

2012 Early Blight Standard Foliar Fungicides (1500 Series)

Location: Inkster, ND
Plot design: 4 rows X 30 feet X 4 replicates; RCBD
All four rows were sprayed; data taken from center two rows

Planting date: May 16, 2012
Row width: 36 inches
Seed spacing: 14 inches
Cultivar: Ranger Russet
50% Emergence: June 10

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 1

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

Objective: To determine the efficacy of standard fungicide chemistries and fungicide programs for the control of early blight caused by *Alternaria solani*.

Early blight inoculation method: Four *A. solani* isolates, two containing the F129L mutation and two wild-type were grown under constant light for 2 weeks on CV-8 medium. Conidia were dislodged and diluted in 0.25% gelatin to a concentration of 3.3×10^3 conidia / ml. The conidial suspension was applied to the outside two rows of each four-row plot at a rate of 87 ml / row on the evening of July 23 and 78 ml / row on the evening of August 9 using custom ATV spray equipment.

Treatment application dates: July 3, 10, 17, 27, August 1, 7, 17, 22, 28, Sept. 6

Treatment application method: Fungicides were applied using a converted ATV.
(55 psi; 61 gpa; 11005XR nozzles)

Vinekill: Killing frost, September 22

Harvest: October 30

2012 Early Blight Foliar Standard Fungicides - Inkster Series 1500

Treatments 1506-1509 are confidential.

Treatment		Rate	Schedule	Foliar Disease (% Severity)										AUDPC	RAUDPC	Yield (cwt/a)	
				6/28	7/12	7/18	7/24	7/30	8/6	8/15	8/20	8/27	9/4				
1501	Non-treated	-	-	0.0	0.5	1.2	0.4	1.1	1.5	2.0	2.4	2.8	13.3	24.7	250.7	0.034	473.4
1502	Reason +	4 fl oz / a +	1,3	0.0	0.2	0.4	0.3	0.6	0.6	0.7	0.8	0.7	1.7	2.2	48.1	0.007	487.7
	Bond +	0.1% v/v +															
	Dithane	2 lb / a															
	Echo Zn	1.3 pt / a		2													
	Echo Zn	2.125 pt / a		4,6,8-10													
	Luna Tranquility +	8 fl oz / a +		5													
	Dithane	2 lb / a															
	Scala +	7 fl oz / a +		7													
	Dithane	2 lb / a															
1503	Reason +	6.9 fl oz / a +	1,3	0.0	0.4	0.7	0.4	1.7	2.3	1.7	1.8	2.1	3.3	5.3	117.7	0.016	468.1
	Bond +	0.1% v/v +															
	Dithane	2 lb / a															
	Echo Zn	1.3 pt / a		2													
	Echo Zn	2.125 pt / a		4,6,8-10													
	Luna Tranquility +	8 fl oz / a +		5													
	Dithane	2 lb / a															
	Scala +	7 fl oz / a +		7													
	Dithane	2 lb / a															
1504	Reason +	4 fl oz / a +	1,3	0.0	0.1	0.6	0.3	0.6	0.5	0.7	0.8	0.9	1.6	2.4	48.9	0.007	481.1
	Bond +	0.1% v/v +															
	Dithane	2 lb / a															
	Echo Zn	1.3 pt / a		2													
	Echo Zn	2.125 pt / a		4,6,8-10													
	Scala +	7 fl oz / a +		5													
	Dithane	2 lb / a															
	Luna Tranquility +	8 fl oz / a +		7													
	Dithane	2 lb / a															
1505	Reason +	4 fl oz / a +	1,3	0.0	0.2	0.6	0.3	0.8	1.0	1.3	1.7	1.8	4.4	6.4	103.1	0.014	472.3
	Bond +	0.1% v/v +															
	Dithane	2 lb / a															
	Echo Zn	1.3 pt / a		2													
	Echo Zn	2.125 pt / a		4,6,8-10													
	Scala +	7 fl oz / a +		5													
	Dithane	2 lb / a															
	Luna Tranquility +	11 fl oz / a +		7													
	Dithane	2 lb / a															

