2010 Turf Disease Trials
Juanita Rios and Frank Wong
UCR Department of Plant Pathology & Microbiology

Materials Tested in 2010

Fungicide	Manufacturer	Fungicide(s)	Notes
Affirm 11.3WDG	Cleary Chemical	polyoxin-D	A new formulation of polyoxin-D similar to Endorse.
Concert 4.3SC	Syngenta	chlorothalonil + propiconazole	A premix of the active ingredients in Daconil and Banner MAXX
Disarm C	Arysta	chlorothalonil + fluoxastrobin	A premix of Disarm plus chlorothalonil for broad spectrum disease activity
Disarm M	Arysta	fluoxastrobin + myclobutanil	A premix of Disarm plus myclobutanil for broad spectrum disease activity
Headway 1.4ME	Syngenta	azoxystrobin + propiconazole	A premix of the active ingredients in Heritage and Banner MAXX
Interface 2.27SC	Bayer	iprodione + trifloxystrobin	A premix of the active ingredients in 26GT and Compass with StressGard pigment.
Iprodione Pro 2SE	BASF	iprodione	A post-patent formulation of iprodione similar to 26GT.
Primo MAXX 1MEC	Syngenta	trinexapac-ethyl	Not a fungicide, but a plant growth regulator that helps to reduce anthracnose severity.
Renown 5SC	Syngenta	azoxystrobin + chlorothalonil	A premix of the active ingredients in Daconil and Heritage
Reserve 4.8SC	Bayer	chlorothalonil + triticonazole	A premix of the active ingredients in Daconil and Triton FLO with StressGard pigment.
Signature 80WG	Bayer	fosetyl-Al	A phosphonate fungicide with StressGard pigment.
Tartan 2.4SC	Bayer	triadimefon + trifloxystrobin	A premix of the active ingredients in Compass and Bayleton with StressGard pigment.
Torque 3.8SE	ClearyChemical	tebuconazole	A new DMI fungicide.
Tourney 50WG	Valent	metconazole	A new DMI fungicide.
Triton FLO 3.1SC	Bayer	triticonazole	A new DMI fungicide with StressGard pigment..
Velista 50WDG	DuPont	penthiopyrad	A new SDHI fungicide in the same class as Emerald and ProStar with a different disease spectrum.

2010 Summer Anthracnose Trials

Forty fungicide treatments were evaluated for their ability to control anthracnose on annual bluegrass. Plots were inoculated on 1 Jun with anthracnose spores grown in the laboratory. The green was a 'Peterson's Creeping' annual bluegrass, established in 2007 from seed. Turf was mowed 3 days a week at a height of 0.25-in. and irrigated daily according to ET needs. Fungicide applications were initiated on 15 Jun.

In addditon to fungicides registered in California and those in late stages of development, evaluated treatments included a number of experimental compounds from Syngenta and Valent. Eight Bayer Programs and one Syngenta Program was

Disease pressure during the trial was good, with check plots reaching a maximum of 82.5% disease by 10 Aug. Generally, curative applications slowed the rate of disease progress after the first applications but it was not until the 3rd application that significant differences were observed between treatments (27 Jul evaluation date).

Plot Map

EAST

1	2	3	4	5	6	7	8	9	10	11	12	13
14	15	16	17	18	19	20	21	22	23	24	25	26
27	28	29	30	31	32	33	34	35	36	37	38	39
40	11	34	2	35	3	36	4	37	6	38	5	39
13	33	12	32	1	31	10	30	9	29	8	28	7
21	14	22	15	23	16	24	17	25	18	26	19	27
40	20	19	20	1	29	21	2	30	22	3	23	31
9	28	8	27	7	33	26	6	32	25	5	24	4
18	10	34	11	35	12	36	13	37	14	38	16	15
24	7	35	8	33	9	32	10	31	11	39	40	17
6	16	5	15	4	14	3	38	2	39	12	1	13
25	17	34	18	x	19	27	20	28	21	29	22	30
x	x	36	40	37	23	26						

