

Dollar Spot Fungicide Trial - 1995

Hancock Turfgrass Research Center
Michigan State University, E. Lansing, MI

The 1995 dollar spot (*Sclerotinia homoeocarpa*) fungicide trial was conducted on an irrigated Emerald creeping bentgrass green at the Hancock Turfgrass Research Center on the MSU campus in E. Lansing, MI. The green was maintained at 1/4" height of cut and was fertilized at 1/2 lb N./mo. Treatments were initially applied to mildly diseased 2' x 9' plots in four replications of a random block design on 7, 14, 21, or 28 day schedules as indicated on the data tables (Tables 9 & 10), beginning on 7/29/95. By the last rating date (10/28/95), the 7 day treatments had been applied 9 times, the 14 day treatments had been applied 5 times, the 21 day treatments had been applied three times, and the 28 day treatments were applied three times. The dollar spot strains in this test location are benzimidazole-resistant.

As data tables 9 and 10 indicate, most treatments gave statistically significant dollar spot control, compared to the fertilized and unfertilized controls. By the latest rating data (9/28/95), most of the standard dollar spot fungicides exhibited none, or very little disease, and were statistically insignificant from each other.

No phytotoxicity was observed in this study this year.

Table 9. Dollar Spot Fungicide Study - 1995
Hancock Turfgrass Research Center
Michigan State University, East Lansing, MI

| Rating Scale: | 0 = no disease, 10 = 100% of plot diseased. (10) = best quality, (0) = worst quality, (7.5) = acceptable quality | | | | | | | |
|---------------------------------------|---|----------|----------------|--------------------|------|--------|----------|--|
| Rating Date: | 9/4/95 | | | | | | | |
| Treatment | Rate/1000 ft ^{2b} | Interval | I ^d | II | III | IV | Avg | |
| Ch. 26019 (WP) | 2.0 oz | 14 days | 0(8) | 0(8) | 0(8) | 0(8) | 0(8.0) | |
| RCO1 | 0.15 oz ai | 14 days | 0(7) | 0(8) | 0(8) | 0(8) | 0(7.8) | |
| RCO2 | 0.30 oz ai | 14 days | 0(7) | 0(8) | 0(7) | 0(8) | 0(7.5) | |
| Lynx + Dac. Ultrex | 0.5 oz + 1.84 oz | 14 days | 0(8) | 0(8) | 0(9) | 0(8) | 0(8.3) | |
| Bayleton + Dac. Ultrex | 0.5 oz + 1.84 oz | 14 days | 0(8) | 0(8) | 0(8) | 0(8) | 0(8.0) | |
| 6.0 fl oz | 14 days | 0(8) | 0(8) | 0(9) | 0(9) | 0(8.5) | I | |
| 2.75 fl oz | 14 days | 0(8) | 0(8) | 0(8) | 0(8) | 0(8.0) | I | |
| 4.0 fl oz | 14 days | 0(8) | 0(8) | 0(8) | 0(9) | 0(8.3) | I | |
| 6.0 fl oz | 14 days | 0(9) | 0(9) | 0(9) | 0(8) | 0(8.8) | I | |
| 2.7 lb ai/A | 21 days | 0(7) | 0(8) | 0(7) | 0(7) | 0(7.3) | I | |
| Eagle alternated with Ch. 26019 (WDG) | 0.6 oz & 2.0 oz | 21 days | 0(7) | 0(7) | 0(7) | 0(7) | 0(7.0) | |
| EXP10682A | 7.0 oz | 21 days | 0(7) | 0(8) | 0(8) | 0(8) | 0(7.8) | |
| Dac. 2787 | 6.0 fl oz | 14 days | 0(8) | 0(8) | 0(8) | 1C(8) | 0.3(8.0) | |
| Banner (GL) + Ch. 26019 (FLO) | 0.3 fl oz + 2.0 fl oz | 21 days | 0(7) | 0(8) | 0(7) | 1C(8) | 0.3(7.5) | |
| Banner (MC) + Ch. 26019 (FLO) | 5.0 fl oz + 1.0 oz | 21 days | 0(8) | 1 ^c (8) | 0(8) | 0(8) | 0.3(8.0) | |

