

Late Blight Foliar Fungicide Standard Chemistries (1300 Series)

Location: Prosper, ND
Plot Design: 4 X 25 ft. rows; 4 replications, RCBD, all four rows sprayed, all data from center two rows.

Planting Date: May 17, 2005
Row Width: 36 inches
Plant Spacing: 12 inches
Soil Temperature: 54F

Cultivar: NorValley

Emergence: June 8

Fertilizer: 200 lb/a; 32-10-10

Herbicide: Treflan (1.0 lb/a); Pre-plant incorporated
Prowl (2.0 pt/a) + Sencor (3.0 oz/a) + Matrix (1.5 oz/a); June 21

Insecticide: Admire (18 oz/a); in-furrow at planting
Asana (6.0 oz/a); July 21, August 5, 22

Inoculation method: Late Blight: Greenhouse reared plants (six weeks old) were inoculated with US-8 (A2). When sporulating lesions developed, two infected plants were transplanted into the center of each eight-row plot on July 18 and again on August 2. A suspension of 1×10^4 zoospores/ml was sprayed onto the foliage of all treatments in replications II and III and onto the untreated plots in all replications on the evening of August 4.

Fungicide application dates: July 9, 15, 21, 29, August 5, 10, 22, 29

Fungicide application method: Fungicides were applied using a converted ATV.
(55 psi; 72 gpa; 11005XR nozzles)

Vinekill: Reglone (2.0 pt/a) +LI700 (2.0 pt/100 gal); September 21, 26

Harvest: October 16, 17

Grade: October 24, 25

Late Blight Foliar Standard Commercial Fungicides Prosper Series 1300

Treatments 1302-1306 and 1310-1323 are Confidential

Treatment	Rate	Schedule	Late Blight (% Severity)								AUDPC	RAUDPC
			7/12	7/19	7/27	8/10	8/20	8/24	8/30	9/8		
1301 Untreated			0.0	0.0	0.0	0.5	32.5	63.8	97.5	93.8	1735.3	0.578
1302 Confidential			0.0	0.0	0.0	0.0	0.0	1.3	25.5	71.3	312.7	0.104
1303 Confidential			0.0	0.0	0.0	0.0	0.0	0.0	15.0	75.0	180.3	0.060
1304 Confidential			0.0	0.0	0.0	0.0	0.3	1.5	2.6	42.5	40.3	0.134
1305 Confidential			0.0	0.0	0.0	0.0	0.0	0.0	13.8	75.0	165.0	0.550
1306 Confidential			0.0	0.0	0.0	0.0	0.3	0.3	2.5	48.8	33.7	0.011
1307 BAS 55007F + Manzate	6.1 floz/a + 2.0 lb/a	Full Season	0.0	0.0	0.0	0.0	0.0	5.3	31.3	77.5	401.7	0.134
1308 BAS 55007F + Bravo Ultrex	6.1 floz/a + 1.4 lb/a	Full Season	0.0	0.0	0.0	0.0	0.0	0.3	2.8	65.0	35.0	0.012
1309 Tanos + Manzate Manzate Tanos + Manzate Manzate + Curzate Super Tin + Curzate Super Tin + Reglone	6.0 oz/a + 1.5 lb/a 2.0 lb/a 8.0 oz/a + 1.5 lb/a 2.0 lb/a + 3.2 oz/a 3.75 oz/a + 3.2 oz/a 3.75 oz/a + 1.5 pt/a	1 2 3,5 4,6 7,8 9	0.0	0.0	0.0	0.0	0.0	0.0	6.8	31.3	81.1	0.027
1310 Confidential			0.0	0.0	0.0	0.0	0.1	0.3	5.3	83.8	65.1	0.022
1311 Confidential			0.0	0.0	0.0	0.0	0.0	0.0	8.8	66.3	105.0	0.035
1312 Confidential			0.0	0.0	0.0	0.0	0.0	0.3	15.0	88.8	182.0	0.061
1313 Confidential			0.0	0.0	0.0	0.0	0.0	0.3	16.5	72.5	199.3	0.066
1314 Confidential			0.0	0.0	0.0	0.0	0.0	1.3	4.0	70.0	54.9	0.018