Table 2. Fungicide effectiveness vs anthracnose

			% Disease									
			15-Jun		29-Jun		13-Jul		27-Jul		10-Aug	
#	Treatment and rate per 1,000 sq ft	Interval	Avg	SD	Avg	SD	Avg	SD	Avg	SD	Avg	SD
1	Check	14	45.0	31.1	45.0	30.0	55.0	25.2	75.0	12.9	82.5	12.6
2	Syngenta EXP1 0.37 fl oz	14	36.3	24.3	32.5	25.0	30.0	25.8	25.0	25.2	20.0	27.1
3	Syngenta EXP1 0.49 fl oz	14	25.0	12.9	12.5	9.6	5.0	10.0	0.0	0.0	0.0	0.0
4	Syngenta EXP2 1.20 fl oz plus Daconil Ultrex 82.5 WG 3.20 oz	14	30.0	16.3	27.5	9.6	15.0	10.0	2.5	5.0	0.0	0.0
5	Syngenta EXP2 1.61 fl oz plus Daconil Ultrez 82.5 WG 3.20 oz	14	26.3	22.1	17.5	17.1	7.5	9.6	0.0	0.0	0.0	0.0
6	Syngenta EXP3 0.47 fl oz plus Daconil Ultrex 82.5 WG 3.20 oz	14	35.0	30.0	27.5	31.0	12.5	15.0	0.0	0.0	0.0	0.0
7	Syngenta EXP3 0.63 fl oz plus Daconil Ulrex 82.5 WG 3.20 oz	14	30.0	29.4	30.0	34.6	10.0	14.1	2.5	5.0	0.0	0.0
8	Syngenta EXP1 0.37 fl oz plus EXP6 1.00 fl oz	14	17.5	9.6	12.5	9.6	8.8	8.5	0.0	0.0	0.0	0.0
9	Syngenta EXP4 0.37 oz	14	31.3	23.9	32.5	12.6	17.5	15.0	0.0	0.0	0.0	0.0
10	Syngenta EXP1 0.37 fl oz plus Daconil Ultrex 82.5 WG 2.40 oz	14	23.8	27.5	12.5	15.0	7.5	9.6	0.0	0.0	0.0	0.0
11	Syngenta EXP1 0.49 fl oz plus Daconil Ultrex 82.5 WG 3.20 oz	14	25.0	23.8	13.8	7.5	11.3	6.3	0.0	0.0	0.0	0.0
12		14	17.5	15.0	20.0	14.1	20.0	14.1	35.0	12.9	22.5	28.7
13		21	13.8	13.8	25.0	26.5	25.0	26.5	27.5	25.0	20.0	27.1
14	Renown 5SC 2.50 fl oz	14	13.8	31.1	25.0	22.5	25.0	23.6	7.5	15.0	20.0	5.0
15	Renown 5SC 4.50 fl oz	21	25.0	26.5	11.3	13.1	7.5	9.6	0.0	0.0	0.0	0.0
16	Syngenta EXP5 0.38 oz	14	20.0	23.1	15.0	17.3	17.5	20.6	15.0	19.1	10.0	14.1
17	Syngenta Summer Program	14	22.5	26.3	25.0	17.3	22.5	17.1	5.0	10.0	0.0	0.0
18	Bayer Program 1	14	35.0	30.0	25.0	20.8	20.0	24.5	0.0	0.0	0.0	0.0
19	Bayer Program 2	14	17.5	22.2	10.0	14.1	10.0	14.1	0.0	0.0	0.0	0.0
20	Bayer Program 3	14	22.5	28.7	17.5	20.6	10.0	11.5	2.5	5.0	0.0	0.0
21	Bayer Program 4	14	27.5	20.6	21.3	23.2	18.8	22.5	0.0	0.0	0.0	0.0
22	Bayer Program 5	14	25.0	23.8	20.0	24.5	12.5	15.0	0.0	0.0	0.0	0.0
23	Bayer Program 6	14	40.0	24.5	27.5	17.1	10.0	8.2	2.5	5.0	0.0	0.0
24	Bayer Program 7	14	35.0	35.1	21.3	21.7	16.3	18.0	15.0	19.1	10.0	14.1

Table 2. Fungicide effectiveness vs anthracnose (continued)