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|----------------------------|-----------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------|
| 5.0 fl oz + 1.0 oz | 21 days | 0(7) | 0(8) | 1 ^c (7) | 0(8) | 0.3(7.5) | HI |
| 5.0 fl oz + 0.75 oz | 21 days | 0(8) | 1 ^c (8) | 0(9) | 0(9) | 0.3(8.5) | HI |
| 3.5 oz | 21 days | 0(8) | 1 ^c (8) | 0(7) | 0(8) | 0.3(7.8) | HI |
| 3.8 oz | 14 days | 0(7) | 1 ^c (9) | 1 ^c (7) | 0(8) | 0.5(7.8) | GHI |
| 3.5 oz | 14 days | 0(8) | 1 ^c (7) | 1 ^c (8) | 1 ^c (7) | 0.7(7.5) | F-I |
| 1.35lb. ai/A + 2.7lb. ai/A | 21 days | 1 ^c (7) | 1(6) | 0(9) | 1 ^c (8) | 0.7(7.5) | F-I |
| 0.9 fl oz + 1.25 oz | 21 days | 1(7) | 1 ^c (8) | 0(7) | 1 ^c (8) | 0.7(7.5) | F-I |
| 3.0 fl oz | 21 days | 1 ^c (8) | 1 ^c (7) | 1 ^c (7) | 0(7) | 0.7(7.3) | F-I |
| 1.0 oz | 21 days | 1 ^c (7) | 1(7) | 1 ^c (7) | 0(7) | 0.7(7.0) | F-I |
| 2.0 oz | 21 days | 1 ^c (7) | 1 ^c (8) | 1 ^c (8) | 0(7) | 0.7(7.5) | F-I |
| Sentinel | 0.167 oz | 28 days | 1 ^c (7) | 0(7) | 1 ^c (8) | 1 ^c (7) | 0.7(7.3) |
| Spectro C | 5.0 oz | 14 days | 1 ^c (8) | 1 ^c (8) | 1(7) | 1 ^c (7) | 1.0(7.5) |
| S-6115 | 1.33 lb | 14 days | 1(7) | 1(6) | 1(7) | 1(6) | 1.0(6.5) |
| S-6128 | 1.25 lb | 14 days | 1(7) | 1(6) | 1 ^c (7) | 1(7) | 1.0(6.8) |
| Lynx + Prostar | 1.0 oz + 2.0 oz | 21 days | 1 ^c (8) | 1(6) | 1(7) | 1 ^c (7) | 1.0(7.0) |
| 1.35lb. ai/A + 4lb. ai/A | 21 days | 1 ^c (7) | 1(6) | 1 ^c (7) | 1 ^c (7) | 1.0(6.8) | E-I |
| 0.3 fl oz | 21 days | 1(7) | 1(7)1 | 1 ^c (7) | 1 ^c (7) | 1.0(7.0) | E-I |
| 0.31 oz | 21 days | 1(6) | 1(6) | 1(7) | 1(6) | 1.0(6.3) | E-I |
| 0.31 oz + 1.25 oz | 21 days | 1 ^c (7) | 1(7) | 1 ^c (7) | 1(7) | 1.0(7.0) | E-I |

