

Foliar Fungicides – Standard Chemistries – Early Blight (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 8, 2007
Row width: 36 inches
Seed spacing: 14 inches

Cultivar: Russet Burbank
50% Emergence: May 31

Fertilizer: Broadcast: 207#N, 78#P, 225#K, 29#S, 1#B; May 3
Starter: 23#N, 69#P, 23#K; May 8
Fertigation: 30#N; July 3, 9, 14

Herbicide: Prowl (2.0 pt / a) + Matrix (1.0 oz / a); June 4

Insecticide: Platinum in-furrow (8.0 oz/a); May 8
Asana (6.0 oz/a); July 12
Baythroid (1.0 oz / a); July 31, August 15

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: Eleven *A. solani* isolates containing the F129L mutation were grown for a minimum of 6 days on CV-8 medium. Conidia were dislodged and diluted in 0.25% gelatin to a concentration of 2.0×10^5 conidia / ml. The conidial suspension was applied to the outside two rows of each four-row plot on July 26th using a converted ATV and modified spray equipment.

Fungicide application dates: June 22, 29
July 6, 12, 19, 27
August 2, 9, 15, 22, 31

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

Vinekill: Rotobeat; September 18

Harvest: September 19

Early Blight Foliar Standard Commercial Fungicides Tappen Series 1500

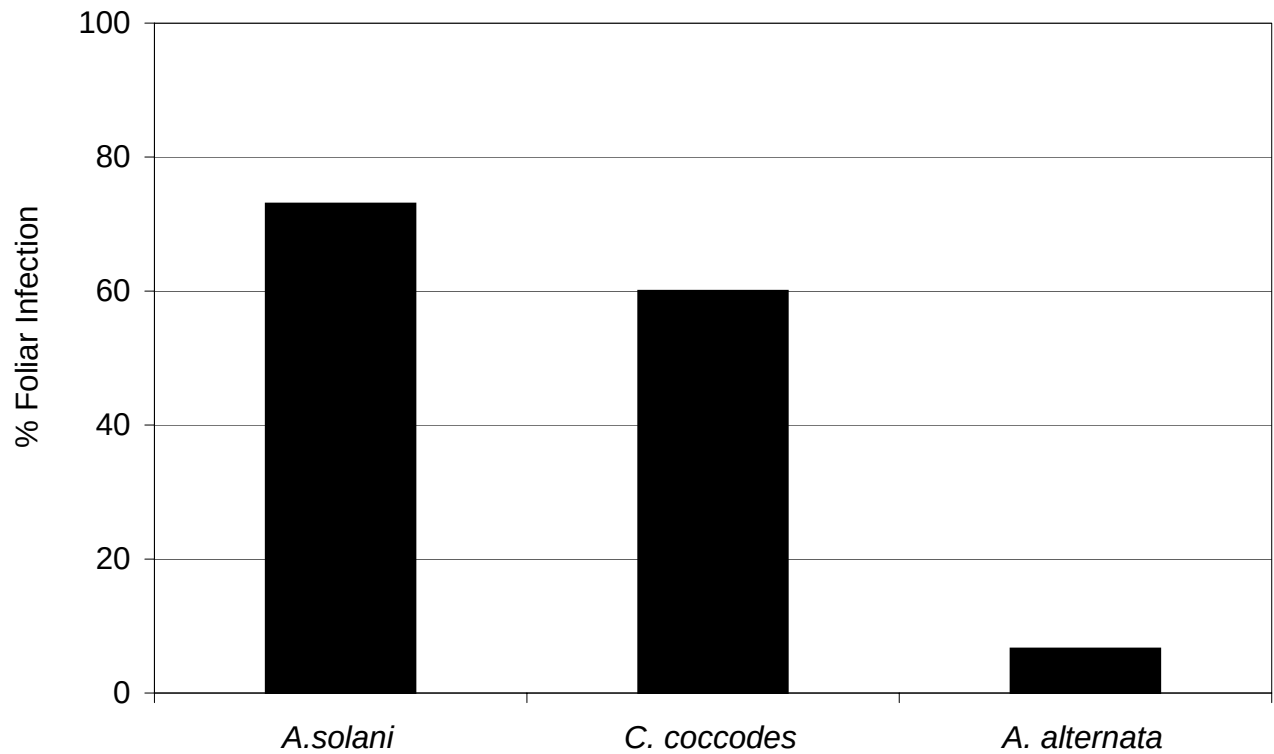
NOTE: Treatment 1520 is confidential.