			% Disease									
			15-Jun		29-Jun		13-Jul		27-Jul		10-Aug	
#	Treatment and rate per 1,000 sq ft	Interval	Avg	SD	Avg	SD	Avg	SD	Avg	SD	Avg	SD
25	Bayer Program 8	14	45.0	19.1	22.5	15.0	20.0	11.5	1.3	2.5	0.0	0.0
26	Reserve 4.8 SC 3.20 fl oz	14	37.5	33.0	30.0	29.4	17.5	15.0	7.5	15.0	5.0	10.0
27	Reserve 4.8 SC 3.50 fl oz	14	35.0	30.0	32.5	27.5	25.0	20.8	10.0	11.5	0.0	0.0
28	Reserve 4.8 SC 4.50 fl oz	14	17.5	22.2	12.5	18.9	7.5	9.6	0.0	0.0	0.0	0.0
29	Concert 4.3SC 5.50 fl oz	14	32.5	25.0	27.5	20.6	27.5	20.6	15.0	30.0	17.5	35.0
30	Disarm C 5.90 fl oz	14	32.5	25.0	20.0	18.3	15.0	19.1	2.5	5.0	0.0	0.0
31	Disarm M 1.0 fl oz	14	30.0	24.5	20.0	11.5	17.5	15.0	5.0	10.0	0.0	0.0
32	Tourney 50WG 0.27 oz	14	35.0	26.5	42.5	9.6	22.5	17.1	1.3	2.5	0.0	0.0
33	Tourney 50WG 0.37 oz	14	45.0	25.2	37.5	12.6	30.0	14.1	2.5	5.0	0.0	0.0
34	Valent EXP1 2.50 oz	14	21.3	16.5	16.3	11.1	16.3	11.1	11.3	13.1	5.0	10.0
35	Velista 50WDG 0.30 oz	14	48.8	29.5	36.3	24.3	28.8	18.4	28.8	16.5	25.0	20.8
36	Velista 50WDG 0.50 oz	14	52.5	22.2	45.0	12.9	32.5	9.6	25.0	12.9	20.0	14.1
37	Velista 50WDG 0.70 oz	14	32.5	17.1	28.8	20.2	16.3	16.0	11.3	10.3	2.5	5.0
38	Velista plus Chlorothalonil Premix 2.10 fl oz	14	32.5	37.7	17.5	20.6	12.5	15.0	12.5	15.0	7.5	9.6
39	Torque 3.8SE 0.60 fl oz	14	27.5	32.0	22.5	26.3	25.0	23.8	15.0	17.3	5.0	10.0
40	Torque 3.8SE 0.60 fl oz alt Affirm 11.3WDG 0.90 oz alt Spectro 90WDG 3.00 oz	14	25.0	37.9	22.5	26.3	17.5	28.7	7.5	15.0	2.5	5.0

Syngneta Summer Program is as follows (All applied at 14-day intervals):

#	15-Jun	29-Jun	13-Jul	27-Jul	10-Aug	24-Aug	7-Sep
17	Headway 1.4ME 1.5 fl oz + Primo MAXX 1MEC 0.1 fl oz	Concert 4.3SC 5 fl oz + Primo MAXX 1MEC 0.1 fl oz	Renown 5SC 2.5 fl oz + Primo MAXX 1MEC 0.1 fl oz	Daconil WS 6SC 3.6 fl oz + Medallion 50WP 0.25 oz + Primo MAXX 1MEC 0.1 fl oz	Daconil WS 6SC 3.6 fl oz + Medallion 50WP 0.25 oz + Primo MAXX 1MEC 0.1 fl oz	Renown 5SC 2.5 fl oz + Primo MAXX 1MEC 0.1 fl oz	Concert 4.3SC 5 fl oz + Primo MAXX 1MEC 0.1 fl oz

Bayer Programs are as follows (All applied at 14-day intervals):