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|-------------------|--------------------|--------------------|--------------------|--------------------|----------|----------|-----|
| 0.6 oz | 21 days | 1 ^c (7) | 1(7) | 1 ^c (7) | 1(7) | 1.0(7.0) | E-I |
| 21 days | 1 ^c (8) | 1 ^c (8) | 1 ^c (7) | 1 ^c (7) | 1.0(7.5) | E-I | |
| 21 days | 1(7) | 1 ^c (7) | 1(6) | 1(7) | 1.0(6.8) | E-I | |
| 21 days | 1(7) | 1(6) | 1(6) | 1(7) | 1.0(6.5) | E-I | |
| 21 days | 1(6) | 1(6) | 1 ^c (7) | 1 ^c (8) | 1.0(6.8) | E-I | |
| 21 days | 1 ^c (8) | 1 ^c (7) | 1 ^c (8) | 1 ^c (7) | 1.0(7.5) | E-I | |
| 21 days | 1 ^c (7) | 1 ^c (7) | 1 ^c (7) | 1 ^c (8) | 1.0(7.3) | E-I | |
| 21 days | 1(7) | 2(6) | 1(7) | 1(7) | 1.3(6.8) | E-I | |
| 21 days | 2(6) | 1 ^c (7) | 1(7) | 1 ^c (7) | 1.3(6.8) | E-I | |
| 21 days | 2(6) | 1(7) | 1 ^c (8) | 1 ^c (7) | 1.3(7.0) | E-I | |
| 14 days & monthly | 1(7) | 2(7) | 1 ^c (7) | 1(7) | 1.3(7.0) | E-I | |
| 7 days | 4(5) | 1(6) | 1 ^c (7) | 1(6) | 1.8(6.0) | D-I | |
| 7 days | 3(5) | 1(6) | 1(6) | 2(5) | 1.8(5.5) | D-I | |
| 21 days | 2(6) | 2(5) | 2(6) | 1(6) | 1.8(5.8) | D-I | |
| 14 days | 2(6) | 2(5) | 2(5) | 2(6) | 2.0(5.5) | C-I | |
| 21 days | 2(5) | 2(6) | 2(5) | 3(5) | 2.3(5.3) | B-H | |
| 21 days | 2(5) | 3(5) | 3(5) | 1 ^c (7) | 2.3(5.5) | B-H | |
| 21 days | 3(6) | 2(5) | 2(6) | 3(5) | 2.5(5.5) | A-G | |
| 21 days | 3(5) | 4(4) | 2(5) | 2(6) | 2.8(5.0) | A-F | |

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|---------|--------|---------|------|------|----------|------|----------|
| 21 days | 2(5) | 6(3) | 2(6) | 2(6) | 3.0(5.0) | A-E | |
| 21 days | 2(4) | 3(6) | 5(3) | 3(5) | 3.3(4.5) | A-E | |
| --- | 3(5) | 4(5) | 5(3) | 3(5) | 3.8(4.5) | A-D | |
| --- | 4(4) | 5(3) | 3(5) | 3(4) | 3.8(4.0) | A-D | |
| monthly | 4(4) | 7(2) | 2(5) | 3(4) | 4.0(3.8) | ABC | |
| Prostar | 3.0 oz | 21 days | 5(3) | 6(4) | 4(5) | 3(4) | 4.5(4.0) |

*Treatment disease averages followed by same letter are not significantly different from each other at the 5% level (Tukeys Honestly Significant Differences Test).

^bRates are formulation unless indicated as active ingredient (ai) or otherwise.

^cPlot has fewer than 10 small dollar spots.

^dRatings in parentheses indicate turf quality.

Table 10. Dollar Spot Fungicide Study - 1995
Hancock Turfgrass Research Center
Michigan State University, E. Lansing, MI

Rating Scale: 0 = no disease, 10 = 100% of plot diseased
(10) = best quality, (0) worst quality. (7.5) = acceptable quality
Rating Date: Sept. 28, 1995