Treatment	Rate	Schedule	Late Blight (% Severity)									AUDPC	RAUDPC
			7/12	7/19	7/27	8/10	8/20	8/24	8/30	9/8			
1315 Confidential			0.0	0.0	0.0	0.0	0.0	0.0	20.0	68.8	240.3	0.080	
1316 Confidential			0.0	0.0	0.0	0.0	0.0	8.8	16.3	90.0	238.8	0.080	
1317 Confidential			0.0	0.0	0.0	0.0	0.0	0.0	23.8	78.8	285.5	0.095	
1318 Confidential			0.0	0.0	0.0	0.0	0.1	0.3	1.8	56.3	23.1	0.008	
1319 Confidential			0.0	0.0	0.0	0.0	0.0	0.0	15.0	70.0	180.2	0.060	
1320 Confidential			0.0	0.0	0.0	0.0	0.0	5.3	9.0	92.0	134.6	0.045	
1321 Confidential			0.0	0.0	0.0	0.0	0.0	7.5	31.5	78.8	415.5	0.139	
1322 Confidential			0.0	0.0	0.0	0.0	0.0	0.3	11.5	86.3	139.4	0.046	
1323 Confidential			0.0	0.0	0.0	0.0	0.0	1.5	42.8	92.5	520.7	0.174	
1324 IR 5885C	1.1 lb/a	Full Season	0.0	0.0	0.0	0.0	0.0	3.8	8.8	72.5	124.4	0.041	
1325 IR 5885C	1.35 lb/a	Full Season	0.0	0.0	0.0	0.0	0.0	2.5	23.8	82.5	297.8	0.099	
1326 IR 5885C	1.6 lb/a	Full Season	0.0	0.0	0.0	0.0	0.0	0.1	0.6	50.3	7.2	0.002	
1327 IR 5885M	1.8 lb/a	Full Season	0.0	0.0	0.0	0.0	0.0	0.0	21.3	70.0	255.3	0.085	
1328 IR 5885M	2.25 lb/a	Full Season	0.0	0.0	0.0	0.0	0.0	1.5	1.5	45.3	26.1	0.009	
1329 IR 5885M	2.7 lb/a	Full Season	0.0	0.0	0.0	0.0	0.0	7.6	17.5	43.8	248.1	0.083	
1330 Dithane	2.0 lb/a	1,3,5,7	0.0	0.0	0.0	0.0	0.3	1.3	1.8	63.8	29.8	0.010	
Gavel	2.0 lb/a	2,4,6,8											
1331 TM 459 + TM 473 Bravo WS	4.0 floz/a + 1.76 floz/a 1.5 pt/a	1,3,5,7 2,4,6,8	0.0	0.0	0.0	0.0	0.0	4.0	35.3	80.0	443.0	0.148	
1332 TM 473	2.11 floz/a	Full Season	0.0	0.0	0.0	0.0	0.1	0.6	11.5	99.5	141.1	0.047	
1333 Ethaboxam + Dithane	10.9 floz/a + 1.4 lb/a	Full Season	0.0	0.0	0.0	0.0	0.0	0.0	4.3	55.0	51.3	0.017	
1334 Dithane	2.0 lb/a	Full Season	0.0	0.0	0.0	0.0	0.0	0.1	1.6	46.3	19.2	0.006	
1335 Echo Zn	2.125 pt/a	Full Season	0.0	0.0	0.0	0.0	0.0	2.5	6.5	41.3	90.5	0.030	
LSD _{P=0.05}			.	.	.	0.1	5.7	7.7	23.8	NS	306.8	0.102	

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			7/12	7/19	7/27	8/10	8/20	8/24	8/30	9/8		
1301 Untreated			0.0	0.0	0.0	0.3	0.3	5.0	1.0	2.5	47.6	0.016
1302 Confidential			0.0	0.0	0.0	0.0	1.3	1.6	2.0	5.0	55.0	0.018
1303 Confidential			0.0	0.0	0.0	0.0	0.3	2.5	3.0	5.0	59.9	0.020
1304 Confidential			0.0	0.0	0.0	0.0	0.1	0.3	1.3	23.8	118.5	0.040
1305 Confidential			0.0	0.0	0.0	0.3	1.5	12.5	4.3	6.3	135.3	0.045
1306 Confidential			0.0	0.0	0.0	0.0	0.3	0.8	3.8	10.0	79.4	0.026
1307 BAS 55007F + Manzate	6.1 floz/a + 2.0 lb/a	Full Season	0.0	0.0	0.0	0.0	0.3	2.5	3.8	2.5	54.5	0.018
1308 BAS 55007F + Bravo Ultrex	6.1 floz/a + 1.4 lb/a	Full Season	0.0	0.0	0.0	0.0	0.3	5.3	0.8	3.0	48.0	0.016
1309 Tanos + Manzate Manzate Tanos + Manzate Manzate + Curzate Super Tin + Curzate Super Tin + Reglone	6.0 oz/a + 1.5 lb/a 2.0 lb/a 8.0 oz/a + 1.5 lb/a 2.0 lb/a + 3.2 oz/a 3.75 oz/a + 3.2 oz/a 3.75 oz/a + 1.5 pt/a	1 2 3,5 4,6 7,8 9	0.0	0.0	0.0	0.0	0.1	0.0	0.6	7.5	38.6	0.013
1310 Confidential			0.0	0.0	0.0	0.0	0.3	4.3	6.6	1.3	78.2	0.026
1311 Confidential			0.0	0.0	0.0	0.0	0.1	6.3	2.8	7.5	86.4	0.029
1312 Confidential			0.0	0.0	0.0	0.3	1.3	0.3	8.8	17.5	156.9	0.052
1313 Confidential			0.0	0.0	0.0	0.0	0.6	1.5	4.3	5.0	66.0	0.022
1314 Confidential			0.0	0.0	0.0	0.0	0.0	0.3	5.3	10.0	86.4	0.029

