

2014 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 3, 2014
Row width: 36 inches
Seed spacing: 14 inches
50% Emergence: June 25

Fertilizer: Broadcast: 61#N, 206#K, 30#S, 1.5#B; May 17
Starter: 29#N, 100#P; June 3

Herbicide: Prowl (2 pts/a) + Sencor (0.5 lb/a) + Matrix (1.5 oz/a); June 16

Insecticide: Admire Pro (8.7 oz/a); IF at plant
Coragen (5 oz/a); July 28
Asana (9 oz/a); August 8
BlackHawk (3.3 oz/a); August 27

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 1.0×10^5 microsclerotia / ml in distilled water. The suspension was applied at a rate of 7.23 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 17, 25, August 1, 5, 14, 20, 28, Sept. 5, 11, 15

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: Hard Frost; October 4

Harvest: October 6, 8

Grade: December 3, 5 (58 DAH)

210	Emesto Silver + Nubark Mancozeb Serenade Soil + Admire Pro Echo Zn Dithane	0.31 fl oz / cwt + 1.0 lb / cwt 2.0 qt / a + 8.7 fl oz / a 2.125 pt / a 2 lbs / a	Seed In-furrow 1,3,5,7,9 2,4,6,8,10	7 day	0.00	0.01	0.04	0.06	0.03	0.16	0.20	0.93	2.93	12.94	32.50	234.8	0.034	490.22
211	Emesto Silver + Nubark Mancozeb Serenade Soil + Admire Pro Echo Zn Dithane	0.31 fl oz / cwt + 1.0 lb / cwt 3.0 qt / a + 8.7 fl oz / a 2.125 pt / a 2 lbs / a	Seed In-furrow 1,3,5,7,9 2,4,6,8,10	7 day	0.00	0.06	0.14	0.19	0.19	0.27	0.23	0.93	5.22	13.63	34.81	267.7	0.039	486.47
212	Emesto Silver + Nubark Mancozeb Serenade Soil + Quadris + Admire Pro Echo Zn Dithane	0.31 fl oz / cwt + 1.0 lb / cwt 2.0 qt / a + 0.8 fl oz / 1000 row ft + 8.7 fl oz / a 2.125 pt / a 2 lbs / a	Seed In-furrow 1,3,5,7,9 2,4,6,8,10	7 day	0.00	0.04	0.12	0.06	0.01	0.06	0.48	0.45	1.85	5.40	8.06	87.5	0.013	507.79
213	Confidential				0.00	0.04	0.06	0.17	0.16	0.14	0.18	0.83	4.99	11.13	23.19	204.9	0.030	491.25
214	Headline Echo Zn	9 fl oz / a 2.125 pt / a	1 2-10	7 day	0.00	0.06	0.09	0.04	0.06	0.19	0.71	1.77	5.98	21.81	40.38	356.1	0.052	513.65
LSD _P = 0.05					NS	0.05	0.07	0.09	0.08	0.13	1.09	4.29	8.53	11.61	17.67	374.59	0.05	33.84

210	Emesto Silver + Nubark Mancozeb Serenade Soil + Admire Pro Echo Zn Dithane	0.31 fl oz / cwt + 1.0 lb / cwt 2.0 qt / a + 8.7 fl oz / a 2.125 pt / a 2 lbs / a	Seed In-furrow 1,3,5,7,9 2,4,6,8,10	7 day	0.00	0.00	0.14	0.27	0.98	1.50	3.23	31.5	0.008	490.22
211	Emesto Silver + Nubark Mancozeb Serenade Soil + Admire Pro Echo Zn Dithane	0.31 fl oz / cwt + 1.0 lb / cwt 3.0 qt / a + 8.7 fl oz / a 2.125 pt / a 2 lbs / a	Seed In-furrow 1,3,5,7,9 2,4,6,8,10	7 day	0.00	0.40	0.40	0.72	1.29	1.43	2.91	39.9	0.010	486.47
212	Emesto Silver + Nubark Mancozeb Serenade Soil + Quadris + Admire Pro Echo Zn Dithane	0.31 fl oz / cwt + 1.0 lb / cwt 2.0 qt / a + 0.8 fl oz / 1000 row ft + 8.7 fl oz / a 2.125 pt / a 2 lbs / a	Seed In-furrow 1,3,5,7,9 2,4,6,8,10	7 day	0.00	0.44	0.76	1.33	1.59	1.75	2.26	49.0	0.012	507.79
213	Confidential				0.00	0.31	0.45	0.75	1.28	1.94	5.48	52.2	0.012	491.25
214	Headline Echo Zn	9 fl oz / a 2.125 pt / a	1 2-10	7 day	0.00	0.23	0.48	1.43	2.51	2.92	5.09	70.9	0.017	513.65
LSD _P = 0.05					NS	NS	1.20	1.51	1.69	1.89	4.37	50.15	0.01	33.84

