

University of GA Coop Ext Service

Bermudagrass Response to Primo Maxx and Cutless

Trial ID: Turf 40-03
Location: Griffin, GA

Study Dir.: Jay Ferrell
Investigator: Tim R Murphy

GENERAL TRIAL INFORMATION

Investigator: Tim R Murphy
Affiliation: UGA-CAES
Study Director: Jay Ferrell
Affiliation: UGA-CAES

Title: Weed Scientist
Title: Res. Scientist

TRIAL LOCATION

City: Griffin Trial Status: 1 yr/final

COOPERATOR/LANDOWNER

Cooperator: Steve Kammerer
Org: Syngenta

CROP DESCRIPTION

Crop 1: CYNDA BERMUDAGRASS/CYNODON DACTYLON Variety: Tifway
Perennial Age: 20 YEAR

SITE AND DESIGN

Plot Width, Unit: 6 FT Plot Length, Unit: 15 FT Reps: 4
Site Type: Simulated golf course fairway Study Design: RANDOMIZED COMPLETE BLOCK

MAINTENANCE

Field Prep./Maintenance: Site mowed at 0.5 inch with Triplex reel mower 3 times per week (Mon., Wed. and Fri.). Clippings returned to site. Irrigated as needed to prevent wilt.

APPLICATION DESCRIPTION

| | A | B |
|----------------------|-----------|-----------|
| Application Date: | 7-3-2003 | 7-31-2003 |
| Time of Day: | 11:30 a.m | 1:40 pm |
| Application Method: | SPRAY | SPRAY |
| Application Timing: | POSPOS | POSPOS |
| Applic. Placement: | FOLIAR | FOLIAR |
| Air Temp., Unit: | 82 F | 85 F |
| % Relative Humidity: | 57 | 70 |
| Wind Velocity, Unit: | 2.5 MPH | 1 MPH |
| Dew Presence (Y/N): | N | N |
| Water Hardness: | | |
| Soil Temp., Unit: | 80 F | 87 F |
| Soil Moisture: | EXCESSIVE | EXCESSIVE |
| % Cloud Cover: | 0 | 80 |

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CROP STAGE AT EACH APPLICATION

| | A | B |
|---------------------|----------|----------|
| Crop 1 Code, Stage: | CYNDA | CYNDA |
| Stage Scale: | active | Active |
| Height, Unit: | 0.5 inch | 0.5 inch |

APPLICATION EQUIPMENT

| | A | B |
|-----------------------|----------|----------|
| Appl. Equipment: | Backpack | Backpack |
| Operating Pressure: | 26 psi | 21 psi |
| Nozzle Type: | Flat fan | 8008 |
| Nozzle Size: | 8008 | Flat fan |
| Nozzle Spacing, Unit: | 20 IN | 20 inch |
| Boom Length, Unit: | 5 FT | 5 feet |
| Boom Height, Unit: | 19 IN | 20 inch |
| Ground Speed, Unit: | 3 MPH | 3 mph |
| Carrier: | water | Water |
| Spray Volume, Unit: | 44 gpa | 44 gpa |
| Propellant: | CO2 | CO2 |
| Tank Mix (Y/N): | N | N |

Trial Comments

7-9-03:

Clippings were collected with a Toro Walk-behind mower equipped with a reel basket from a 13 ft. long by 2.17 ft. (26 inches) area centered in middle of plot. Clippings were dried and recorded as dry weight (WEIDRY) in grams/plot. Entire plot area mowed with Triplex reel mower after clippings were collected. Plot # 102 spilled bermudagrass. Clipping weights for this plot deleted from analysis (ANOVA).

7-25-03

Clippings collected on July 25 (rain prevented clipping on 7/23).

7-29-03

1 lb N/1000 sq.ft. as 34-0-0 fertilizer broadcast over entire test area.

8-15-03

Plots were to have been clipped on 8-13-03, but plots were accidentally mowed on this date. Clipping weights were collected on 8-15-03.

