

## **Stop #10: Anthracnose Fungicide Trial 2015**

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### **Anthracnose:**

Eleven fungicide treatments are being evaluated for their ability to control anthracnose preventatively on an annual bluegrass green. Inoculation was achieved through core aeration and dragging in order to spread the existing inoculum. The plot was originally established in 2007 from seed with 'Peterson's Creeping' annual bluegrass. The study was set up as a randomized complete block with four replications. Fungicide treatments were initiated on 2 June 2015 before disease symptoms were present. Treatments were sprayed every 14 days. The plot receives 0.125 lb N/1000ft<sup>2</sup> every 14 days. The plot was topdressed on 15 May 2015, 18 August 2015, and deep tined on 15 May 2015. The most recent rating date was 27 August 2015.

<b>Location:</b>	UCR Turf Facility
<b>Soil:</b>	Hanford fine sandy loam
<b>Experimental Design:</b>	Complete randomized block with 4 replications
<b>Plot Size:</b>	4' X 6'
<b>Application Information:</b>	CO <sub>2</sub> Backpack sprayer with TeeJet 8004VS nozzles Output: 2 gal/M
<b>Mowing Regime:</b>	0.125 inches 3 days/wk

### **Results and Conclusions:**

- ✓ Overall, anthracnose disease pressure and distribution were moderate to heavy, with disease present in every replication by mid-June.
- ✓ All of the fungicide treatments significantly reduced disease pressure when compared with the control, but no significance has been seen when comparing different treatments.
- ✓ Two treatments (4 & 5) received consistently high turf quality and Normalized Difference Vegetation Index (NDVI) ratings throughout the study.
- ✓ Summer patch disease pressure was present but sporadic this year. Treatments that did not contain fungicides for summer patch and anthracnose control suffered most from the disease.

**Data:**

**Table 1.** Effects of fungicides and fungicide programs on turf quality (1-9) and Normalized Difference Vegetation Index (NDVI 0-1). Disease and turf quality ratings were taken every 14 days but only the two most recent rating dates are shown.

Trt	Treatment Name	Rate	Rate Unit	Appl Code	Turf Quality 8/13/15 1-9	Turf Quality 8/27/15 1-9	NDVI 8/13/15 0-1	NDVI 8/27/15 0-1
1	Control				3.88 b	3.75 b	0.730 b	0.693 b
2	Chipco Signature	4 oz wt/1000 ft2		ACDEFGH	6.25 a	6.25 a	0.848 a	0.870 a
	Daconil Ultrex	3.2 oz wt/1000 ft2		ADFH				
	Mirage SC	1 fl oz/1000 ft2		BG				
	Insignia	0.7 fl oz/1000 ft2		CE				
3	Signature Stressgard	4 oz wt/1000 ft2		ACDEFGH	7.38 a	7.00 a	0.868 a	0.870 a
	Daconil Ultrex	3.2 oz wt/1000 ft2		ADFH				
	Mirage SC	1 fl oz/1000 ft2		BG				
	Insignia	0.7 fl oz/1000 ft2		CE				
4	Velista	0.5 oz wt/1000 ft2		ACEG	7.63 a	7.38 a	0.870 a	0.870 a
	Daconil Action	3.5 fl oz/1000 ft2		ABCDEFGH				
	Appear	6 fl oz/1000 ft2		ABCDEFGH				
	Primo Maxx	0.1 fl oz/1000 ft2		ABCDEFGH				
	Heritage Action	0.4 oz wt/1000 ft2		BDFH				
5	Heritage Action	0.2 oz wt/1000 ft2		ABCDEFGH	7.50 a	7.25 a	0.850 a	0.875 a
	Daconil Action	3.5 fl oz/1000 ft2		ABCDEFGH				
	Appear	6 fl oz/1000 ft2		ABCDEFGH				
6	Velista	0.5 oz wt/1000 ft2		ABCDEFGH	6.88 a	6.13 a	0.860 a	0.868 a
	Daconil Action	3.5 fl oz/1000 ft2		ABCDEFGH				
	Primo Maxx	0.1 fl oz/1000 ft2		ABCDEFGH				
7	Velista	0.5 oz wt/1000 ft2		ABCDEFGH	6.13 a	5.63 a	0.835 a	0.835 a
	Daconil Action	3.5 fl oz/1000 ft2		ABCDEFGH				
	Appear	6 fl oz/1000 ft2		ABCDEFGH				
8	A20581A	0.34 fl oz/1000 ft2		ABCDEFGH	6.38 a	6.00 a	0.848 a	0.858 a
9	Briskway	0.7 fl oz/1000 ft2		AH	7.50 a	7.00 a	0.873 a	0.853 a
	Primo Maxx	0.1 fl oz/1000 ft2		ABCDEFGH				
	Velista	0.5 oz wt/1000 ft2		BDF				
	Appear	6 fl oz/1000 ft2		BCEFG				
	Heritage Action	0.4 oz wt/1000 ft2		CEG				
	Daconil Action	3.5 fl oz/1000 ft2		CDEG				
10	Encartis	4 fl oz/1000 ft2		ABCDEFGH	5.75 a	4.50 b	0.840 a	0.808 a
11	Lexicon Intrinsic	0.47 fl oz/1000 ft2		ACEG	6.38 a	6.13 a	0.853 a	0.860 a
	Encartis	4 fl oz/1000 ft2		BDFH				
	Trinity	1 fl oz/1000 ft2		BDFH				
12	Clearys 3336	4 oz wt/1000 ft2		AB	6.88 a	6.88 a	0.865 a	0.865 a
	Velista	0.5 oz wt/1000 ft2		CDEFGH				
	Daconil Action	3.5 fl oz/1000 ft2		CDEFGH				
	Primo Maxx	0.1 fl oz/1000 ft2		CDEFGH				

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)  
Each letter in application code represents a 14 day interval

**Application Code**

A = 2 June 2015  
B = 16 June 2015  
C = 30 June 2015  
D = 14 July 2015

E = 28 July 2015  
F = 11 August 2015  
G = 25 August 2015  
H = 8 September 2015

**Table 2.** Effects of fungicides and fungicide programs on turf color (1-9), summer patch cover (%), and anthracnose cover (%). Disease and turf quality ratings were taken every 14 days but only the two most recent rating dates are shown.