[illegible]

Treatment		Rate	Schedule	Foliar Disease (%Severity)											AUDPC	RAUDPC	Total Yield (cwt/a)
				7/6	7/11	7/18	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/10			
1506	Echo Zn	2.125 pt / a	1,2,4,6,8-11	0.14	0.19	0.53	0.71	0.7	0.8	0.8	1.9	1.3	4.0	5.3	89.3	0.014	463.0
	Tanos +	6.0 oz / a +	3														
	Dithane	1.5 lb / a															
	Endura +	2.5 oz / a +	5														
	Dithane	1.5 lb / a															
	Scala +	7.0 oz / a +	7														
	Dithane	1.5 lb / a															
1507	Echo Zn	1.3 pt / a	1	0.00	0.03	0.12	0.35	0.3	0.7	0.6	0.8	1.2	2.9	5.5	48.1	0.007	507.7
	Endura +	2.5 oz / a +	2,6														
	Dithane	1.5 lb / a															
	Echo Zn	2.125 pt / a	3,5,7,8,10,11														
	Reason +	4.0 floz / a +	4														
	Bond +	0.1% v/v +															
	Dithane	1.5 lb / a															
Scala +	7.0 floz / a +	9															
Dithane	1.5 lb / a																
1508	Bravo WS	0.8 pt / a	1,2	0.04	0.13	0.39	0.25	0.2	0.3	1.2	2.6	3.4	14.6	18.3	104.3	0.016	429.1
	Bravo WS	1.5 pt / a	3-11														
1509	Equus 720 SST	0.8 pt / a	1,2	0.00	0.01	0.13	0.23	0.5	0.9	1.9	5.1	5.9	12.3	24.1	254.0	0.038	503.0
	Equus 720 SST	1.5 pt / a	3-11														
1510	Equus 500 Zn	1.15 pt / a	1,2	0.10	0.22	0.44	0.59	0.3	0.9	1.8	4.2	5.6	12.1	23.9	248.1	0.038	506.1
	Equus 500 Zn	2.125 pt / a	3-11														
1511	Bravo 500 Zn	1.15 pt / a	1,2	0.00	0.02	0.12	0.13	0.2	0.4	0.5	1.3	1.7	2.8	4.8	46.9	0.007	487.0
	Bravo 500 Zn	2.125 pt / a	3-11														
1512	Equus 82.5% WDG	0.7 lb / a	1,2	0.08	0.18	0.22	0.26	0.2	1.1	2.1	4.3	6.1	14.5	24.5	268.3	0.041	471.0
	Equus 82.5% WDG	1.36 lb / a	3-11														
1513	Bravo Zn	2.125 pt / a	1,3,4,6,8-11	0.00	0.02	0.09	0.31	0.3	0.6	0.7	1.9	2.3	4.4	7.0	92.2	0.014	494.5
	Evito +	2.0 floz / a +	2,5,7														
	Activator 90	0.125% v/v															
1514	Bravo ZN	2.125 pt / a	1,3,4,6,8-11	0.04	0.12	0.18	0.20	0.4	0.5	0.9	2.1	2.6	5.6	7.0	106.1	0.016	455.6
	Evito +	2.0 floz / a +	2,5,7														
	Activator 90 +	0.125% v/v +															
	Polyoxin D WDG	6.2 oz / a															
1515	Bravo ZN	2.125 pt / a	1,2	0.00	0.01	0.06	0.10	0.1	0.6	0.5	1.1	2.5	8.3	12.0	62.3	0.009	515.0
	ARY-0474-005	1.5 pt / a	3-11														
1516	Bravo Zn	2.125 pt / a	1	0.11	0.21	0.49	0.39	0.3	0.7	1.8	5.5	6.4	21.0	37.3	358.4	0.054	480.0
	Revus Opti +	2.5 pt / a +	2,3,5,6,8,9														
	Activator 90	0.125 % v/v															
	Bravo WS	1.5 pt / a	4,7,10,11														

