-furrow	20.9	8.8	3.6	2.7	5.8	2.6
2713	Priaxor + OR 079	8.1 fl oz/ A + 16 oz/A	In-furrow	23.1	12.4	7.8	5.1	7.5	2.6
2714	Priaxor + OR 079	8.1 fl oz/ A + 32 oz/A	In-furrow	21.4	16.2	2.8	0.8	0.0	2.7
2715	OR 079	16 oz/A	In-furrow	49.7	44.2	10.9	7.6	4.0	2.8
2716	OR 079	32 oz/A	In-furrow	41.5	28.9	19.7	12.8	21.0	2.9
2717	Maxim 4 FS + Quadris	0.08 fl oz/cwt + 9 fl oz/A	Seed In-furrow	11.1	8.0	5.8	2.3	0.5	3.0
2718	Moncut	0.79 oz/1000 row feet	In-furrow	23.9	8.3	3.1	1.9	3.8	2.7
2719	6% Mancozeb	1 lb /cwt	Seed	42.6	24.9	10.0	7.6	6.5	3.1
LSD _{p> 0.05}				18.82	14.25	6.64	4.81	10.64	0.47

2014 Standard Seed Treatment Inkster Series 2700

Treatment		Rate	Schedule	Total Yield (cwt)
2701	Non-treated	-	-	510.6
2702	Spirato 480 FS	0.08 fl oz / cwt	Seed	470.8
2703	ST-Methly 540 FS Spirato 480 FS	0.35 fl oz / cwt + 0.08 fl oz / cwt	Seed	440.3
2704	ST-Methly 540 FS Spirato 480 FS	0.5 fl oz / cwt + 0.08 fl oz / cwt	Seed	493.7
2705	ST-Methly 540 FS Spirato 480 FS	0.7 fl oz / cwt + 0.08 fl oz / cwt	Seed	425.0
2706	Maxim 4 FS	0.08 fl oz / cwt	Seed	531.4
2707	WE1042-2	1 lb /cwt	Seed	492.4
2708	WE1043-1	1 lb /cwt	Seed	490.9
2709	Maxim 4 FS + WE 1052-1	0.08 fl oz / cwt + 800 ml/ 100 L	Seed	471.6
2710	Maxim 4 FS + WE 1042-2	0.08 fl oz / cwt + 1 lb /cwt	Seed	497.1
2711	Eresto Silver + WE 1042-2	0.3 fl oz/ cwt + 1 lb /cwt	Seed	442.5
2712	Priaxor	8.1 fl oz/ A	In-furrow	436.0
2713	Priaxor + OR 079	8.1 fl oz/ A + 16 oz/A	In-furrow	494.1
2714	Priaxor + OR 079	8.1 fl oz/ A + 32 oz/A	In-furrow	448.2
2715	OR 079	16 oz/A	In-furrow	458.5
2716	OR 079	32 oz/A	In-furrow	439.3
2717	Maxim 4 FS + Quadris	0.08 fl oz/cwt + 9 fl oz/A	Seed In-furrow	473.1
2718	Moncut	0.79 oz/1000 row feet	In-furrow	513.3
2719	6% Mancozeb	1 lb /cwt	Seed	501.0
LSD _{p> 0.05}				NS

2014 Standard Seed Treatment Inkster Series 2700

Treatment		Rate	Schedule	% Rhizoc Coverage 72 DAH
2701	Non-treated	-	-	1.63
2702	Spirato 480 FS	0.08 fl oz / cwt	Seed	0.76
2703	ST-Methly 540 FS Spirato 480 FS	0.35 fl oz / cwt + 0.08 fl oz / cwt	Seed	0.09
2704	ST-Methly 540 FS Spirato 480 FS	0.5 fl oz / cwt + 0.08 fl oz / cwt	Seed	0.13
2705	ST-Methly 540 FS Spirato 480 FS	0.7 fl oz / cwt + 0.08 fl oz / cwt	Seed	0.64
2706	Maxim 4 FS	0.08 fl oz / cwt	Seed	0.44
2707	WE1042-2	1 lb /cwt	Seed	0.73
2708	WE1043-1	1 lb /cwt	Seed	2.98
2709	Maxim 4 FS + WE 1052-1	0.08 fl oz / cwt + 800 ml/ 100 L	Seed	0.24
2710	Maxim 4 FS + WE 1042-2	0.08 fl oz / cwt + 1 lb /cwt	Seed	0.05
2711	Emesto Silver + WE 1042-2	0.3 fl oz/ cwt + 1 lb /cwt	Seed	0.49
2712	Priaxor	8.1 fl oz/ A	In-furrow	0.54
2713	Priaxor + OR 079	8.1 fl oz/ A + 16 oz/A	In-furrow	0.94
2714	Priaxor + OR 079	8.1 fl oz/ A + 32 oz/A	In-furrow	0.81
2715	OR 079	16 oz/A	In-furrow	1.16
2716	OR 079	32 oz/A	In-furrow	2.56
2717	Maxim 4 FS + Quadris	0.08 fl oz/cwt + 9 fl oz/A	Seed In-furrow	0.69
2718	Moncut	0.79 oz/1000 row feet	In-furrow	1.36
2719	6% Mancozeb	1 lb /cwt	Seed	1.38
LSD $p > 0.05$				1.16