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Bermudagrass Response to Primo Maxx and Cutless

Trial ID: Turf 40-03
 Location: Griffin, GA

Study Dir. : Jay Ferrell
 Investigator: Tim R Murphy

| Weed Code | CYND A | CYND A | CYND A | CYND A | CYND A | CYND A | | | | | | | |
|--------------------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|------|------|------|------|------|------|
| Crop Code | CYND A | CYND A | CYND A | CYND A | CYND A | CYND A | | | | | | | |
| Part Rated | | | | | | | | | | | | | |
| Rating Data Type | Quality | Quality | Quality | Quality | Quality | Quality | | | | | | | |
| Rating Unit | 0-10 | 0-10 | 0-10 | 0-10 | 0-10 | 0-10 | | | | | | | |
| Rating Date | 7-9-2003 | 7-16-2003 | 7-25-2003 | 7-30-2003 | 8-7-2003 | 8-13-2003 | | | | | | | |
| Trt-Eval Interval | 6 DA-A | 13 DA-A | 22 DA-A | 27 DA-A | 7 DA-B | 13 DA-B | | | | | | | |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Grow Stg | Appl Code | | | | | | |
| 1 | Untreated | | | | | | | 9.3 | 9.2 | 9.0 | 9.0 | 8.4 | 8.4 |
| 2 | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | A | 9.2 | 9.1 | 9.2 | 9.3 | 9.1 | 9.5 |
| | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | B | | | | | | |
| 3 | Primo Maxx | 1 | SC | 10 | fl oz/a | | A | 8.9 | 9.0 | 9.2 | 9.3 | 9.3 | 9.3 |
| | Primo Maxx | 1 | SC | 10 | fl oz/a | | B | | | | | | |
| 4 | Primo Maxx | 1 | SC | 13 | fl oz/a | | A | 9.1 | 9.2 | 9.4 | 9.4 | 9.6 | 9.6 |
| | Primo Maxx | 1 | SC | 13 | fl oz/a | | B | | | | | | |
| 5 | Cutless | 50 | W | 4 | oz wt/a | | A | 9.4 | 9.4 | 9.0 | 8.7 | 8.3 | 8.5 |
| | Cutless | 50 | W | 4 | oz wt/a | | B | | | | | | |
| 6 | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | A | 8.7 | 8.9 | 9.2 | 9.3 | 9.1 | 9.4 |
| | Cutless | 50 | W | 4 | oz wt/a | | A | | | | | | |
| | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | B | | | | | | |
| | Cutless | 50 | W | 4 | oz wt/a | | B | | | | | | |
| 7 | Trimmit | 2 | SC | 8 | fl oz/a | | A | 9.2 | 9.2 | 9.1 | 8.9 | 8.3 | 8.3 |
| | Trimmit | 2 | SC | 8 | fl oz/a | | B | | | | | | |
| 8 | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | A | 8.5 | 8.7 | 9.2 | 9.3 | 9.5 | 9.4 |
| | Trimmit | 2 | SC | 8 | fl oz/a | | A | | | | | | |
| | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | B | | | | | | |
| | Trimmit | 2 | SC | 8 | fl oz/a | | B | | | | | | |
| LSD (P=.05) | | | | | | | | 0.46 | 0.39 | 0.25 | 0.25 | 0.55 | 0.61 |
| Standard Deviation | | | | | | | | 0.31 | 0.27 | 0.17 | 0.17 | 0.37 | 0.41 |
| CV | | | | | | | | 3.45 | 2.96 | 1.83 | 1.84 | 4.18 | 4.58 |

