

## Seed Treatment (2100 Series)

**Location:** Tappen, ND  
**Plot design:** 2 row X 25 feet X 4 replications; RCBD

**Planting date:** May 15, 2003  
**Row width:** 36 inches  
**Seed spacing:** 12 inches  
**Soil Temperature:** 63F

**Cultivar:** Red Norland (2 cut sides)

**Fertilizer:** Pre-plant Incorporated: 14# N, 65# P, 300# K  
Banded Starter: 58# N, 159# P, 23# S  
Sidedress: 71# N, 21# S; June 4  
Foliar: 15# N; July 7, 14, 21, 28

**Herbicide:** Prowl (2 pt/a) + Matrix (1.5 oz/a); June 9

**Insecticide:** Platinum in-furrow (8 oz/a)

**Fungicide application dates:** June 30 – Dithane (2.0 lb/a)  
July 7 – Dithane  
July 14 – Echo Zn (2.0 pt/a)  
July 21 – Polyram (2.0 lb/a)  
July28 – Echo Zn  
August 4 – Dithane  
August 11 – Echo Zn  
August 18 – Echo Zn

**Data collection dates:** Stand count: 6-26-03; 42 Days After Planting  
Rhizoctonia evaluation: 7-8-03; 54 Days After Planting  
Tuber number and size: 8-14-03; 92 Days After Planting

