

## 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 12, 2010  
**Row width:** 36 inches  
**Seed spacing:** 14 inches
- Cultivar:** Ranger Russet  
**50% Emergence:** June 6
- Herbicide:** Prowl (2.0 pt/a) + Matrix (1.0 oz/a) + Sencor (0.5 lb/a); June 2
- Fertilizer:** Broadcast: 61#N, 200#K, 30#S; April 27  
Starter: 29#N, 100#P; May 12  
Fertigation: 20#N; July 7, 16, 29
- Insecticide:** Admire Pro (8.7 oz/a) + Ultra Flourish (12.2 oz/a); in furrow at plant  
Kaiso (2 oz/a); August 6
- 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:** Eight *A. solani* isolates, four containing the F129L mutation and four wild-type were grown under constant light for 2 to 3 weeks on CV-8 medium. Conidia were dislodged and diluted in 0.25% gelatin to a concentration of  $1.0 \times 10^4$  conidia / ml. The conidial suspension was applied to the outside two rows of each four-row plot at a rate of 102 ml / row on the evening of July 19 using a converted ATV and modified spray equipment.

**Treatment application dates:** June 23, 29, July 7, 16, 21, 28, August 3, 11, 18, 25, September 1

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

<b>Fungicide overspray dates:</b>	July 16	Revus (8 oz/a)
	July 21	Revus (8 oz/a)
	July 28	Presidio (4 oz/a)
	August 3	Presidio (4 oz/a)
	August 11	Revus (8 oz/a) + Curzate (3.2 oz/a)
	August 18	Presidio (4 oz/a) + Curzate (3.2 oz/a)
	August 25	Revus (8 oz/a) + Curzate (3.2 oz/a)

September 1    Presidio (4.0 oz/a)  
September 8    Gavel (2.0 lb/a)  
September 14    Revus Top (7.0 oz/a)

**Vinekill:**                      Reglone (2.0 pt/a) + Ad-Wet 90 Plus (1.0 pt/100 gal);  
September 30  
Rotobeat; October 4

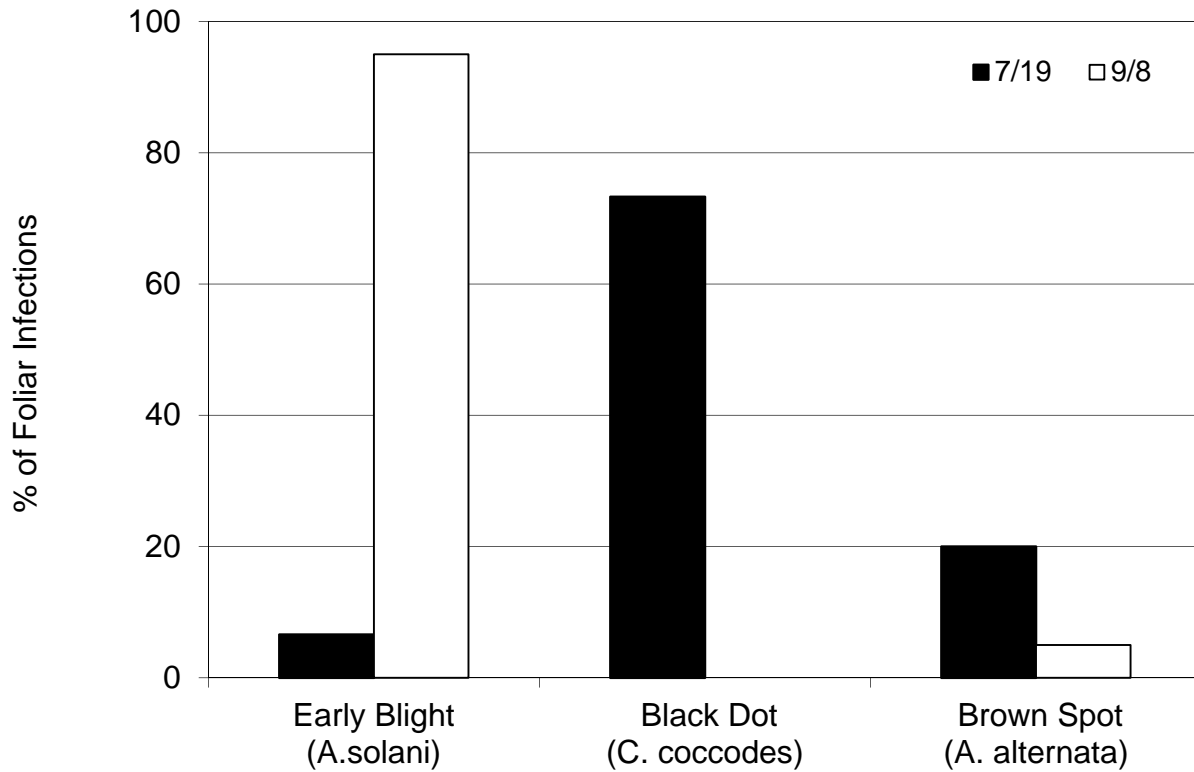
**Harvest:**                      October 5 and 8