2014 Standard Seed Treatment - Inkster Series 2700

Treatment		Rate	Application	Total Yield (cwt/a)	Total Marketable (>4oz) %	Unusable %	< 4oz %	4-6oz %	6-10oz %	10 oz + %	Hollow Heart %	Internal Defects %	Specific Gravity
2701	Non-treated	-	-	510.6	75.8	2.4	21.9	25.6	31.1	19.1	0.0	0.0	1.0899
2702	Spirato 480 FS	0.08 fl oz / cwt	Seed	470.8	62.3	7.6	30.1	26.8	27.3	8.2	6.9	0.0	1.0880
2703	ST-Methly 540 FS Spirato 480 FS	0.35 fl oz / cwt + 0.08 fl oz / cwt	Seed	440.3	66.8	3.9	29.3	37.5	23.4	5.9	1.9	0.0	1.0950
2704	ST-Methly 540 FS Spirato 480 FS	0.5 fl oz / cwt + 0.08 fl oz / cwt	Seed	493.7	68.0	2.8	29.2	31.6	27.7	8.7	0.6	1.0	1.0876
2705	ST-Methly 540 FS Spirato 480 FS	0.7 fl oz / cwt + 0.08 fl oz / cwt	Seed	425.0	56.5	5.0	38.5	22.6	26.6	7.3	4.5	0.0	1.0905
2706	Maxim 4 FS	0.08 fl oz / cwt	Seed	531.4	70.1	4.9	25.1	30.3	30.1	9.7	3.5	0.0	1.0908
2707	WE1042-2	1 lb /cwt	Seed	492.4	70.2	7.5	22.3	29.2	33.4	7.6	6.0	0.0	1.0895
2708	WE1043-1	1 lb /cwt	Seed	490.9	75.2	4.8	20.0	23.5	31.9	19.8	3.2	0.0	1.0893
2709	Maxim 4 FS + WE 1052-1	0.08 fl oz / cwt + 800 ml/ 100 L	Seed	471.6	67.0	2.8	30.2	34.2	27.4	5.4	2.0	0.0	1.0927
2710	Maxim 4 FS + WE 1042-2	0.08 fl oz / cwt + 1 lb /cwt	Seed	497.1	72.6	4.4	22.9	27.5	30.7	14.4	2.1	0.0	1.0958
2711	Ernesto Silver + WE 1042-2	0.3 fl oz/ cwt + 1 lb /cwt	Seed	442.5	75.5	5.0	19.5	31.6	33.1	10.8	3.8	0.0	1.0896
2712	Priaxor	8.1 fl oz/ A	In-furrow	436.0	76.3	2.7	21.1	27.9	30.6	17.8	1.4	0.0	1.0896
2713	Priaxor + OR 079	8.1 fl oz/ A + 16 oz/A	In-furrow	494.1	75.0	7.8	17.2	26.8	30.9	17.3	6.4	0.0	1.0851
2714	Priaxor + OR 079	8.1 fl oz/ A + 32 oz/A	In-furrow	448.2	74.2	5.4	20.4	25.7	32.9	15.6	2.9	0.0	1.0879
2715	OR 079	16 oz/A	In-furrow	458.5	65.5	15.9	18.5	21.0	25.0	19.5	14.4	0.0	1.0859
2716	OR 079	32 oz/A	In-furrow	439.3	66.8	10.7	22.6	25.1	26.6	15.1	2.5	0.0	1.0888
2717	Maxim 4 FS + Quadris	0.08 fl oz/cwt + 9 fl oz/A	Seed In-furrow	473.1	61.5	3.5	34.9	27.7	20.8	13.0	2.7	0.0	1.0875
2718	Moncut	0.79 oz/1000 row feet	In-furrow	513.3	81.7	3.0	15.3	28.6	38.6	14.5	0.9	0.0	1.0874
2719	6% Mancozeb	1 lb /cwt	Seed	501.0	70.8	4.1	25.1	23.5	34.3	13.0	2.3	0.9	1.0933

