

Early Blight Standard Foliar Fungicides – (1500 Series)

Location: Tappen, 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 13, 2008
Row width: 36 inches
Seed spacing: 14 inches

Cultivar: Ranger Russet
50% Emergence: June 14

Fertilizer: Broadcast: 209#N, 52#P, 200#K, 1#B; May 7

Herbicide: Prowl (2.0 pt/a) + Matrix (1.0 oz/a); Pre-June 10

Insecticide: Belay in-furrow (12.0 oz/a); May 13

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: Six *A. solani* isolates containing the F129L mutation were grown under constant light for 14 days on CV-8 medium. Conidia were dislodged and diluted in 0.25% gelatin to a concentration of 1.0×10^5 conidia / ml. The conidial suspension was applied to the outside two rows of each four-row plot at a rate of 100 ml / row on the evening of July 24th using a converted ATV and modified spray equipment.

Fungicide application dates: July 9, 15, 22, 30, August 5, 13, 19, 27
September 3, 12

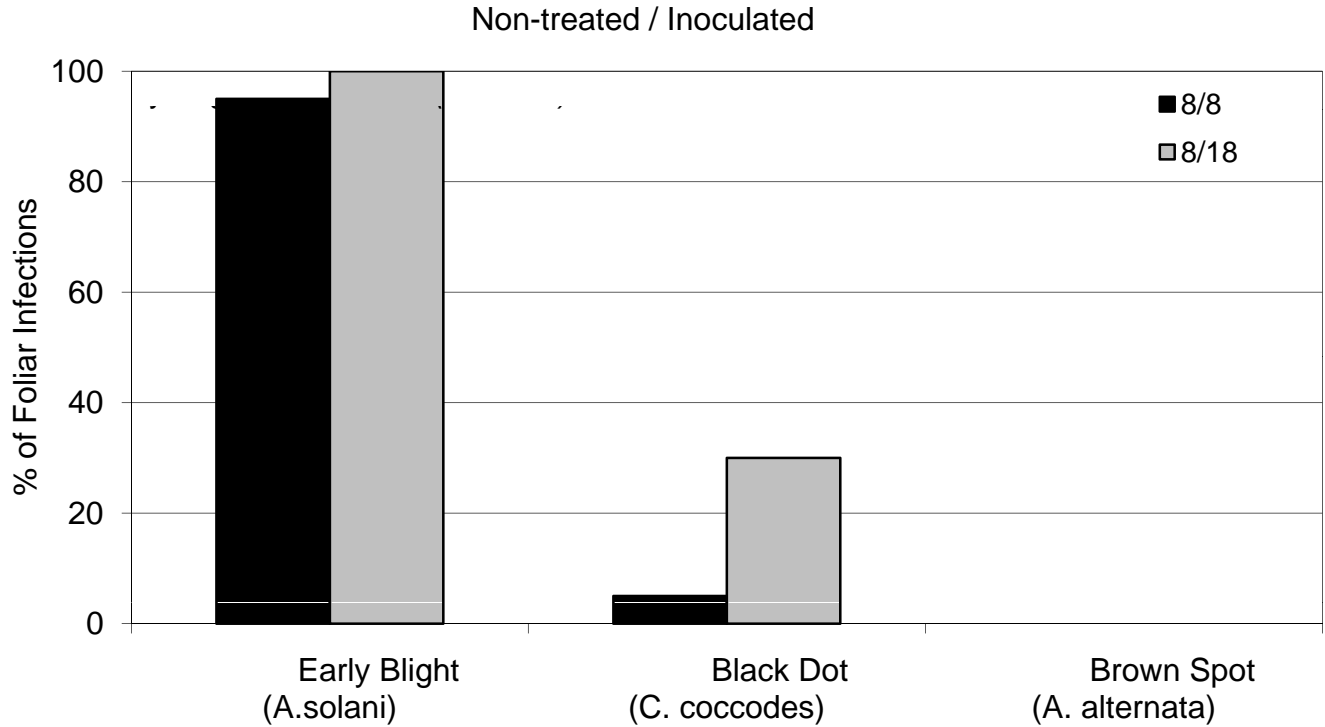
Fungicide application method: Fungicides were applied using a converted ATV.
(55 psi; 61 gpa; 11005XR nozzles)