**Vinekill:** Rotobeat, August 20: Reglone (2.0 pt/a) August 25

**Harvest:** September 23

**Grade:** September 29

## Seed Treatment - Tappen Series 2100

### Rhizoctonia Evaluation - 54 Days After Planting

Treatment	Rate	Timing	stand (42 DAP)	stems /plant	# stems w/ rhizoc	% stems w/ rhizoc	# stems girdled	% stems girdled	stolons /plant	# stolons w/ rhizoc	% stolons w/ rhizoc	# stolons girdled	% stolons girdled	vigor (1-4)	seed decay (%)
2101 Untreated	0	-	23.2	3.7	1.0	0.4	0.2	0.1	20.0	1.3	0.1	0.7	0.0	3.6	100.0
2102 Dustret A	1.0 lb/cwt	cut seed	21.9	3.8	0.7	0.2	0.1	0.0	21.5	1.0	0.1	0.3	0.0	3.8	93.0
2103 Dustret MZ16	0.5 lb/cwt	cut seed	21.1	4.3	0.7	0.2	0.2	0.1	22.0	0.6	0.1	0.4	0.0	3.8	89.0
2104 Symbex	2.0 qt/a	in-furrow at plant	22.6	3.9	1.2	0.4	0.4	0.1	20.1	1.7	0.1	1.1	0.1	3.6	94.0
Vigor-Cal Phos +	2.0 qt/a +	foliar at													
Spraytech Oil	1.0 pt/a	tuber initiation													
2105 Nubark M500 Plus	1.0 lb/cwt	cut seed	21.0	4.2	1.2	0.3	0.2	0.0	23.4	2.1	0.1	1.1	0.0	3.9	92.5
2106 Nubark M500 (1500)	1.0 lb/cwt	cut seed	19.4	3.7	0.8	0.2	0.4	0.1	20.0	1.2	0.1	1.0	0.0	3.9	91.5
2107 Nubark 510 M500	1.0 lb/cwt	cut seed	17.8	3.6	1.0	0.3	0.2	0.0	20.4	0.7	0.0	0.4	0.0	3.6	75.0
2108 Nubark M	1.0 lb/cwt	cut seed	19.9	3.1	0.5	0.2	0.0	0.0	18.7	0.3	0.0	0.1	0.0	3.7	86.5
2109 Bio-Seed-Gard + Douglas Firbark + SP-1	2.0 oz/cwt + 4.0 oz/cwt + 0.5 gal/cwt	cut seed	17.8	4.0	0.5	0.2	0.2	0.1	21.5	0.7	0.0	0.4	0.0	3.7	100.0
2110 PCC-1	0.5 lb/cwt	cut seed	20.8	4.4	0.6	0.1	0.0	0.0	24.3	0.2	0.0	0.1	0.0	4.0	94.5
2111 PCC-3	0.5 lb/cwt	cut seed	21.5	3.8	0.5	0.1	0.1	0.0	21.2	1.0	0.0	0.2	0.0	3.8	79.0
2112 PCC-4A + 4B	0.022 lb/cwt + 0.75 lb/cwt	cut seed	19.1	3.7	0.5	0.2	0.1	0.0	20.3	0.4	0.0	0.1	0.0	3.6	92.5
2113 Tops Mz	0.75 lb/cwt	cut seed	20.3	3.9	0.6	0.2	0.1	0.0	22.1	0.6	0.0	0.2	0.0	3.8	83.0
2114 Maxim Mz	0.5 lb/cwt	cut seed	23.0	4.6	0.5	0.1	0.2	0.0	23.6	0.6	0.0	0.4	0.0	3.9	71.8
2115 Moncoat Mz	1.0 lb/cwt	cut seed	21.7	4.3	0.5	0.1	0.1	0.0	24.0	0.5	0.0	0.1	0.0	3.8	78.3
2116 PST6	1.0 lb/cwt	cut seed	22.5	3.9	1.2	0.4	0.5	0.1	20.8	1.0	0.1	0.6	0.0	3.6	93.3
2117 PST6 + Quadris	1.0 lb/cwt + 6.0 oz/a	cut seed in-furrow at plant	22.4	3.9	0.7	0.2	0.2	0.0	20.5	0.6	0.0	0.4	0.0	3.7	84.0
2118 Quadris	6.0 oz/a	in-furrow at plant	21.0	3.9	0.6	0.1	0.2	0.0	21.4	0.5	0.0	0.4	0.0	3.8	97.0
2119 PST6 + Moncut	1.0 lb/cwt + 0.79 oz/1000 row ft	cut seed in-furrow at plant	21.3	3.9	0.7	0.2	0.0	0.0	22.5	0.4	0.0	0.1	0.0	3.8	93.5
2120 Moncut	0.79 oz/1000 row ft	in-furrow at plant	20.5	3.6	0.8	0.2	0.2	0.0	20.1	1.0	0.1	0.5	0.0	3.6	95.0
LSD <sub>P=0.05</sub>			2.6	NS	NS	0.2	NS	NS	NS	1.0	0.1	NS	0.04	NS	16.9

Seed Treatment - Tappen Series 2100  
Tuber Evaluation - 92 Days After Planting

Treatment	Rate	Timing	vigor (1-4)	tuber #	# tubers > 3 oz.
2101 Untreated	0	-	3.9	11.6	7.1
2102 Dustret A	1.0 lb/cwt	cut seed	4.0	11.2	6.9
2103 Dustret MZ16	0.5 lb/cwt	cut seed	3.8	10.1	6.1
2104 Symbex Vigor-Cal Phos + Spraytech Oil	2.0 qt/a 2.0 qt/a + 1.0 pt/a	in-furrow at plant foliar at tuber initiation	3.7	11.4	6.5
2105 Nubark M500 Plus	1.0 lb/cwt	cut seed	3.7	10.8	6.4
2106 Nubark M500 (1500)	1.0 lb/cwt	cut seed	3.7	9.3	6.3
2107 Nubark 510 M500	1.0 lb/cwt	cut seed	3.9	9.7	6.4
2108 Nubark M	1.0 lb/cwt	cut seed	3.7	9.8	7.9
2109 Bio-Seed-Gard + Douglas Firbark + SP-1	2.0 oz/cwt + 4.0 oz/cwt + 0.5 gal/cwt	cut seed	3.9	12.7	7.8
2110 PCC-1	0.5 lb/cwt	cut seed	3.8	9.7	6.7
2111 PCC-3	0.5 lb/cwt	cut seed	3.9	11.6	8.2
2112 PCC-4A + 4B	0.022 lb/cwt + 0.75 lb/cwt	cut seed	3.7	9.9	7.1
2113 Tops Mz	0.75 lb/cwt	cut seed	3.8	10.0	7.1
2114 Maxim Mz	0.5 lb/cwt	cut seed	4.0	12.3	7.1
2115 Moncoat Mz	1.0 lb/cwt	cut seed	3.9	10.5	7.0
2116 PST6	1.0 lb/cwt	cut seed	3.8	10.7	7.3
2117 PST6 + Quadris	1.0 lb/cwt + 6.0 oz/a	cut seed in-furrow at plant	3.6	9.5	5.4
2118 Quadris	6.0 oz/a	in-furrow at plant	3.9	9.7	7.1
2119 PST6 + Moncut	1.0 lb/cwt + 0.79 oz/1000 row ft	cut seed in-furrow at plant	3.8	9.5	6.9
2120 Moncut	0.79 oz/1000 row ft	in-furrow at plant	3.6	9.0	5.7
LSD <sub>P=0.05</sub>			NS	NS	NS