1510	Vertisan EC + Activator 90	1 pt / a + 0.25% v/v	1,3,5,7,9 2,4,6,8,10	0.0	0.1	0.4	0.2	0.9	0.8	0.9	0.8	0.8	1.9	2.4	54.3	0.007	482.2
1511	Tanos + Manzate	6 oz / a + 1.5 lb / a															
	Vertisan EC + Activator 90	1 pt / a + 0.25% v/v	2,4,6,8,10														
1512	Bravo Zn Manzate	2.125 pt / a 2 lb / a	1,7,9 2,8,10	0.0	0.2	0.3	0.4	0.2	0.3	0.8	0.7	0.8	1.2	1.1	36.8	0.005	487.0
	Tanos + Manzate	6 oz / a + 1.5 lb / a	3,5														
	Endura + Manzate	3 oz / a 1.5 lb / a	4,6														
1513	Approach Vertisan EC + Activator 90	9 fl oz / a 1 pt / a + 0.25% v/v	1,3,5,7,9 2,4,6,8,10	0.0	0.3	1.3	0.3	1.2	1.1	1.1	2.0	2.3	4.3	6.8	116.3	0.016	478.9
1514	Bravo Zn Priaxor	2.125 pt / a 4 fl oz / a	1,3,4,6,8-10 2,5,7	0.0	0.1	0.6	0.4	0.5	0.5	0.6	0.9	0.7	1.8	2.8	50.6	0.007	491.2
1515	Bravo Zn Cabrio Plus	2.125 pt / a 2 lb / a	1,3,4,6,8-10 2,5,7	0.0	0.2	1.7	0.2	1.2	1.4	1.3	1.2	1.3	2.1	2.3	79.5	0.011	472.2
1516	Headline + Manzate Quash + Manzate Bravo Zn	9 oz/a + 1.5 lb / a 2.5 oz/a + 1.5 lb / a 2.125 pt / a	1 3,5	0.0	0.2	0.3	0.2	0.6	0.7	0.8	1.0	1.1	4.7	6.4	86.0	0.011	490.9
1517	Headline + Manzate Bravo Zn Quash + Manzate	9 oz/a + 1.5 lb / a 2.125 pt / a 2.5 oz/a + 1.5 lb / a	1 2,3,4,6,8,9,10 5,7	0.0	0.1	0.6	0.2	0.8	1.1	1.4	1.3	1.7	2.3	3.3	75.6	0.012	480.2
1518	Headline + Manzate Bravo Zn Quash + Manzate	9 oz/a + 1.5 lb / a 2.125 pt / a 2.5 oz/a + 1.5 lb / a	1 2,3,4,5,6,8,10 7,9	0.0	0.2	0.2	0.2	0.7	0.6	1.0	0.9	0.9	2.7	4.0	63.2	0.010	466.2
1519	Headline + Manzate Bravo Zn Quash + Manzate	9 oz/a + 1.5 lb / a 2.125 pt / a 2.5 oz/a + 1.5 lb / a	1 5	0.0	0.3	0.8	0.3	1.0	1.1	1.0	1.1	1.6	2.6	4.4	81.3	0.009	469.4

	Scala + Manzate	7 fl oz / a + 2 lb / a	9														
1520	Echo Zn	2.125 pt / a	Full season	0.0	0.1	0.4	0.3	0.8	0.8	1.2	1.1	1.0	3.5	7.5	85.2	0.011	468.1
1521	Manzate	2 lb / a	Full season	0.0	0.2	0.6	0.3	0.7	1.0	1.4	1.4	2.1	6.8	8.8	127.6	0.012	474.0
1522	Headline + Manzate	6.0 fl oz / a + 2.0 lb / a	1	0.0	0.1	0.5	0.2	0.6	0.5	0.4	0.5	0.5	3.0	4.0	57.2	0.017	472.4
	Bravo Zn	2.125 pt / a	2,3,4,6,7,8,10														
	Endura + Manzate	2.5 oz / a + 2.0 lb / a	5														
	Scala + Manzate	7.0 fl oz / a + 2.0 lb / a	9														
LSD _{P = 0.05}				NS	0.1	0.5	NS	0.6	0.5	0.6	0.6	0.6	2.5	3.8	46.9	0.006	NS