2014 Black Dot Foliar Fungicides - Inkster Series 200

* 213 is confidential*

Treatment		Rate	Schedule	Interval	Emergence (%)		
					6/26	7/1	7/8
201	Non-treated / Non-inoculated	-	-	-	95.5	95.0	93.5
202	Non-treated / inoculated	-	-	-	96.5	96.5	93.0
203	Priaxor	6.7 fl oz / a	In-furrow	-	89.0	95.0	92.5
204	Priaxor	8.0 fl oz / a	In-furrow	-	95.5	95.0	94.5
205	Priaxor	6.7 fl oz / a	1	7 day	91.0	89.0	93.5
	Echo Zn	2.125 pt / a	2-10				
206	Reason +	6.9 fl oz / a +	1,3	7 day	98.0	97.0	96.0
	Bond +	0.1 % v/v +					
	Dithane	2.0 lb / a					
	Echo Zn	1.3 pt / a	2				
	Luna Tranquility +	9.0 fl oz / a +	4				
	Dithane	2.0 lb / a					
	Echo Zn	2.125 pt / a	5,6,8-10				
	Scala +	7.0 fl oz / a +	7				
	Dithane	2.0 lb / a					
207	Emesto Silver +	0.31 fl oz / cwt +	Seed	7 day	85.0	88.0	88.5
	Nubark Mancozeb	1.0 lb / cwt					
	Serenade Soil	2.0 qt / a	In-furrow				
	Reason +	6.9 fl oz / a +	1,3				
	Bond +	0.1 % v/v +					
	Dithane	2.0 lb / a					
	Echo Zn	1.3 pt / a	2				
	Luna Tranquility +	9.0 fl oz / a +	4				
	Dithane	2.0 lb / a					
	Echo Zn	2.125 pt / a	5,6,8-10				
	Scala +	7.0 fl oz / a +	7				
	Dithane	2.0 lb / a					

208	Emesto Silver +	0.31 fl oz / cwt +	Seed	7 day	88.5	91.5	89.0
	Nubark Mancozeb	1.0 lb / cwt					
	Admire Pro	8.7 fl oz / a	In-furrow				
	Echo Zn	2.125 pt / a	1,3,5,7,9				
	Dithane	2 lbs / a	2,4,6,8,10				
209	Emesto Silver +	0.31 fl oz / cwt +	Seed	7 day	90.0	89.0	90.5
	Nubark Mancozeb	1.0 lb / cwt					
	Quadris +	0.8 fl oz / 1000 row ft +	In-furrow				
	Admire Pro	8.7 fl oz / a					
	Echo Zn	2.125 pt / a	1,3,5,7,9				
	Dithane	2 lbs / a	2,4,6,8,10				
210	Emesto Silver +	0.31 fl oz / cwt +	Seed	7 day	92.0	93.5	90.5
	Nubark Mancozeb	1.0 lb / cwt					
	Serenade Soil +	2.0 qt / a +	In-furrow				
	Admire Pro	8.7 fl oz / a					
	Echo Zn	2.125 pt / a	1,3,5,7,9				
	Dithane	2 lbs / a	2,4,6,8,10				
211	Emesto Silver +	0.31 fl oz / cwt +	Seed	7 day	80.5	90.0	90.5
	Nubark Mancozeb	1.0 lb / cwt					
	Serenade Soil +	3.0 qt / a +	In-furrow				
	Admire Pro	8.7 fl oz / a					
	Echo Zn	2.125 pt / a	1,3,5,7,9				
	Dithane	2 lbs / a	2,4,6,8,10				
212	Emesto Silver +	0.31 fl oz / cwt +	Seed	7 day	91.5	89.0	89.5
	Nubark Mancozeb	1.0 lb / cwt					
	Serenade Soil +	2.0 qt / a +	In-furrow				
	Quadris +	0.8 fl oz / 1000 row ft +					
	Admire Pro	8.7 fl oz / a					
	Echo Zn	2.125 pt / a	1,3,5,7,9				
	Dithane	2 lbs / a	2,4,6,8,10				
213	Confidential				89.5	89.0	90.0
214	Headline	9 fl oz / a	1	7 day	96.5	95.0	91.5
	Echo Zn	2.125 pt / a	2-10				
LSD _{P = 0.05}					9.92	5.97	NS

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Rep IV

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Rep III

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Rep II

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Rep I

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