Treatment	Rate	Schedule	Foliar Disease (% Severity)													AUDPC	RAUDPC	Total Yield (cwt/a)
			6/23	6/30	7/7	7/13	7/20	7/28	8/3	8/10	8/17	8/24	9/2	9/8				
1511 Echo Zn	1.3 pt / a	1,2	0.0	0.34	2.59	6.2	6.9	9.9	9.6	11.8	13.2	19.9	37.2	59.2	1032.5	0.148	582.0	
Reason +	4 fl oz / a +	3																
Bond +	0.1% v/v +																	
Dithane	1.5 lb / a																	
Echo Zn	2.125 pt / a	4,6,8-11																
Scala +	7 fl oz / a +	5,7																
Dithane	1.5 lb / a																	
1512 Echo Zn	1.3 pt / a	1,2	0.0	0.30	0.65	2.7	2.6	2.7	3.3	5.4	5.1	6.8	13.4	23.6	382.4	0.055	653.9	
Reason +	4 fl oz / a +	3																
Bond +	0.1% v/v +																	
Dithane	1.5 lb / a																	
Echo Zn	2.125 pt / a	4,6,8-11																
Luna Tranquility	11 fl oz / a	5																
Scala +	7 fl oz / a +	7																
Dithane	1.5 lb / a																	
1513 Bravo Zn	2.125 pt / a	1,2,4,6,8-11	0.0	0.51	2.34	6.2	6.1	6.4	6.6	7.7	8.6	11.1	24.0	41.7	698.4	0.100	660.0	
Headline +	6 fl oz / a +	3																
Manzate	2 lb / a																	
Endura +	2.5 oz / a +	5																
Manzate	2 lb / a																	
Scala +	7 fl oz / a +	7																
Manzate	2 lb / a																	
1514 Bravo Zn	2.125 pt / a	1,3,5,7,9-11	0.0	0.34	0.28	0.9	2.0	2.2	2.4	3.3	3.5	3.5	17.5	28.7	348.2	0.050	613.0	
Tanos +	6 oz / a	2,6																
Manzate	2 lb / a																	
Endura +	2.5 oz / a +	4,8																
Manzate	2 lb / a																	
1515 Manzate	2 lb / a	Full season	0.0	0.32	1.51	3.2	3.8	4.8	5.3	6.3	8.8	14.0	27.8	45.3	689.5	0.099	630.6	
1516 Bravo Zn	2.125 pt / a	Full season	0.0	0.16	0.28	1.2	1.5	1.9	2.4	3.3	5.6	9.5	35.8	54.9	621.7	0.089	630.5	
LSD <sub>P = 0.05</sub>			.	0.38	1.12	1.6	1.8	1.9	2.4	3.1	4.9	10.1	14.6	18.2	576.3	0.082	51.7	

## Early Blight Standard Foliar Fungicides - Inkster Series 1500 Foliar Disease Complex



NOTE: The sum of the three pathogens recovered may be greater than 100% because in some cases, more than one pathogen was recovered from a single lesion.

Represents pathogens recovered from non-treated-inoculated treatments. Leaves were collected from all 4 replications at 2 points during the growing season.