

Early Blight Foliar Fungicide Standard and Experimental Chemistries (1500 Series)

Location: Tappen, ND
Plot design: 4 rows X 25 feet X 4 replicates; RCBD
All four rows were sprayed; data taken from center two rows

Planting date: May 3, 2003
Row width: 36 inches
Seed spacing: 12 inches
Soil Temperature: 60F

Cultivar: Russet Norkotah

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 15
15# N; July 21

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

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

Inoculation method: Early Blight: Greenhouse reared tomato plants, cv. Orange Pixie, were inoculated with a combination of 10 azoxystrobin reduced sensitive and 10 azoxystrobin sensitive *A. solani* isolates originally isolated from North Dakota. Four pots containing three infected plants each were transplanted into the center two rows of each eight-row plot on **July 3**, following the first fungicide application.

Fungicide application dates: June 30, July 7, 15, 21, 28, August 4, 11, 18, 25, 31

Fungicide application method: Fungicides were applied using a converted ATV.
(55 psi; 73 gpa; 11005XR nozzles)

Vinekill: Rotobeat, September 17

Harvest: September 23

Early Blight Foliar Fungicide Experimental and Standard Chemistries
Tappen Series 1500

NOTE: Treatments 1508-1511 are confidential

Treatment	Rate	Schedule	Early Blight (%Severity)									AUDPC	RAUDPC	Total Yield (cwt/a)
			7/8	7/16	7/22	7/29	8/5	8/18	8/25	9/2	9/9			
1501 Untreated			0.1	0.8	1.6	3.5	14.8	95.6	98.9	100	100	2949.2	0.47	405.4
1502 Bravo Zn	2.0 pt/a	Full Season	0.1	0.6	1.2	2.1	6.4	65.0	87.1	95.6	99.4	2422.6	0.38	454.1
1503 Dithane	2.0 lb/a	Full Season	0.0	0.7	0.8	3.5	9.4	70.0	89.8	97.5	99.9	2546.9	0.40	436.9
1504 Bravo Zn + Dithane	1.125 pt/a + 1.0 lb/a	Full Season	0.1	0.7	1.8	3.4	4.1	50.6	82.2	95.0	99.4	2228.8	0.35	450.0
1505 Reason + Bond Bravo WS	5.5 oz/a + 0.1% v/v 1.0 pt/a	1,3,5,7,9 2,4,6,8,10	0.1	0.4	0.9	1.6	4.9	63.8	91.6	97.2	99.3	2431.9	0.39	425.6
1506 Reason + Bond Bravo WS	8.2 oz/a + 0.1% v/v 1.0 pt/a	1,3,5,7,9 2,4,6,8,10	0.0	1.0	1.7	2.2	6.4	56.3	87.6	98.1	99.9	2367.3	0.38	434.4
1507 Bravo Zn Bravo Zn + Rovral	2.0 pt/a 1.5 pt/a + 1.0 pt/a	1,3,5,7,9 2,4,6,8,10	0.1	0.2	0.9	2.0	3.9	53.8	86.6	94.1	98.2	2256.2	0.36	447.8
1512 Endura + Polyram Headline Polyram	2.5 oz/a + 1.5 lb/a 6.0 oz/a 2.0 lb/a	1,3,5 2,4,6 7-10	0.0	0.5	0.8	0.4	0.8	21.6	63.4	76.3	91.6	1574.4	0.25	481.5
1513 Endura + Polyram Headline Acrobat + Polyram Polyram	2.5 oz/a + 1.5 lb/a 6.0 oz/a 6.4 oz/a + 2.0 lb/a 2.0 lb/a	1,3,5 2 4 6-10	0.1	0.4	0.5	0.6	1.7	29.7	61.6	81.9	94.4	1702.2	0.27	473.2

Treatment	Rate	Schedule	Early Blight (%Severity)									AUDPC	RAUDPC	Total Yield (cwt/a)
			7/8	7/16	7/22	7/29	8/5	8/18	8/25	9/2	9/9			
1514 Echo Zn	2.0 pt/a	1,4,7	0.1	1.0	1.1	1.7	2.7	41.3	73.8	88.6	96.8	1989.6	0.32	466.1
Headline +	6.1 oz/a +	2,5,8												
Polyram	1.0 lb/a													
Endura	4.5 oz/a	3,6,9												
Acrobat +	6.4 oz/a +	10												
Polyram	2.0 lb/a													
1515 Bravo Zn	2.0 pt/a	1,3,5,7,9	0.0	0.3	0.7	1.1	2.5	38.4	77.5	91.4	98.8	2005.9	0.32	467.8
Quadris +	6.2 oz/a +	2,4,6,8,10												
Dithane	1.5 lb/a													
1516 Bravo Zn	2.0 pt/a	1,3,5,7,9	0.1	1.1	0.7	3.2	8.8	71.6	90.3	98.7	100	2569.4	0.41	443.5
Quadris Opti	1.6 pt/a	2,4,6,8,10												
1517 Bravo Zn	2.0 pt/a	1,3,5,7,9	0.1	0.6	0.6	1.9	3.6	50.9	86.9	97.9	99.8	2264.2	0.36	448.2
Amistar	2.0 oz/a	2,4,6,8,10												
1518 Tanos +	4.0 oz/a +	1,3,5,7,9	0.0	0.7	0.8	1.9	2.9	28.8	63.4	82.5	96.5	1748.8	0.28	456.3
Dithane	1.5 lb/a													
Dithane	2.0 lb/a	2,4,6,8,10												
1519 Tanos +	6.0 oz/a +	1,3,5,7,9	0.1	0.3	0.6	1.4	2.4	40.3	70.6	90.4	98.7	1968.7	0.31	452.0
Dithane	1.5 lb/a													
Bravo WS	1.5 pt/a	2,4,6,8,10												
1520 Tanos +	6.0 oz/a +	1,3,5,7,9	0.0	0.7	1.1	1.9	3.2	42.8	73.4	91.3	96.9	2028.2	0.32	449.2
Dithane	1.5 lb/a													
Dithane	2.0 lb/a	2,4,6,8,10												
1521 Tanos +	8.0 oz/a +	1,3,5,7,9	0.1	0.4	0.7	1.2	2.9	46.9	80.5	90.9	97.8	2107.1	0.33	456.3
Dithane	1.5 lb/a													
Bravo WS	1.5 pt/a	2,4,6,8,10												
1522 Tanos +	8.0 oz/a +	1,3,5,7,9	0.2	1.2	1.1	2.0	3.0	41.3	69.4	87.2	97.3	1961.3	0.31	478.3
Dithane	1.5 lb/a													
Dithane	2.0 lb/a	2,4,6,8,10												
1523 KQ667	1.5 lb/a	1,3,5,7,9	0.2	0.3	0.4	1.7	5.5	68.4	94.6	99.4	100	2519.4	0.40	455.5
Bravo WS	1.5 pt/a	2,4,6,8,10												
1524 VigorCal Phos +	2.0 qt/a +	1,3,5,7,9	0.0	0.6	1.2	3.9	17.6	92.6	99.4	100	100	2947.6	0.47	410.7
SprayTech Oil	1.0 pt/a	**14 day**												
LSD _{P=0.05}			NS	0.6	0.7	1.4	3.5	11.1	6.9	4.8	2.1	334.8	0.05	39.8