Treatment	Rate	Schedule	Early Blight (% Severity)								AUDPC	RAUDPC
			7/12	7/19	7/27	8/10	8/20	8/24	8/30	9/8		
1315 Confidential			0.0	0.0	0.0	0.0	0.5	7.5	4.3	8.8	112.7	0.038
1316 Confidential			0.0	0.0	0.0	0.0	0.3	6.5	4.3	1.3	72.6	0.034
1317 Confidential			0.0	0.0	0.0	0.0	0.6	1.5	4.0	8.8	81.0	0.027
1318 Confidential			0.0	0.0	0.0	0.3	0.1	2.8	10.0	20.0	180.8	0.060
1319 Confidential			0.0	0.0	0.0	0.0	0.1	5.0	7.8	7.5	117.3	0.039
1320 Confidential			0.0	0.0	0.0	0.0	0.3	3.0	5.5	1.5	65.1	0.022
1321 Confidential			0.0	0.0	0.0	0.0	1.5	2.5	1.8	1.3	42.9	0.014
1322 Confidential			0.0	0.0	0.0	0.0	0.6	3.8	6.5	8.8	111.3	0.037
1323 Confidential			0.0	0.0	0.0	0.0	2.6	18.8	6.5	0.0	161.6	0.054
1324 IR 5885C	1.1 lb/a	Full Season	0.0	0.0	0.0	0.0	0.6	2.5	5.1	5.0	77.1	0.026
1325 IR 5885C	1.35 lb/a	Full Season	0.0	0.0	0.0	0.0	0.6	11.3	5.3	7.5	133.5	0.045
1326 IR 5885C	1.6 lb/a	Full Season	0.0	0.0	0.0	0.0	0.1	0.1	1.5	7.8	47.2	0.016
1327 IR 5885M	1.8 lb/a	Full Season	0.0	0.0	0.0	0.0	0.1	3.8	1.0	8.8	66.2	0.022
1328 IR 5885M	2.25 lb/a	Full Season	0.0	0.0	0.0	0.0	0.1	0.1	0.6	12.8	62.4	0.021
1329 IR 5885M	2.7 lb/a	Full Season	0.0	0.0	0.0	0.0	0.3	0.0	1.6	7.5	47.4	0.016
1330 Dithane	2.0 lb/a	1,3,5,7	0.0	0.0	0.0	0.0	0.0	1.8	3.0	17.5	110.3	0.037
Gavel	2.0 lb/a	2,4,6,8										
1331 TM 459 + TM 473 Bravo WS	4.0 floz/a + 1.76 floz/a 1.5 pt/a	1,3,5,7 2,4,6,8	0.0	0.0	0.0	0.0	1.3	6.3	9.3	7.5	144.3	0.048
1332 TM 473	2.11 floz/a	Full Season	0.0	0.0	0.0	0.0	1.3	2.0	2.8	0.3	41.3	0.014
1333 Ethaboxam + Dithane	10.9 floz/a + 1.4 lb/a	Full Season	0.0	0.0	0.0	0.0	0.3	0.0	0.3	10.0	49.9	0.017
1334 Dithane	2.0 lb/a	Full Season	0.0	0.0	0.0	0.0	0.1	0.3	5.0	30.3	175.6	0.059
1335 Echo Zn	2.125 pt/a	Full Season	0.0	0.0	0.0	0.0	0.0	0.0	0.6	10.0	49.3	0.016
LSD _{P=0.05}			.	.	.	NS	NS	6.8	NS	NS	NS	NS