#	15-Jun	29-Jun	13-Jul	27-Jul	10-Aug	24-Aug	7-Sep
18	Triton FLO 3.1SC 0.75 fl oz	Triton FLO 3.1SC 0.75 fl oz	Signature 80WG 4.0 oz + Daconil Ultrex 82.5WG 3.2 oz	Reserve 4.8SC 3.6 fl oz	Signature 80WG 4.0 oz + Daconil Ultrex 82.5WG 3.2 oz	Reserve 4.8SC 3.6 fl oz	Reserve 4.8SC 3.6 fl oz
19	Reserve 4.8SC 3.6 fl oz	Reserve 4.8SC 3.6 fl oz	Signature 80WG 4.0 oz + Daconil Ultrex 82.5WG 3.2 oz	Reserve 4.8SC 3.6 fl oz	Signature 80WG 4.0 oz + Daconil Ultrex 82.5WG 3.2 oz	Reserve 4.8SC 3.6 fl oz	Reserve 4.8SC 3.6 fl oz
20	Signature 80WG 4.0 oz + Daconil Ultrex 82.5WG 3.2 oz	Signature 80WG 4.0 oz + Daconil Ultrex 82.5WG 3.2 oz	Reserve 4.8SC 3.6 fl oz	Signature 80WG 4.0 oz + Daconil Ultrex 82.5WG 3.2 oz	Reserve 4.8SC 3.6 fl oz	Reserve 4.8SC 3.6 fl oz	Reserve 4.8SC 3.6 fl oz
21	Reserve 4.8 SC 3.6 fl oz	Reserve 4.8 SC 3.6 fl oz	Signature 80WG 4.0 oz + Daconil Ultrex 82.5WG 3.2 oz	Reserve 4.8SC 3.6 fl oz	Signature 80WG 4.0 oz + Daconil Ultrex 82.5WG 3.2 oz	Reserve 4.8SC 3.6 fl oz	Reserve 4.8SC 3.6 fl oz
22	Signature 80WG 4.0 oz	Signature 80WG 4.0 oz + Daconil Ultrex 82.5WG 3.2 oz	Triton FLO 3.1SC 0.75 fl oz	Signature 80WG 4.0 oz + Daconil Ultrex 82.5WG 3.2 oz	Triton FLO 3.1SC 0.75 fl oz	Signature 80WG 4.0 oz + Daconil Ultrex 82.5WG 3.2 oz	Triton FLO 3.1 SC 0.75 fl oz
23	Reserve 4.8 SC 3.6 fl oz	Reserve 4.8 SC 3.6 fl oz	Insignia 20WG 0.90 oz+ Daconil Ultrex 82.5WG 3.2 oz	Reserve 4.8SC 3.6 fl oz	Insignia 20WG 0.90 oz+ Daconil Ultrex 82.5WG 3.2 oz	Reserve 4.8SC 3.6 fl oz	Reserve 4.8SC 3.6 fl oz
24	Signature 80WG 4.0 oz + Daconil Ultrex 82.5WG 3.2 oz	Signature 80WG 4.0 oz + Daconil Ultrex 82.5WG 3.2 oz	Signature 80WG 4.0 oz + Daconil Ultrex 82.5WG 3.2 oz	Signature 80WG 4.0 oz + Daconil Ultrex 82.5WG 3.2 oz	Signature 80WG 4.0 oz + Daconil Ultrex 82.5WG 3.2 oz	Signature 80WG 4.0 oz + Daconil Ultrex 82.5WG 3.2 oz	Signature 80WG 4.0 oz + Daconil Ultrex 82.5WG 3.2 oz
25	Triton FLO 3.1SC 0.75 fl oz	Triton FLO 3.1SC 0.75 fl oz	Insignia 20WG 0.90 oz+ Daconil Ultrex 82.5WG 3.2 oz	Reserve 4.8SC 3.6 fl oz	Insignia 20WG 0.90 oz+ Daconil Ultrex 82.5WG 3.2 oz	Reserve 4.8SC 3.6 fl oz	Triton FLO 3.1SC 0.75 fl oz

2010 Dollar Spot Trials

Twenty three fungicide treatments were evaluated for their effectiveness in controlling dollar spot (*Sclerotinia homoeocarpa*) on creeping bentgrass at UCR. The effectiveness of 19 of these is presented here. Plots were inoculated mid-May with dollar spot infested grain. The green was a 90/10 mix of creeping bentgrass and annual bluegrass, established in 2005 from sod. Turf was mowed 3 days a week at a height of 0.25-in. and irrigated daily according to ET needs. Fungicide applications were initiated on 8 Jun at 14-, 21- or 28-day intervals. Disease severity (% plot area affected) was evaluated every 14 days.

