

# LSU Northeast Research Station

Rice tolerance to pre- and post-applications of Prowl.

Trial ID: MR06R110  
Location:

Study Dir.:  
Investigator: Bill Williams

## GENERAL TRIAL INFORMATION

Investigator: Bill Williams

Conducted Under GLP (Y/N): N

Conducted Under GEP (Y/N): N

## CROP AND WEED DESCRIPTION

| Weed | Code  | Common Name           | Scientific Name        |
|------|-------|-----------------------|------------------------|
| 1.   | ECHCG | Common barnyardgrass  | Echinochloa crus-galli |
| 2.   | SEBEX | Hemp sesbania         | Sesbania exaltata      |
| 3.   | ORYRU | Wild red rice         | Oryza rufipogon        |
| 4.   | LEFPA | Tighthead sprangletop | Leptochloa panicoides  |
| 5.   | BRAPP | Broadleaf signalgrass | Brachiaria platyphylla |

Crop 1: ORYSA RICE

Variety: Cocodrie

Planting Date: 6/1/06

Planting Method: DRILLED

Rate: 90 LB/A

Depth: 0.25 IN

Row Spacing: 8 IN

Spacing Within Row: 5 IN

Seed Bed: MEDIUM

Soil Moisture: DRY

## SITE AND DESIGN

Plot Width, Unit: 6.67 FT Plot Length, Unit: 15 FT Reps: 3

Site Type: RICE PADDY

Tillage Type: CONVENTIONAL-TILL

Study Design: FACTORIAL

## SOIL DESCRIPTION

% Sand: 14

% OM: 1.3

Texture: Silt loam

% Silt: 70

pH: 5.8

Soil Name: gigger silt loam

% Clay: 16

CEC: 5.8

Fert. Level: EXCELLENT

## MOISTURE CONDITIONS

|     | Date    | Amount | Unit | Type      |
|-----|---------|--------|------|-----------|
| 1.  | 6/8/06  |        |      | Flush     |
| 2.  | 6/13/06 |        |      | Flush     |
| 3.  | 6/17/06 | 0.05   | IN   | RAIN      |
| 4.  | 6/18/06 | 0.01   | IN   | RAIN      |
| 5.  | 6/19/06 | 0.03   | IN   | RAIN      |
| 6.  | 6/21/06 | 0.01   | IN   | RAIN      |
| 7.  | 6/23/06 | 0.22   | IN   | RAIN      |
| 8.  | 6/24/06 | 0.01   | IN   | RAIN      |
| 9.  | 7/2/06  | 0.01   | IN   | RAIN      |
| 10. | 7/3/06  |        |      | Fertilize |
| 11. | 7/3/06  | 0.34   | IN   | RAIN      |
| 12. | 7/4/06  | 0.38   | IN   | RAIN      |
| 13. | 7/5/06  |        |      | Flood     |
| 14. | 7/5/06  | 0.33   | IN   | RAIN      |
| 15. | 7/6/06  | 0.06   | IN   | RAIN      |
| 16. | 7/7/06  | 0.01   | IN   | RAIN      |
| 17. | 7/16/06 | 0.07   | IN   | RAIN      |
| 18. | 7/19/06 | 1.25   | IN   | RAIN      |
| 19. | 7/20/06 | 0.01   | IN   | RAIN      |
| 20. | 7/22/06 | 1.37   | IN   | RAIN      |
| 21. | 7/23/06 | 0.01   | IN   | RAIN      |
| 22. | 7/26/06 | 0.14   | IN   | RAIN      |
| 23. | 7/27/06 | 0.24   | IN   | RAIN      |
| 24. | 7/28/06 | 0.01   | IN   | RAIN      |

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Overall Moisture Conditions: Dry

Closest Weather Station: Macon Ridge Research Station Distance: 0.25 Unit: MI

## APPLICATION DESCRIPTION

|                      | A      | B       |
|----------------------|--------|---------|
| Application Date:    | 6/1/06 | 6/10/06 |
| Application Method:  | SPRAY  | SPRAY   |
| Application Timing:  | PRE    | 1-2 LF  |
| Applic. Placement:   | BROFOL | BROFOL  |
| Air Temp., Unit:     | 92 F   | 94 F    |
| % Relative Humidity: | 68     | 63      |
| Wind Velocity, Unit: | 2 S    | 2 S     |
| Soil Temp., Unit:    | 81 F   | 67 F    |
| Soil Moisture:       | DRY    | DRY     |
| % Cloud Cover:       | 20     | 30      |