| Treatment | Rate/1000 ft ^{2b} | Interval | I ^d | II | III | IV |
|-----------------------------|----------------------------|-------------------|----------------|------|--------------------|------|
| Ch. 26019 (FLO) | 3 fl oz | 21 day | 0(7) | 0(7) | 0(7) | 0(8) |
| Ch. 26019 (WDG) | 2 oz | 21 day | 0(8) | 0(8) | 0(8) | 0(8) |
| EXP 10682A | 3.5 oz | 21 day | 0(7) | 0(8) | 0(8) | 0(8) |
| EXP 10682A | 7 oz | 21 day | 0(7) | 0(8) | 0(8) | 0(8) |
| Curalan | 1 oz | 21 day | 0(8) | 0(7) | 0(8) | 0(8) |
| Twosome | 3 fl oz | 21 day | 0(8) | 0(8) | 0(8) | 0(7) |
| Thalonil(F) + Lynx | 5 fl oz + 0.75 oz | 21 day | 0(8) | 0(8) | 0(9) | 0(8) |
| Thalonil(F) + Bayleton | 5 fl oz + 0.75 oz | 21 day | 0(7) | 9(8) | 0(7) | 0(8) |
| Thalonil(F) + Banner | 5 fl oz + 0.5 fl oz | 21 day | 0(8) | 0(8) | 0(8) | 0(8) |
| Banner(MC) + Ch. 26019(FLO) | 0.9 fl oz + 2 fl oz | 21 day | 0(8) | 0(8) | 0(8) | 0(8) |
| Banner(GL) + Ch. 26019(FLO) | 0.3 fl oz + 2 fl oz | 21 day | 0(7) | 0(8) | 0(8) | 0(8) |
| Curalan | 2.7 lb ai/A | 21 day | 0(8) | 0(7) | 0(8) | 0(8) |
| Dac. 2787 | 6 fl oz | 14 day | 0(9) | 0(9) | 0(9) | 0(9) |
| Ch. 26019 (WP) | 2 oz | 14 day | 0(8) | 0(8) | 0(8) | 0(8) |
| RC01 | 0.15 oz ai | 14 day | 0(7) | 0(8) | 0(8) | 0(8) |
| RC02 | 0.3 oz ai | 14 day | 0(7) | 0(8) | 0(8) | 0(8) |
| Lynx + Dac. Ultrex | 0.5 oz + 1.84 oz | 14 day | 0(9) | 0(8) | 0(9) | 0(8) |
| Bayleton + Dac. Ultrex | 0.5 oz + 1.84 oz | 14 day | 0(8) | 0(8) | 0(8) | 0(8) |
| Thalonil (4L) | 6 fl oz | 14 day | 0(9) | 0(9) | 0(9) | 0(8) |
| IB 11924 | 2.75 fl oz | 14 day | 0(8) | 0(8) | 0(8) | 0(9) |
| IB 10222 | 4 fl oz | 14 day | 0(8) | 0(9) | 0(8) | 0(9) |
| Dac. Ultrex | 3.8 oz | 14 day | 0(8) | 0(9) | 0(8) | 0(8) |
| IB 11521 | 6 fl oz | 14 day | 0(9) | 0(9) | 0(9) | 0(8) |
| Spectro C | 5 oz | 14 day | 0(8) | 0(8) | 0(8) | 0(8) |
| Dac. 2787 & Primo | 6 fl oz + 0.09 lb ai/A | 14 days & monthly | 0(8) | 0(8) | 0(9) | 0(8) |
| Thalonil(DF) | 3.5 oz | 14 days | 0(9) | 0(8) | 1 ^c (9) | 0(8) |