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| Weed Code | | | | | | | CYNDA | CYNDA | CYNDA | CYNDA | CYNDA | CYNDA | |
|--------------------|----------------|-----------|-----------|-----------|-----------|----------|-----------|-----------|----------|-----------|-----------|-----------|-----|
| Crop Code | | | | | | | | | | | | | |
| Part Rated | | | | | | | | | | | | | |
| Rating Data Type | | | | | | | Quality | Quality | Quality | Quality | Color | Color | |
| Rating Unit | | | | | | | 0-10 | 0-10 | 0-10 | 0-10 | 0-10 | 0-10 | |
| Rating Date | | | | | | | 8-20-2003 | 8-27-2003 | 9-3-2003 | 9-10-2003 | 8-13-2003 | 8-20-2003 | |
| Trt-Eval Interval | | | | | | | 20 DA-B | 27 DA-B | 34 DA-B | 41 DA-B | 13 DA-B | 20 DA-B | |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate Rate | Rate Unit | Grow Stg | Appl Code | | | | | | |
| 1 | Untreated | | | | | | | 8.5 | 8.8 | 8.5 | 8.0 | 8.3 | 8.1 |
| 2 | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | A | 9.5 | 9.5 | 8.9 | 8.5 | 8.9 | 9.4 |
| | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | B | | | | | | |
| 3 | Primo Maxx | 1 | SC | 10 | fl oz/a | | A | 9.5 | 9.6 | 9.1 | 8.5 | 9.4 | 9.4 |
| | Primo Maxx | 1 | SC | 10 | fl oz/a | | B | | | | | | |
| 4 | Primo Maxx | 1 | SC | 13 | fl oz/a | | A | 9.6 | 9.9 | 9.4 | 8.9 | 9.6 | 9.6 |
| | Primo Maxx | 1 | SC | 13 | fl oz/a | | B | | | | | | |
| 5 | Cutless | 50 | W | 4 | oz wt/a | | A | 8.6 | 8.9 | 8.8 | 8.5 | 8.5 | 8.4 |
| | Cutless | 50 | W | 4 | oz wt/a | | B | | | | | | |
| 6 | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | A | 9.6 | 9.6 | 8.9 | 8.4 | 9.5 | 9.5 |
| | Cutless | 50 | W | 4 | oz wt/a | | A | | | | | | |
| | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | B | | | | | | |
| | Cutless | 50 | W | 4 | oz wt/a | | B | | | | | | |
| 7 | Trimmit | 2 | SC | 8 | fl oz/a | | A | 8.5 | 8.8 | 8.6 | 8.8 | 8.4 | 8.3 |
| | Trimmit | 2 | SC | 8 | fl oz/a | | B | | | | | | |
| 8 | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | A | 9.5 | 9.6 | 9.1 | 8.5 | 9.5 | 9.4 |
| | Trimmit | 2 | SC | 8 | fl oz/a | | A | | | | | | |
| | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | B | | | | | | |
| | Trimmit | 2 | SC | 8 | fl oz/a | | B | | | | | | |
| LSD (P=.05) | | | | | | | 0.50 | 0.56 | 0.65 | 0.63 | 0.49 | 0.47 | |
| Standard Deviation | | | | | | | 0.34 | 0.38 | 0.44 | 0.43 | 0.33 | 0.32 | |
| CV | | | | | | | 3.7 | 4.08 | 4.96 | 5.01 | 3.69 | 3.59 | |