## CROP STAGE AT EACH APPLICATION

|                     | A     | B     |
|---------------------|-------|-------|
| Crop 1 Code, Stage: | ORYSA | ORYSA |
| Stage Scale:        | N/A   | 2 LF  |
| Height, Unit:       |       | 2 IN  |

## WEED STAGE AT EACH APPLICATION

|                     | A     | B      |
|---------------------|-------|--------|
| Weed 1 Code, Stage: | ECHCG | ECHCG  |
| Stage Scale:        | N/A   | 2 LF   |
| Density, Unit:      |       | .5 IN  |
| Weed 2 Code, Stage: | SEBEX | SEBEX  |
| Stage Scale:        | N/A   | COT    |
| Density, Unit:      |       | .5 IN  |
| Weed 3 Code, Stage: | ORYRU | ORYRU  |
| Stage Scale:        | N/A   | 1 LF   |
| Density, Unit:      |       | 2 IN   |
| Weed 4 Code, Stage: | LEFPA | LEFPA  |
| Stage Scale:        | N/A   | 1 LF   |
| Density, Unit:      |       | .25 IN |
| Weed 5 Code, Stage: | BRAPP | BRAPP  |
| Stage Scale:        | N/A   | 1 LF   |
| Density, Unit:      |       | .25 IN |

## APPLICATION EQUIPMENT

|                       | A         | B         |
|-----------------------|-----------|-----------|
| Appl. Equipment:      | Backpack  | Backpack  |
| Operating Pressure:   | 31        | 31        |
| Nozzle Type:          | Greenleaf | Greenleaf |
| Nozzle Size:          | 11002     | 11002     |
| Nozzle Spacing, Unit: | 20 IN     | 20 IN     |
| Nozzles/Row:          | 4         | 4         |
| Carrier:              | WATER     | WATER     |
| Spray Volume, Unit:   | 15 GPA    | 15 GPA    |
| Propellant:           | CO2       | CO2       |