Treatment		Rate	Schedule	Foliar Disease (%Severity)											AUDPC	RAUDPC	Total Yield (cwt/a)
				7/6	7/11	7/18	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/10			
1517	Bravo Zn Revus Top + Activator 90 Bravo WS	2.125 pt/a 5.5 floz / a + 0.125% v/v 1.5 pt / a	1 2,3,5,6,8,9 4,7,10,11	0.00	0.03	0.09	0.54	0.4	0.8	0.8	1.3	1.8	4.3	7.8	68.3	0.010	488.7
1518	Bravo Zn Revus Top + Activator 90 Bravo WS	2.125 pt / a 7.0 oz / a + 0.125% v/v 1.5 pt / a	1 2,3,5,6,8,9 4,7,10,11	0.13	0.23	0.31	0.33	0.5	0.8	0.7	0.4	0.6	2.0	5.5	42.0	0.006	471.9
1519	Bravo Zn Quadris Opti Revus Top + Activator 90 Bravo WS	2.125 pt / a 1.6 pt / a 7.0 oz / a + 0.125% v/v 1.5 pt / a	1 2,4,8 3,5,9,11 6,7,10	0.00	0.00	0.06	0.11	0.2	0.6	0.8	1.5	1.2	2.7	5.3	48.5	0.007	501.3
1520	Confidential			0.12	0.21	0.23	0.17	0.3	0.5	0.7	0.6	1.3	3.8	10.9	85.9	0.013	501.8
1521	Bravo Zn Revus Top + Activator 90	2.125 pt / a 7.0 oz / a + 0.125% v/v	1,3,5,7-11 2,4,6	0.00	0.00	0.09	0.15	0.2	0.3	0.2	0.4	0.8	2.1	6.3	47.3	0.007	489.7
1522	Manzate	2.0 lb / a	Full season	0.12	0.16	0.76	0.59	0.7	0.8	1.0	1.6	3.0	5.5	15.1	105.1	0.016	502.6
1523	Bravo Zn Revus Top + Activator 90	2.125 p t / a 7.0 oz / a + 0.125% v/v	2,3,5,7,9-11 4,6,8	0.01	0.03	0.16	0.19	0.3	0.4	0.4	0.5	0.5	1.0	2.7	31.6	0.005	512.3
1524	Bravo Zn Revus Top + Activator 90	2.125 pt / a 7.0 oz / a + 0.125% v/v	1-5,7,9,11 6,8,10	0.13	0.21	0.29	0.27	0.6	0.8	0.8	1.2	1.1	1.1	3.9	55.7	0.008	487.4
1525	Echo Zn Headline + Dithane Endura + Dithane Scala + Dithane	2.125 pt / a 6.0 floz / a + 2.0 lb / a 2.5 oz / a + 2.0 lb / a 7.0 floz / a + 2.0 lb / a	1,3,4,6,8-11 2 5 7	0.02	0.03	0.08	0.12	0.2	0.3	0.3	1.0	1.3	1.3	2.7	29.8	0.005	458.5
1526	Headline + Dithane Echo Zn Endura + Dithane	6.0 floz / a + 2.0 lb / a 2.125 pt / a 2.5 oz / a + 2.0 lb / a	1,5 2,4,6,8-11 3,7	0.13	0.19	0.31	0.31	0.3	0.8	1.0	0.7	0.5	1.4	4.4	49.9	0.008	493.9
LSD _P = 0.05				0.06	0.07	0.26	0.27	0.3	0.5	0.8	1.8	2.2	4.5	7.9	129.2	0.020	NS

Foliar Disease Complex at Tappen, ND 2007 (1500 Series)



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.