Trt	Treatment Name	Rate	Rate Unit	Appl Code	Turf Color 8/13/15 1-9	Turf Color 8/27/15 1-9	Summer Patch 8/13/15 %	Summer Patch 8/27/15 %	Anthracnose 8/13/15 %	Anthracnose 8/27/15 %
1	Control				3.75 c	3.50 c	0.0 a	0.0 c	48.8 a	55.0 a
2	Chipco Signature	4 oz wt/1000 ft2	ACDEFGH		6.13 ab	6.25 ab	0.6 a	0.0 c	0.0 b	0.0 b
	Daconil Ultrex	3.2 oz wt/1000 ft2	ADFH							
	Mirage SC	1 fl oz/1000 ft2	BG							
	Insignia	0.7 fl oz/1000 ft2	CE							
3	SignatureStressgard	4 oz wt/1000 ft2	ACDEFGH		7.50 a	7.00 a	0.0 a	0.0 c	0.0 b	0.0 b
	Daconil Ultrex	3.2 oz wt/1000 ft2	ADFH							
	Mirage SC	1 fl oz/1000 ft2	BG							
	Insignia	0.7 fl oz/1000 ft2	CE							
4	Velista	0.5 oz wt/1000 ft2	ACEG		7.75 a	7.38 a	0.6 a	0.0 c	0.0 b	0.0 b
	Daconil Action	3.5 fl oz/1000 ft2	ABCDEFGH							
	Appear	6 fl oz/1000 ft2	ABCDEFGH							
	Primo Maxx	0.1 fl oz/1000 ft2	ABCDEFGH							
	Heritage Action	0.4 oz wt/1000 ft2	BDFH							
5	Heritage Action	0.2 oz wt/1000 ft2	ABCDEFGH		7.75 a	7.25 a	0.8 a	0.0 c	0.0 b	0.0 b
	Daconil Action	3.5 fl oz/1000 ft2	ABCDEFGH							
	Appear	6 fl oz/1000 ft2	ABCDEFGH							
6	Velista	0.5 oz wt/1000 ft2	ABCDEFGH		7.38 a	6.38 ab	2.1 a	5.0 c	0.0 b	0.0 b
	Daconil Action	3.5 fl oz/1000 ft2	ABCDEFGH							
	Primo Maxx	0.1 fl oz/1000 ft2	ABCDEFGH							
7	Velista	0.5 oz wt/1000 ft2	ABCDEFGH		6.13 ab	5.88 ab	3.1 a	11.8 b	0.0 b	2.5 b
	Daconil Action	3.5 fl oz/1000 ft2	ABCDEFGH							
	Appear	6 fl oz/1000 ft2	ABCDEFGH							
8	A20581A	0.34 fl oz/1000 ft2	ABCDEFGH		6.50 ab	6.13 ab	0.0 a	3.0 c	6.3 b	6.3 b
9	Briskway	0.7 fl oz/1000 ft2	AH		7.88 a	7.38 a	0.8 a	0.0 c	0.0 b	0.0 b
	Primo Maxx	0.1 fl oz/1000 ft2	ABCDEFGH							
	Velista	0.5 oz wt/1000 ft2	BDF							
	Appear	6 fl oz/1000 ft2	BCEFG							
	Heritage Action	0.4 oz wt/1000 ft2	CEG							
	Daconil Action	3.5 fl oz/1000 ft2	CDEG							
10	Encartis	4 fl oz/1000 ft2	ABCDEFGH		5.25 b	4.63 bc	3.3 a	28.8 a	0.0 b	2.0 b
11	Lexicon Intrinsic	0.47 fl oz/1000 ft2	ACEG		6.25 ab	6.38 ab	0.0 a	1.3 c	0.0 b	0.0 b
	Encartis	4 fl oz/1000 ft2	BDFH							
	Trinity	1 fl oz/1000 ft2	BDFH							
12	Clearys 3336	4 oz wt/1000 ft2	AB		7.25 a	7.13 a	0.0 a	0.0 c	0.0 b	0.0 b
	Velista	0.5 oz wt/1000 ft2	CDEFGH							
	Daconil Action	3.5 fl oz/1000 ft2	CDEFGH							
	Primo Maxx	0.1 fl oz/1000 ft2	CDEFGH							

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)  
Each letter in application code represents a 14 day interval

North/Trees

EXP	10	EXP	EXP	9	
EXP	5	EXP	EXP	7	
11	4	7	4	10	2
10	EXP	EXP	2	EXP	7
9	EXP	6	EXP	1	9
8	1	3	11	3	EXP
7	EXP	2	EXP	EXP	8
6	9	EXP	3	6	EXP
5	EXP	11	8	EXP	EXP
4	EXP	8	1	11	10
3	EXP	EXP	5	5	EXP
2	EXP	6	EXP	EXP	4
1	EXP	12	12	12	12

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