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| Crop Code          | ORYSA<br>STAND C<br>REDUCTION | ORYSA<br>STAND C<br>REDUCTION | ORYSA<br>VIGOR C<br>REDUCTION | ORYSA<br>VIGOR C<br>REDUCTION | ORYSA<br>VIGOR C<br>REDUCTION | ORYSA<br>VIGOR C<br>REDUCTION | ORYSA<br>VIGOR C<br>REDUCTION | ORYSA<br>GRAIN C<br>YIELD |        |         |
|--------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|---------------------------|--------|---------|
| Part Rated         |                               |                               |                               |                               |                               |                               |                               |                           |        |         |
| Rating Data Type   |                               |                               |                               |                               |                               |                               |                               |                           |        |         |
| Rating Unit        | %                             | %                             | %                             | %                             | %                             | %                             | %                             | lb/plt                    |        |         |
| Rating Date        | 6/13/06                       | 6/20/06                       | 6/13/06                       | 6/20/06                       | 7/20/06                       | 7/25/06                       | 10/3/06                       |                           |        |         |
| Trt-Eval Interval  | 3 DA-B                        | 10 DA-B                       | 3 DA-B                        | 10 DA-B                       | 40 DA-B                       | 45 DA-B                       |                               |                           |        |         |
| ARM Action Codes   |                               |                               |                               |                               |                               |                               |                               |                           |        |         |
| # Subsamples, Dec. |                               |                               |                               |                               |                               |                               |                               |                           |        |         |
| Trt No.            | Treatment Name                | Rate                          | Unit                          | 1                             | 2                             | 3                             | 4                             | 5                         | 6      | 7       |
| 1                  | Preemergence Prowl H20        | 1                             | lb ai/a                       | 30.0 a                        | 3.3 c                         | 0.0 b                         | 20.0 ab                       | 3.3 a                     | 0.0 a  | 11.83 a |
| 2                  | Preemergence Prowl H20        | 2                             | lb ai/a                       | 13.3 ab                       | 16.7 bc                       | 0.0 b                         | 16.7 ab                       | 1.7 a                     | 0.0 a  | 11.63 a |
| 3                  | Preemergence Prowl H20        | 3                             | lb ai/a                       | 33.3 a                        | 26.7 ab                       | 13.3 a                        | 35.0 a                        | 3.3 a                     | 0.0 a  | 12.60 a |
| 4                  | Preemergence Prowl H20        | 4                             | lb ai/a                       | 36.7 a                        | 33.3 a                        | 0.0 b                         | 33.3 a                        | 1.7 a                     | 0.0 a  | 13.43 a |
| 5                  | 1-2 lf rice Prowl H20         | 1                             | lb ai/a                       | 0.0 b                         | 0.0 c                         | 0.0 b                         | 0.0 b                         | 0.0 a                     | 0.0 a  | 12.70 a |
| 6                  | 1-2 lf rice Prowl H20         | 2                             | lb ai/a                       | 0.0 b                         | 0.0 c                         | 0.0 b                         | 0.0 b                         | 0.0 a                     | 0.0 a  | 12.70 a |
| 7                  | 1-2 lf rice Prowl H20         | 3                             | lb ai/a                       | 10.0 ab                       | 0.0 c                         | 0.0 b                         | 0.0 b                         | 0.0 a                     | 0.0 a  | 12.73 a |
| 8                  | 1-2 lf rice Prowl H20         | 4                             | lb ai/a                       | 0.0 b                         | 0.0 c                         | 0.0 b                         | 0.0 b                         | 0.0 a                     | 0.0 a  | 12.60 a |
| LSD (P=.05)        |                               |                               |                               | 18.38                         | 11.86                         | 3.58                          | 14.91                         | 3.02                      | 0.00   | 1.438   |
| Standard Deviation |                               |                               |                               | 10.49                         | 6.77                          | 2.04                          | 8.51                          | 1.73                      | 0.00   | 0.821   |
| CV                 |                               |                               |                               | 68.07                         | 67.7                          | 122.47                        | 64.86                         | 138.01                    | 0.0    | 6.55    |
| Bartlett's X2      |                               |                               |                               | 0.302                         | 3.189                         | 0.0                           | 3.494                         | 0.0                       | 0.0    | 2.267   |
| P(Bartlett's X2)   |                               |                               |                               | 0.96                          | 0.363                         | .                             | 0.322                         | 1.00                      | .      | 0.944   |
| Replicate F        |                               |                               |                               | 1.173                         | 0.273                         | 1.000                         | 3.924                         | 4.200                     | 0.000  | 1.250   |
| Replicate Prob(F)  |                               |                               |                               | 0.3381                        | 0.7653                        | 0.3927                        | 0.0444                        | 0.0373                    | 1.0000 | 0.3166  |
| Treatment F        |                               |                               |                               | 6.741                         | 12.260                        | 16.000                        | 9.674                         | 2.200                     | 0.000  | 1.407   |
| Treatment Prob(F)  |                               |                               |                               | 0.0013                        | 0.0001                        | 0.0001                        | 0.0002                        | 0.0991                    | 1.0000 | 0.2772  |

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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|                             |           |
|-----------------------------|-----------|
| Crop Code                   | ORYSA     |
| Part Rated                  | GRAIN C   |
| Rating Data Type            | YIELD     |
| Rating Unit                 | BU        |
| Rating Date                 | 10/3/06   |
| Trt-Eval Interval           |           |
| ARM Action Codes            | TY1       |
| # Subsamples, Dec.          | 0         |
| Trt Treatment               | Rate      |
| No. Name                    | Rate Unit |
| 8                           |           |
| 1 Preemergence<br>Prowl H20 | 1 lb ai/a |
| 178 a                       |           |
| 2 Preemergence<br>Prowl H20 | 2 lb ai/a |
| 175 a                       |           |
| 3 Preemergence<br>Prowl H20 | 3 lb ai/a |
| 189 a                       |           |
| 4 Preemergence<br>Prowl H20 | 4 lb ai/a |
| 202 a                       |           |
| 5 1-2 lf rice<br>Prowl H20  | 1 lb ai/a |
| 191 a                       |           |
| 6 1-2 lf rice<br>Prowl H20  | 2 lb ai/a |
| 191 a                       |           |
| 7 1-2 lf rice<br>Prowl H20  | 3 lb ai/a |
| 191 a                       |           |
| 8 1-2 lf rice<br>Prowl H20  | 4 lb ai/a |
| 189 a                       |           |
| LSD (P=.05)                 | 21.6      |
| Standard Deviation          | 12.3      |
| CV                          | 6.55      |
| Bartlett's X2               | 2.267     |
| P(Bartlett's X2)            | 0.944     |
| Replicate F                 | 1.251     |
| Replicate Prob(F)           | 0.3164    |
| Treatment F                 | 1.408     |
| Treatment Prob(F)           | 0.2770    |

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)  
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

### ARM Action Codes

TY1 = 15.03333\*[7]