

2015 Black Dot Foliar Fungicides (200 Series)

Location: Inkster, ND
Plot design: 4 rows X 30 feet X 4 reps; RCBD
All 4 rows were sprayed; foliar disease data was taken from the center 2 rows.

Planting date: June 5, 2015
Row width: 36 inches
Seed spacing: 14 inches
Cultivar: Russet Burbank
50% Emergence: June 27

Fertilizer: Broadcast: 67#N, 124#K, 30#S, 1.5#Zn, 2#B, 1#Cu; May 22
Starter: 29#N, 100#P; June 5

Herbicide: Prowl (2 pts/a) + Sencor (0.5 lb/a) + Matrix (1.5 oz/a); June 12

Insecticide: Admire Pro (8.7 oz/a); IF at plant
Coragen (5 oz/a); July 9
Asana (9.6 oz/a); July 27
Coragen (5 oz/a); August 4
Asana (9.6 oz/a); August 11
Blackhawk (3.3 oz/a); August 17

Objective: To determine the efficacy of standard fungicide chemistries and fungicide programs for the control of black dot caused by *Colletotrichum coccodes*.

Black dot inoculation method: Five *C. coccodes* isolates representing vegetative compatibility groups 2, and 6 were grown for 5 to 6 weeks on CV-8 agar medium. Microsclerotia were released from the agar using an electric blender and the microsclerotial suspension was adjusted to a concentration of 4.1×10^5 microsclerotia / ml in distilled water. The suspension was applied at a rate of 9.03 ml/row foot to the outside two rows of each plot on the evening of July 22 using custom ATV spray equipment.

Foliar application dates: July 20, 27, 31, August 5, 13, 18, 27, Sept. 1, 11, 16
Foliar application method: Fungicides were applied using a converted ATV (55 psi; 61 gpa; 11005XR nozzles).

In-furrow application method: In-furrow treatments applied using a planter-mounted CO₂ sprayer with single nozzle directed at seed piece (6501 tips, 8 GPA).

Vinekill: Killing frost; October 7
Harvest: October 21, 22

**2015 Black Dot Foliar Fungicides - Inkster Series 200
Foliar Disease**

* Treatments 205 - 211 are confidential*

Treatment	Rate	Schedule	Interval	Foliar Disease (% Severity)													AUDPC	RAUDPC	Yield (cwt/a)
				7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23					
201 Non-treated / Non-inoculated	-	-	-	0.04	0.04	0.05	0.11	0.16	0.17	0.86	5.67	33.16	54.44	66.19	894.406	0.118	450.79		
202 Non-treated / inoculated	-	-	-	0.04	0.05	0.04	0.08	0.09	0.14	0.57	4.22	17.00	43.19	66.69	691.275	0.091	436.47		
203 Reason + Bond + Dithane Echo Zn Echo Zn Luna Tranquility + Dithane Scala + Dithane	6.9 fl oz / a + 0.1 % v/v + 2.0 lb / a 1.3 pt / a 2.125 pt / a 11.2 fl oz / a + 2.0 lb / a 7.0 fl oz / a + 2.0 lb / a	1,3 2 4,6,8-10 5 7	7 day	0.04	0.13	0.09	0.08	0.07	0.10	0.19	0.25	1.08	4.24	8.69	74.309	0.010	479.83		
204 Ernesto Silver + Nubark Mancozeb Serenade Soil Reason + Bond + Dithane Echo Zn Echo Zn Luna Tranquility + Dithane Scala + Dithane	0.31 fl oz / cwt + 16.0 oz / cwt 2.0 qt / a 6.9 fl oz / a + 0.1 % v/v + 2.0 lb / a 1.3 pt / a 2.125 pt / a 11.2 fl oz / a + 2.0 lb / a 7.0 fl oz / a + 2.0 lb / a	Seed In-furrow 1,3 2 4,6,8-10 5 7	7 day	0.01	0.02	0.04	0.08	0.11	0.10	0.24	0.28	0.63	0.70	3.02	25.831	0.003	469.50		
205 Confidential				0.03	0.06	0.04	0.05	0.15	0.19	0.25	1.56	6.22	27.84	47.63	421.341	0.055	464.13		
206 Confidential				0.04	0.05	0.06	0.04	0.11	0.10	0.33	1.94	7.91	24.78	32.25	370.847	0.049	486.77		
207 Confidential				0.05	0.06	0.05	0.06	0.09	0.14	0.30	2.56	12.81	38.66	56.44	580.844	0.076	480.50		
208 Confidential				0.06	0.10	0.24	0.27	0.29	0.33	0.36	0.54	2.03	9.13	25.56	182.759	0.024	392.94		
209 Confidential				0.03	0.04	0.03	0.08	0.16	0.14	0.46	2.62	12.18	40.47	58.94	599.669	0.079	481.64		
210 Confidential				0.06	0.06	0.21	0.32	0.28	0.28	0.30	0.49	1.04	2.84	14.22	90.903	0.012	418.18		
211 Confidential				0.06	0.05	0.25	0.28	0.28	0.35	0.45	0.70	3.01	10.68	31.50	222.922	0.029	385.21		
212 Luna Tranquility Echo Zn	11.2 fl oz / a 2.125 pt / a	1-5 6-10	7 day	0.02	0.03	0.05	0.05	0.06	0.09	0.09	0.11	0.16	0.18	2.21	13.509	0.002	480.68		
213 Endura Echo Zn	5.5 oz / a 2.125 pt / a	1-5 6-10	7 day	0.03	0.03	0.02	0.02	0.07	0.11	0.09	0.69	4.23	11.77	26.06	210.513	0.028	472.89		
214 Headline + Dithane Echo Zn Echo Zn Luna Tranquility + Dithane Scala + Dithane	9.0 fl oz / a + 2.0 lb / a 1.3 pt / a 2.125 pt / a 11.2 fl oz / a + 2.0 lb / a 7.0 fl oz / a + 2.0 lb / a	1,3 2 4,6,8-10 5 7	7 day	0.06	0.02	0.04	0.06	0.08	0.11	0.16	0.26	0.81	3.34	6.41	56.891	0.007	515.46		
LSDp=0.05				NS	0.05	0.06	0.06	0.09	0.09	0.31	1.98	8.37	15.94	18.32	499.580	0.066	43.90		