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| Weed Code | | | | | | | CYND | CYND | CYND | CYND | CYND | CYND | |
|--------------------|----------------|-----------|-----------|-------------|------|----------|-----------|----------|-----------|----------|-----------|-----------|------|
| Crop Code | | | | | | | | | | | | | |
| Part Rated | | | | | | | | | | | | | |
| Rating Data Type | | | | | | | Color | Color | Color | WEIDRY | WEIDRY | WEIDRY | |
| Rating Unit | | | | | | | 0-10 | 0-10 | 0-10 | gr/plot | gr/plot | gr/plot | |
| Rating Date | | | | | | | 8-27-2003 | 9-3-2003 | 9-10-2003 | 7-9-2003 | 7-16-2003 | 7-25-2003 | |
| Trt-Eval Interval | | | | | | | 27 DA-B | 34 DA-B | 41 DA-B | 6 DA-A | 13 DA-A | 22 DA-A | |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate Rate | Unit | Grow Stg | Appl Code | | | | | | |
| 1 | Untreated | | | | | | | 8.6 | 9.0 | 8.0 | 39.7 | 31.5 | 15.9 |
| 2 | Primo Maxx | 1 SC | | 6.5 fl oz/a | | | A | 9.4 | 9.0 | 8.1 | 23.4 | 18.7 | 12.9 |
| | Primo Maxx | 1 SC | | 6.5 fl oz/a | | | B | | | | | | |
| 3 | Primo Maxx | 1 SC | | 10 fl oz/a | | | A | 9.4 | 9.4 | 8.4 | 15.5 | 12.1 | 9.9 |
| | Primo Maxx | 1 SC | | 10 fl oz/a | | | B | | | | | | |
| 4 | Primo Maxx | 1 SC | | 13 fl oz/a | | | A | 9.8 | 9.6 | 8.6 | 13.9 | 11.0 | 10.1 |
| | Primo Maxx | 1 SC | | 13 fl oz/a | | | B | | | | | | |
| 5 | Cutless | 50 W | | 4 oz wt/a | | | A | 8.8 | 9.0 | 8.3 | 27.7 | 21.2 | 12.2 |
| | Cutless | 50 W | | 4 oz wt/a | | | B | | | | | | |
| 6 | Primo Maxx | 1 SC | | 6.5 fl oz/a | | | A | 9.5 | 9.1 | 8.1 | 17.8 | 9.9 | 10.7 |
| | Cutless | 50 W | | 4 oz wt/a | | | A | | | | | | |
| | Primo Maxx | 1 SC | | 6.5 fl oz/a | | | B | | | | | | |
| | Cutless | 50 W | | 4 oz wt/a | | | B | | | | | | |
| 7 | Trimmit | 2 SC | | 8 fl oz/a | | | A | 8.8 | 8.9 | 8.3 | 31.5 | 23.0 | 14.1 |
| | Trimmit | 2 SC | | 8 fl oz/a | | | B | | | | | | |
| 8 | Primo Maxx | 1 SC | | 6.5 fl oz/a | | | A | 9.5 | 9.4 | 8.1 | 11.4 | 5.7 | 6.5 |
| | Trimmit | 2 SC | | 8 fl oz/a | | | A | | | | | | |
| | Primo Maxx | 1 SC | | 6.5 fl oz/a | | | B | | | | | | |
| | Trimmit | 2 SC | | 8 fl oz/a | | | B | | | | | | |
| LSD (P=.05) | | | | | | | 0.70 | 0.61 | 0.36 | 12.76 | 8.20 | 4.21 | |
| Standard Deviation | | | | | | | 0.48 | 0.42 | 0.25 | 8.65 | 5.58 | 2.86 | |
| CV | | | | | | | 5.19 | 4.55 | 3.01 | 38.27 | 33.49 | 24.77 | |