| | | | | | | |
|------------------------------------|----------------------------|---------|--------------------|--------------------|--------------------|--------------------|
| Curalan + Dac. Ultrex | 1.35 lb ai/A + 4 lb ai/A | 21 days | 0(7) | 1 ^c (8) | 0(8) | 0(8) |
| Banner(MC) + Dac. Ultrex | 0.9 fl oz + 1.25 oz | 21 days | 0(7) | 0(9) | 0(8) | 1 ^c (8) |
| Eagle alternated w/ Ch. 26019(WDG) | 0.6 oz & 2 oz | 21 days | 0(0) | 1 ^c (7) | 0(7) | 0(8) |
| Curalan + Fungo 85 | 1.35 lb ai/A + 2.7 lb ai/A | 21 days | 1 ^c (7) | 1 ^c (9) | 0(8) | 0(8) |
| EXP 10702A | 3 fl oz | 21 day | 0(8) | 1 ^c (9) | 1 ^c (8) | 0(8) |
| Sentinel | 0.167 oz | 28 day | 1 ^c (7) | 1 ^c (7) | 0(9) | 1 ^c (8) |
| Rubigan AS | 1.5 fl oz | 21 day | 1 ^c (7) | 1 ^c (7) | 0(7) | 1 ^c (8) |
| Banner(GL) + Dac. Ultrex | 0.3 fl oz + 1.25 oz | 21 day | 1 ^c (6) | 0(8) | 1 ^c (7) | 1 ^c (7) |
| S-6115 | 1.33 lb | 14 day | 1(6) | 1(6) | 1(7) | 1 ^c (7) |
| S-6128 | 1.25 lb | 14 day | 1(7) | 1 ^c (7) | 1 ^c (7) | 1 ^c (7) |
| Banner(GL) | 0.3 fl oz | 21 day | 1(7) | 1 ^c (7) | 1 ^c (7) | 1 ^c (8) |
| Banner (WP) | 0.31 oz | 21 day | 1(6) | 1 ^c (6) | 1(7) | 1(7) |
| Banner(WP) + Dac. Ultrex | 0.31 oz + 1.25 oz | 21 day | 1 ^c (7) | 1 ^c (7) | 1 ^c (7) | 1 ^c (7) |
| Eagle | 0.6 oz | 21 day | 1 ^c (7) | 1 ^c (7) | 1(7) | 1 ^c (7) |
| Bayleton + Prostar | 1 oz + 2 oz | 21 day | 1 ^c (8) | 1(7) | 1 ^c (7) | 1 ^c (7) |
| Rubigan AS | 0.75 fl oz | 21 day | 1(7) | 1(7) | 1 ^c (6) | 1 ^c (7) |
| Rubigan AS+ Prostar | 0.75 fl oz + 2 oz | 21 day | 1(6) | 1(6) | 1(6) | 1 ^c (7) |
| Rubigan AS + Prostar | 1.5 fl oz + 2 oz | 21 day | 1 ^c (7) | 1(7) | 1 ^c (7) | 1 ^c (7) |
| Lynx + Prostar | 1 oz + 2 oz | 21 day | 1 ^c (7) | 2(6) | 1(6) | 1 ^c (7) |
| Banner(MC) | 0.9 fl oz | 21 day | 2(6) | 1(7) | 1 ^c (7) | 1 ^c (7) |
| V-10028 | 27.3 gm. | 7 day | 4(5) | 1(6) | 1 ^c (7) | 1(6) |
| NAF-53 | 1.5 fl oz | 21 day | 2(6) | 3(5) | 2(6) | 0(8) |
| V-10028 | 54.7 gm. | 7 day | 3(5) | 1(6) | 2(5) | 3(5) |
| NAF-53 | 0.75 fl oz | 21 day | 2(5) | 2(5) | 2(6) | 3(5) |
| Dac. Ultrex | 1.25 oz | 21 day | 3(5) | 2(5) | 1(6) | 3(6) |
| Rubigan AS + Prostar | 0.38 fl oz + 1 oz | 21 day | 3(6) | 3(5) | 2(6) | 2(6) |
| NAF-53 | 0.38 fl oz | 21 day | 3(4) | 3(4) | 2(5) | 2(6) |
| Cleary 3336 | 2 oz | 14 day | 3(5) | 3(5) | 3(5) | 3(5) |
| Prostar | 2 oz | 21 day | 3(5) | 2(6) | 5(3) | 4(4) |
| Primo | 0.09 lb ai/A | monthly | 4(4) | 5(3) | 3(5) | 4(4) |
| Control(fert.) | -- | -- | 4(3) | 4(5) | 5(3) | 3(5) |
| Prostar | 3 oz | 21 day | 5(3) | 5(3) | 4(3) | 5(3) |

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Control (unfert.)

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5(3)

6(3)

4(3)

5(4)

^aTreatment disease rating averages followed by same letter are not significantly different from each other at the 5% level.

^bRates are formulation per 1000 ft² unless indicated as active ingredient (ai) or otherwise.

^cPlot has fewer than 10 small dollar spots.

^dRatings in parentheses indicate turf quality.