Vinekill: Rotobeat; September 22

Harvest: September 24

Treatment	Rate	Schedule	Foliar Disease (%Severity)												AUDPC	RAUDPC	Total Yield (cwt/a)
			7/2	7/9	7/16	7/23	7/30	8/6	8/13	8/19	8/27	9/3	9/10	9/17			
1513 Chlorothalonil 720	0.8 pt / a	1	0.00	0.01	0.39	0.5	0.7	1.0	4.0	6.9	28.0	35.6	43.7	74.1	1118.6	0.145	435.5
Evito +	2.0 fl oz / a +	2															
Dithane	2.0 lb / a																
Chlorothalonil 720	1.5 pt / a	3,4,6,8-10															
Endura +	2.5 oz / a +	5															
Dithane	2.0 lb / a																
Scala +	7.0 fl oz / a +	7															
Dithane	2.0 lb / a																
1514 Evito +	2.0 fl oz / a +	1,5	0.00	0.12	0.29	0.5	0.5	0.9	6.2	9.6	19.4	28.9	36.9	76.9	1004.4	0.130	419.1
Dithane	2.0 lb / a																
Chlorothalonil 720	1.5 pt / a	2,4,6,8-10															
Endura +	2.5 oz / a +	3,7															
Dithane	2 lbs/ac																
1515 Bravo Zn 500F	2.0 pt / a	1,2	0.00	0.00	0.18	0.3	0.3	0.6	2.8	3.5	4.2	9.6	13.1	26.3	338.1	0.044	487.2
Penncozeb 75DF	2.0 lb / a	4,6,7,9															
Headline 2.09EC +	9.0 fl oz / a +	3															
Bravo Zn 500F	1.5 pt / a																
Endura 70W +	2.5 oz / a +	5															
Bravo Zn 500F	1.5 pt / a																
Super Tin 80WP +	3.75 oz / a +	8,10															
Penncozeb 75DF	2.0 lb / a																
1516 Penncozeb	2.0 lb / a	Full Season	0.00	0.09	0.18	0.8	0.9	3.1	10.9	16.7	30.3	49.9	56.1	79.1	1484.2	0.193	418.5
1517 TD-2368-01-76DF	3.0 lb / a	Full Season	0.00	0.03	0.31	0.5	0.3	0.5	0.9	1.3	3.0	2.9	5.6	16.1	164.5	0.021	471.8
1518 TD-2368-01-76DF	4.0 lb / a	Full Season	0.00	0.03	0.41	0.8	1.2	2.3	7.5	10.7	15.0	32.0	37.5	60.3	974.5	0.127	437.9
1519 Bravo Zn	2.125 pt / a	1,2,4,6,8-10	0.00	0.01	0.40	0.8	0.9	1.1	6.8	9.0	19.6	25.9	40.8	58.7	948.4	0.123	460.6
Headline +	6.0 fl oz / a +	3															
Manzate	2.0 lb / a																
Endura +	2.5 oz / a +	5															
Manzate	2.0 lb / a																
Scala +	7.0 fl oz / a +	7															
Manzate	2.0 lb / a																
1520 Manzate	2.0 lb / a	Full Season	0.00	0.04	0.29	0.6	0.6	2.1	9.8	13.5	18.8	30.8	41.3	72.8	1094.5	0.142	426.3
1521 Echo Zn	2.12 pt / a	Full Season	0.00	0.06	0.56	0.9	0.7	1.3	5.4	9.4	17.3	18.4	32.5	68.8	852.0	0.111	428.7
1522 Confidential			0.00	0.02	0.24	0.2	0.3	1.6	8.0	16.2	23.7	35.1	43.8	61.9	1131.9	0.147	418.2
LSD _{P = 0.05}			.	0.07	0.30	0.5	0.4	1.1	2.8	5.1	9.9	13.3	14.7	17.6	696.6	0.091	39.1

Early Blight Standard Foliar Fungicides - Tappen Series 1500 Foliar Disease Complex



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