## Seed Treatment - Tappen Series 2100 Yield and Grade

Treatment	Rate	Timing	Total Yield (cwt/a)	Market Yield (cwt/a)	<1 7/8 in (cwt/a)	>4 1/2 in (cwt/a)
2101 Untreated	0	-	449.3	393.1	56.2	0.0
2102 Dustret A	1.0 lb/cwt	cut seed	436.6	386.7	49.9	0.0
2103 Dustret MZ16	0.5 lb/cwt	cut seed	365.9	325.0	40.9	0.0
2104 Symbex Vigor-Cal Phos + Spraytech Oil	2.0 qt/a 2.0 qt/a + 1.0 pt/a	in-furrow at plant foliar at tuber initiation	400.1	350.3	49.8	0.0
2105 Nubark M500 Plus	1.0 lb/cwt	cut seed	399.8	346.8	53.0	0.0
2106 Nubark M500 (1500)	1.0 lb/cwt	cut seed	398.3	353.7	44.5	0.0
2107 Nubark 510 M500	1.0 lb/cwt	cut seed	317.1	274.7	42.3	0.0
2108 Nubark M	1.0 lb/cwt	cut seed	398.6	355.8	42.7	0.0
2109 Bio-Seed-Gard + Douglas Firbark + SP-1	2.0 oz/cwt + 4.0 oz/cwt + 0.5 gal/cwt	cut seed	330.6	283.4	47.2	0.0
2110 PCC-1	0.5 lb/cwt	cut seed	390.6	343.1	47.4	0.0
2111 PCC-3	0.5 lb/cwt	cut seed	421.9	373.0	48.9	0.0
2112 PCC-4A + 4B	0.022 lb/cwt + 0.75 lb/cwt	cut seed	394.2	350.6	43.5	0.0
2113 Tops Mz	0.75 lb/cwt	cut seed	358.6	326.5	32.1	0.0
2114 Maxim Mz	0.5 lb/cwt	cut seed	406.9	341.7	65.2	0.0
2115 Moncoat Mz	1.0 lb/cwt	cut seed	419.9	365.7	54.2	0.0
2116 PST6	1.0 lb/cwt	cut seed	419.6	362.5	57.1	0.0
2117 PST6 + Quadris	1.0 lb/cwt + 6.0 oz/a	cut seed in-furrow at plant	404.9	337.9	67.1	0.0
2118 Quadris	6.0 oz/a	in-furrow at plant	407.8	347.9	59.9	0.0
2119 PST6 + Moncut	1.0 lb/cwt + 0.79 oz/1000 row ft	cut seed in-furrow at plant	372.9	327.7	45.2	0.0
2120 Moncut	0.79 oz/1000 row ft	in-furrow at plant	385.7	333.8	51.8	0.0
LSD <sub>P=0.05</sub>			44.3	45.3	12.3	NS