Disease pressure was good with disease reaching 52% by 20 Jul in untreated plots. Most fungicides gave an immediate response 14 days after the first application (22 Jun); by 6 Jul, almost all fungicide treatments were significantly different from the check plots.

Plot Map

1	2	3	4	5	6	7	8	9	10	11	12	13
14	15	16	17	18	19	20	21	22	1	20	18	4
11	5	14	10	6	15	19	12	16	3	21	2	17
7	13	8	22	9	1	14	10	2	19	9	15	20
13	4	18	11	12	3	6	17	22	7	21	16	8
5	12	4	11	3	16	2	10	1	17	8	18	9
13	15	22	5	14	21	6	20	7	19	23	23	23

Table 3. Control of dollar spot with fungicides

			% Dollar Spot							
			8-Jun		22-Jun		6-Jul		20-Jul	
#	Treatment and rate per 1,000 sq ft	Interval	Avg	SD	Avg	SD	Avg	SD	Avg	SD
1	Check	14	20.0	8.2	27.5	5.0	32.5	9.6	52.5	15.0
2	Interface SC 3.00 fl oz	14	16.3	7.5	0.0	0.0	0.0	0.0	0.0	0.0
3	Interface SC 4.00 fl oz	14	11.3	7.5	12.5	9.6	0.0	0.0	0.0	0.0
4	Interface SC 5.00 fl oz	14	16.3	4.8	2.5	5.0	0.0	0.0	0.0	0.0
5	Iprodione Pro 2 SE 5.00 fl oz	14	15.0	12.2	6.3	9.5	1.3	2.5	0.0	0.0
6	Tartan SC 1.50 fl oz	14	20.0	10.8	10.0	11.5	0.0	0.0	0.0	0.0
7	BASF EXP1 1.93 fl oz	14	17.5	9.6	7.5	5.0	2.5	5.0	0.0	0.0
8	BASF EXP1 2.89 fl oz	14	13.8	11.1	7.5	9.6	0.0	0.0	0.0	0.0
9	BASF EXP2 0.16 fl oz	14	16.3	11.1	5.0	5.8	1.3	2.5	0.0	0.0
10	BASF EXP2 0.16 fl oz	21	20.0	11.5	5.0	5.8	0.0	0.0	0.0	0.0
11	BASF EXP2 0.21 fl oz	21	21.3	6.3	7.5	9.6	1.3	2.5	0.0	0.0
12	BASF EXP2 0.21 fl oz	28	12.5	5.0	5.0	10.0	0.0	0.0	0.0	0.0
13	BASF EXP2 0.34 fl oz	21	5.0	4.1	7.5	9.6	2.5	2.9	0.0	0.0
14	BASF EXP2 0.46 fl oz	28	18.8	7.1	7.5	5.8	3.8	0.0	0.0	0.0
15	Velista 50WDG 0.30 oz	14	18.8	6.3	7.5	9.6	3.8	4.8	2.5	5.0
16	Velista 50WDG 0.50 oz	14	13.8	6.3	5.0	5.8	2.5	2.9	0.0	0.0
17	Valent EXP2 0.40 fl oz	14	18.8	11.1	6.3	9.5	2.5	5.0	0.0	0.0
18	Valent EXP2 0.50 fl oz	14	17.5	2.9	10.0	8.2	5.0	4.1	0.0	0.0
19	Valent EXP2 0.60 fl oz	14	17.5	6.5	12.5	9.6	1.3	2.5	0.0	0.0
20	Valent EXP2 0.70 fl oz	14	17.5	5.0	5.0	5.8	1.3	2.5	0.0	0.0
21	Tourney 50 WG 0.37 oz	14	11.3	10.3	17.5	5.0	11.3	5.0	3.8	7.5
22	Tourney 50 WG 0.37 oz plus Valent EXP2 0.50 fl oz	14	20.0	7.1	7.5	9.6	3.8	4.8	0.0	0.0
23	Torque 3.8SC 0.60 fl oz alt Spectro 90WDG 4.00 fl oz	14	25.0	10.0	25.0	10.0	16.3	7.5	1.3	2.5