2015 Black Dot Foliar Fungicides - Inkster Series 200
Black Dot Stem Incidence

* Treatments 205 - 211 are confidential*

Treatment	Rate	Schedule	Interval	Black Dot (% Stem Incidence)												AUDPC	RAUDPC	Yield (cwt/a)
				7/15	7/22	7/29	8/5	8/12	8/19	8/26	9/2	9/9	9/16	9/23				
201 Non-treated / Non-inoculated	-	-	-	0.00	0.00	0.00	0.00	0.12	0.12	0.46	0.71	1.41	3.28	11.60	33.44	241.247	0.057	450.79
202 Non-treated / inoculated	-	-	-	0.00	0.00	0.00	0.12	0.12	0.49	0.61	0.61	0.87	7.87	21.52	145.776	0.035	436.47	
203 Reason + Bond + Dithane Echo Zn Echo Zn Luna Tranquility + Dithane Scala + Dithane	6.9 fl oz / a + 0.1 % v/v + 2.0 lb / a 1.3 pt / a 2.125 pt / a 11.2 fl oz / a + 2.0 lb / a 7.0 fl oz / a + 2.0 lb / a	1,3 2 4,6,8-10 5 7	7 day	0.00	0.00	0.00	0.11	0.11	0.11	0.11	0.11	0.73	1.34	1.85	28.698	0.007	479.83	
204 Emesto Silver + Nubark Mancozeb Serenade Soil Reason + Bond + Dithane Echo Zn Echo Zn Luna Tranquility + Dithane Scala + Dithane	0.31 fl oz / cwt + 16.0 oz / cwt 2.0 qt / a 6.9 fl oz / a + 0.1 % v/v + 2.0 lb / a 1.3 pt / a 2.125 pt / a 11.2 fl oz / a + 2.0 lb / a 7.0 fl oz / a + 2.0 lb / a	Seed In-furrow 1,3 2 4,6,8-10 5 7	7 day	0.00	0.00	0.00	0.00	0.00	0.26	0.40	0.53	0.67	0.67	0.81	20.704	0.005	469.50	
205 Confidential				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.76	3.79	14.87	88.439	0.021	464.13	
206 Confidential				0.00	0.00	0.13	0.13	0.13	0.53	0.80	1.21	1.92	3.56	7.74	86.580	0.021	486.77	
207 Confidential				0.00	0.00	0.00	0.00	0.00	0.63	0.89	1.02	2.06	4.54	14.10	110.044	0.026	480.50	
208 Confidential				0.00	0.00	0.00	0.00	0.00	0.39	0.53	0.53	0.92	3.28	9.72	71.739	0.017	392.94	
209 Confidential				0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.38	1.05	4.17	16.88	108.915	0.026	481.64	
210 Confidential				0.00	0.00	0.00	0.00	0.00	0.17	0.97	1.28	2.45	3.60	6.61	81.623	0.019	418.18	
211 Confidential				0.00	0.00	0.00	0.00	0.00	0.24	0.62	0.85	1.36	3.54	9.08	75.679	0.018	385.21	
212 Luna Tranquility Echo Zn	11.2 fl oz / a 2.125 pt / a	1-5 6-10	7 day	0.00	0.00	0.00	0.00	0.00	0.15	0.29	0.54	0.92	1.84	2.89	39.338	0.009	480.68	
213 Endura Echo Zn	5.5 oz / a 2.125 pt / a	1-5 6-10	7 day	0.00	0.00	0.00	0.29	0.29	0.42	0.69	1.07	1.07	1.46	6.28	54.959	0.013	472.89	
214 Headline + Dithane Echo Zn Echo Zn Luna Tranquility + Dithane Scala + Dithane	9.0 fl oz / a + 2.0 lb / a 1.3 pt / a 2.125 pt / a 11.2 fl oz / a + 2.0 lb / a 7.0 fl oz / a + 2.0 lb / a	1,3 2 4,6,8-10 5 7	7 day	0.00	0.00	0.13	0.13	0.13	0.27	0.27	0.27	0.27	1.52	3.25	34.761	0.008	515.46	
LSDp=0.05				NS	NS	NS	0.28	NS	0.66	1.00	1.18	1.69	3.63	10.49	95.679	0.023	43.90	

2015 Black Dot Foliar Fungicides - Inkster Series 200

N ↓

102	208
302	204
502	212
312	214
112	206
702	202
602	210

502	202
702	206
302	208
602	210
312	204
102	212
112	214

702	212
102	202
112	210
302	204
502	214
602	208
312	206

Tower 5

602	206
312	210
702	204
112	208
302	202
502	214
102	212