LSD_P = 0.05

NS

2014 Standard Seed Treatment - Inkster Series 2700

Treatment	Rate	Application	Total Yield (cwt/a)	Total Marketable (>4oz) %	Unusable %	< 4oz %	4-6oz %	6-10oz %	10 oz + %	Hollow Heart %	Internal Defects %	Specific Gravity
2701 Non-treated	-	-	510.6	75.8	2.4	21.9	25.6	31.1	19.1	0.0	0.0	1.0899
2702 Spirato 480 FS	0.08 fl oz / cwt	Seed	470.8	62.3	7.6	30.1	26.8	27.3	8.2	6.9	0.0	1.0880
2703 ST-Methly 540 FS	0.35 fl oz / cwt +	Seed	440.3	66.8	3.9	29.3	37.5	23.4	5.9	1.9	0.0	1.0950
	Spirato 480 FS 0.08 fl oz / cwt											
2704 ST-Methly 540 FS	0.5 fl oz / cwt +	Seed	493.7	68.0	2.8	29.2	31.6	27.7	8.7	0.6	1.0	1.0876
	Spirato 480 FS 0.08 fl oz / cwt											
2705 ST-Methly 540 FS	0.7 fl oz / cwt +	Seed	425.0	56.5	5.0	38.5	22.6	26.6	7.3	4.5	0.0	1.0905
	Spirato 480 FS 0.08 fl oz / cwt											
2706 Maxim 4 FS	0.08 fl oz / cwt	Seed	531.4	70.1	4.9	25.1	30.3	30.1	9.7	3.5	0.0	1.0908
2707 WE1042-2	1 lb /cwt	Seed	492.4	70.2	7.5	22.3	29.2	33.4	7.6	6.0	0.0	1.0895
2708 WE1043-1	1 lb /cwt	Seed	490.9	75.2	4.8	20.0	23.5	31.9	19.8	3.2	0.0	1.0893
2709 Maxim 4 FS +	0.08 fl oz / cwt +	Seed	471.6	67.0	2.8	30.2	34.2	27.4	5.4	2.0	0.0	1.0927
	WE 1052-1 800 ml/ 100 L											
2710 Maxim 4 FS +	0.08 fl oz / cwt +	Seed	497.1	72.6	4.4	22.9	27.5	30.7	14.4	2.1	0.0	1.0958
	WE 1042-2 1 lb /cwt											
2711 Ernesto Silver +	0.3 fl oz/ cwt +	Seed	442.5	75.5	5.0	19.5	31.6	33.1	10.8	3.8	0.0	1.0896
	WE 1042-2 1 lb /cwt											
2712 Priaxor	8.1 fl oz/ A	In-furrow	436.0	76.3	2.7	21.1	27.9	30.6	17.8	1.4	0.0	1.0896
2713 Priaxor +	8.1 fl oz/ A +	In-furrow	494.1	75.0	7.8	17.2	26.8	30.9	17.3	6.4	0.0	1.0851
	OR 079 16 oz/A											
2714 Priaxor +	8.1 fl oz/ A +	In-furrow	448.2	74.2	5.4	20.4	25.7	32.9	15.6	2.9	0.0	1.0879
	OR 079 32 oz/A											
2715 OR 079	16 oz/A	In-furrow	458.5	65.5	15.9	18.5	21.0	25.0	19.5	14.4	0.0	1.0859
2716 OR 079	32 oz/A	In-furrow	439.3	66.8	10.7	22.6	25.1	26.6	15.1	2.5	0.0	1.0888
2717 Maxim 4 FS +	0.08 fl oz/cwt +	Seed	473.1	61.5	3.5	34.9	27.7	20.8	13.0	2.7	0.0	1.0875
	Quadris 9 fl oz/A	In-furrow										
2718 Moncut	0.79 oz/1000 row feet	In-furrow	513.3	81.7	3.0	15.3	28.6	38.6	14.5	0.9	0.0	1.0874
2719 6% Mancozeb	1 lb /cwt	Seed	501.0	70.8	4.1	25.1	23.5	34.3	13.0	2.3	0.9	1.0933
LSD _{P=0.05}			NS									