Compounds Tested in 1994-95 Season

| <u>Product Trade Name</u> | <u>formulation</u> | <u>Manufacturer</u> |
|---------------------------|--------------------|---------------------|
| Aliette WDG | 80 WDG | Rhone-Poulenc |
| AMV 6 | NA | Amvac Chem. Co |
| AMV 30 | NA | Amvac Chem. Co |
| ANDFG 176 - ANDFG 190 | NA | The Andersons |
| Banner | 1.1 EC | Ciba Geigy Corp. |
| Banner (GL) | NA | Ciba Geigy Corp. |
| Banner (MC) | NA | Ciba Geigy Corp. |
| Banner (WP) | NA | Ciba Geigy Corp. |
| Bayleton | 25 DF | Miles Corp. |
| Calo-Clor | 90 WP | O.M. Scotts & So |
| Calo-Gran | 2.7 G | O.M. Scotts & So |
| CGA-0173506 | NA | Ciba Geigy Corp. |
| Chipco 26019 FLO | 25 F | Rhone Poulenc |
| Chipco 26019 WDG | 50 WDG | Rhone Poulenc |
| Chipco 26019 (WP) | 50 WP | Rhone Poulenc |
| Cleary 3336 | 50 WP | WP.A. Cleary Ch |
| Consyst | 67 WP | Regal Chemical C |
| Curalan | 50 DF | BASF Corp. |
| Cutless | 50 W | Dow Elanco |
| Daconil 2787 | 4.17 F | ISK Biotech |
| Daconil Ultrex | 82.5 WDG | ISK Biotech |
| Defend | 2 F | WP.A. Cleary Ch |
| Dithane M-45 | 80 WP | Rohm & Haas |
| Eagle | 40 WP | Rohm & Haas |

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| | | |
|-----------------------------|------------------|-------------------|
| Embark | 2 S | PBI/Gordon |
| EXP 10452A | NA | Rhone Poulenc |
| EXP 10682A | NA | Rhone Poulenc |
| EXP 10702A | NA | Rhone Poulenc |
| EXP 10704A | NA | Rhone Poulenc |
| Fluazinam 500 | 500 F | ISK Biotech |
| Fore | 80 W | Rohm & Haas |
| Fungo 85 | 85 DF | O.M. Scotts & So |
| Herbruck's Fertilizer | 10-2-10 | Herbrucks |
| Heritage | 50 WDG | Zeneca Ag Prods. |
| IB 10222 | NA | ISK Biotech |
| IB 11521 | NA | ISK Biotech |
| IB 11924 | NA | ISK Biotech |
| Latron CS-7 | Surfactant | Rohm & Haas |
| Lesco R100002-Lesco R100012 | NA | Lesco |
| Lynx | 25DF | Miles, Inc. |
| Menafee Humate | Soil conditioner | Earthgreen Prods. |
| NAF-53 | 2 EC | Dow Elanco |
| Panasea Plus | N/A | Emerald Isle |
| PCNB | 75 WP | Amvac Chem. Co |
| Primo | 1 EC | Ciba Geigy Corp. |
| Prostar | 50 WP | Nor-Am |
| RC01 | NA | Regal Chemical C |
| RC02 | NA | Regal Chemical C |
| Revere | 75 WDG | Lesco |

| | | |
|--|--------------------------|-------------------|
| RH-0611 | 62.3 WP | Rohm & Haas |
| Rizolex | 75 WP | Sandoz Agro, Inc. |
| Rubigan AS | 1.1 F | Dow Elanco |
| Rubigan (WP) | 50 WP | Dow Elanco |
| S-6115 | NA | O.M. Scotts & So |
| S-6128 | NA | O.M. Scotts & So |
| Scotts Fertilizer & Fungicide II (FF II) | 14-3-3 fert., 15.4% PCNB | O.M. Scotts & So |
| Sentinel | 40 WDG | Sandoz Agro, Inc. |
| Spotrete | 75 WDG | W.A. Cleary Che |
| Subdue | 2E | Ciba Geigy Corp. |
| Terraclor | 75 WP | Uniroyal Chem. |
| Thalonil (DF) | 90 DF | Terra |
| Thalonil (F) | 4 F | Terra |
| Turfcide 10 G | 10 GR | Uniroyal Chem. |
| Turfcide 400 | 4 F | Uniroyal Chem. |
| Turf Enhancer | 2 SC | O.M. Scotts & So |
| UBI 9249 | NA | Uniroyal Chem. |
| UBI 9250 | NA | Uniroyal Chem. |
| V-10028 | NA | Valent |
| Vigoro 94-292-1-GS, etc. | NA | Vigoro |
| Vorlan | 50 DF | O.M. Scotts & So |