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| Weed Code | | | | | | | CYND A | CYND A | CYND A | CYND A | CYND A | CYND A | | |
|--------------------|----------------|------------|-----------|-----------|---------|----------|-----------|----------|-----------|-----------|-----------|----------|-------|---|
| Crop Code | | | | | | | | | | | | | | |
| Part Rated | | | | | | | | | | | | | | |
| Rating Data Type | | | | | | | WEIDRY | WEIDRY | WEIDRY | WEIDRY | WEIDRY | WEIDRY | | |
| Rating Unit | | | | | | | gr/plot | gr/plot | gr/plot | gr/plot | gr/plot | gr/plot | | |
| Rating Date | | | | | | | 7-30-2003 | 8-7-2003 | 8-15-2003 | 8-20-2003 | 8-27-2003 | 9-3-2003 | | |
| Trt-Eval Interval | | | | | | | 27 DA-A | 7 DA-B | 15 DA-B | 20 DA-B | 27 DA-B | 34 DA-B | | |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate Rate | Unit | Grow Stg | Appl Code | | | | | | | |
| 1 | Untreated | | | | | | | 30.6 | 83.9 | 43.8 | 77.4 | 87.2 | 104.5 | |
| 2 | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | A | 22.1 | 42.3 | 26.1 | 56.1 | 74.4 | 104.5 | |
| | | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | | | | | | | B |
| 3 | Primo Maxx | 1 | SC | 10 | fl oz/a | | A | 18.7 | 25.6 | 13.9 | 30.6 | 59.4 | 98.3 | |
| | | Primo Maxx | 1 | SC | 10 | fl oz/a | | | | | | | | B |
| 4 | Primo Maxx | 1 | SC | 13 | fl oz/a | | A | 19.1 | 23.2 | 13.0 | 33.6 | 57.1 | 88.1 | |
| | | Primo Maxx | 1 | SC | 13 | fl oz/a | | | | | | | | B |
| 5 | Cutless | 50 | W | 4 | oz wt/a | | A | 25.7 | 71.8 | 44.3 | 75.1 | 79.5 | 100.0 | |
| | | Cutless | 50 | W | 4 | oz wt/a | | | | | | | | B |
| 6 | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | A | 22.4 | 26.3 | 21.2 | 53.5 | 79.1 | 91.1 | |
| | | Cutless | 50 | W | 4 | oz wt/a | | | | | | | | A |
| | | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | | | | | | | B |
| | | Cutless | 50 | W | 4 | oz wt/a | | | | | | | | B |
| 7 | Trimmit | 2 | SC | 8 | fl oz/a | | A | 28.3 | 88.4 | 50.8 | 79.9 | 89.0 | 107.4 | |
| | | Trimmit | 2 | SC | 8 | fl oz/a | | | | | | | | B |
| 8 | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | A | 17.1 | 32.7 | 22.8 | 46.1 | 67.5 | 101.0 | |
| | | Trimmit | 2 | SC | 8 | fl oz/a | | | | | | | | A |
| | | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | | | | | | | B |
| | | Trimmit | 2 | SC | 8 | fl oz/a | | | | | | | | B |
| LSD (P=.05) | | | | | | | 9.58 | 15.09 | 10.03 | 14.81 | 20.22 | 19.10 | | |
| Standard Deviation | | | | | | | 6.51 | 10.26 | 6.82 | 10.04 | 13.71 | 12.98 | | |
| CV | | | | | | | 28.29 | 20.83 | 23.12 | 17.76 | 18.49 | 13.07 | | |

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| Weed Code | | | | | | | | | | | CYNDA |
|--------------------|----------------|-----------|-----------|-----------|-----------|----------|-----------|--|--|--|-----------|
| Crop Code | | | | | | | | | | | |
| Part Rated | | | | | | | | | | | |
| Rating Data Type | | | | | | | | | | | WEIDRY |
| Rating Unit | | | | | | | | | | | gr/plot |
| Rating Date | | | | | | | | | | | 9-10-2003 |
| Trt-Eval Interval | | | | | | | | | | | 41 DA-B |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate Rate | Rate Unit | Grow Stg | Appl Code | | | | |
| 1 | Untreated | | | | | | | | | | 47.4 |
| 2 | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | A | | | | 38.7 |
| | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | B | | | | |
| 3 | Primo Maxx | 1 | SC | 10 | fl oz/a | | A | | | | 41.6 |
| | Primo Maxx | 1 | SC | 10 | fl oz/a | | B | | | | |
| 4 | Primo Maxx | 1 | SC | 13 | fl oz/a | | A | | | | 35.1 |
| | Primo Maxx | 1 | SC | 13 | fl oz/a | | B | | | | |
| 5 | Cutless | 50 | W | 4 | oz wt/a | | A | | | | 41.2 |
| | Cutless | 50 | W | 4 | oz wt/a | | B | | | | |
| 6 | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | A | | | | 38.8 |
| | Cutless | 50 | W | 4 | oz wt/a | | A | | | | |
| | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | B | | | | |
| | Cutless | 50 | W | 4 | oz wt/a | | B | | | | |
| 7 | Trimmit | 2 | SC | 8 | fl oz/a | | A | | | | 37.7 |
| | Trimmit | 2 | SC | 8 | fl oz/a | | B | | | | |
| 8 | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | A | | | | 35.8 |
| | Trimmit | 2 | SC | 8 | fl oz/a | | A | | | | |
| | Primo Maxx | 1 | SC | 6.5 | fl oz/a | | B | | | | |
| | Trimmit | 2 | SC | 8 | fl oz/a | | B | | | | |
| LSD (P=.05) | | | | | | | | | | | 10.55 |
| Standard Deviation | | | | | | | | | | | 7.17 |
| CV | | | | | | | | | | | 18.14 |