

# University of Georgia

## ZIDUA PRE IN IN SOYBEANS

Trial ID: SB-14-11 Study Dir.: SANDY NEWELL  
Location: PONDER FARM Investigator: Eric P. Prostko

Reps: 4 Plots: 6 by 25 feet  
Spray vol: 15 gal/ac Mix size: 1.5 liters (min .78211)

| Trt No. | Treatment Name  | Form Conc        | Form Type | Rate                 | Grow Unit | Appl Stg | Code | Amt Product to Measure     | Rep 1 | 2   | 3   | 4   |
|---------|-----------------|------------------|-----------|----------------------|-----------|----------|------|----------------------------|-------|-----|-----|-----|
| 1       | ZIDUA           | 85               | WG        | 1.5 oz/a             | PRE       | A        |      | 1.123 g/mx                 | 101   | 208 | 302 | 403 |
| 2       | ZIDUA           | 85               | WG        | 2.0 oz/a             | PRE       | A        |      | 1.498 g/mx                 | 102   | 209 | 304 | 408 |
| 3       | ZIDUA           | 85               | WG        | 4.0 oz/a             | PRE       | A        |      | 2.996 g/mx                 | 103   | 201 | 310 | 406 |
| 4       | ZIDUA SHARPEN   | 85 WG<br>2.85 SC |           | 2.0 oz/a<br>1.0 oz/a | PRE       | A        |      | 1.498 g/mx<br>0.7812 ml/mx | 104   | 211 | 308 | 410 |
| 5       | ZIDUA VERDICT   | 85 WG<br>5.57 EC |           | 1.5 oz/a<br>5.0 oz/a | PRE       | A        |      | 1.123 g/mx<br>3.906 ml/mx  | 105   | 204 | 305 | 409 |
| 6       | DUAL MAGNUM     | 7.62 EC          |           | 16.0 oz/a            | PRE       | A        |      | 12.5 ml/mx                 | 106   | 210 | 306 | 401 |
| 7       | VALOR SX        | 51 WG            |           | 2.0 oz/a             | PRE       | A        |      | 1.498 g/mx                 | 107   | 206 | 307 | 402 |
| 8       | PREFIX          | 5.29 EC          |           | 32.0 oz/a            | PRE       | A        |      | 25.0 ml/mx                 | 108   | 203 | 301 | 404 |
| 9       | ZIDUA VALOR SX  | 85 WG<br>51 WG   |           | 1.5 oz/a<br>2.0 oz/a | PRE       | A        |      | 1.123 g/mx<br>1.498 g/mx   | 109   | 202 | 311 | 407 |
| 10      | AUTHORITY FIRST | 70 DF            |           | 3.0 oz/a             | PRE       | A        |      | 2.247 g/mx                 | 110   | 205 | 303 | 411 |
| 11      | NTC             |                  |           |                      |           |          |      |                            | 111   | 207 | 309 | 405 |

Sort Order: Treatment

### Trial Comments

PREFIX = DUAL MAGNUM (4.34 LBS/GAL) + REFLEX (0.95 LBS/GAL)  
AUTHORITY FIRST = SPARTAN (62.1%) + FIRSTRATE (7.9%)  
VERDICT = OUTLOOK (5 LBS/GAL) + SHARPEN (0.57 LBS/GAL)

ANNUAL GRASS: NON-UNIFORM MIXTURE OF CRABGRASS + TEXAS PANICUM + GOOSEGRASS

BORON @ 1 QT/A + DIMILIN @ 2 OZ/A - JULY 1

ENTIRE PLOT AREA WAS OVERPSRAYED WITH ROUNDUP W-MAX @ 33 OZ/A ON JUNE 30.

HARVEST AID: GRAMOXONE INTEON @ 1 PT/A ON SEPTEMBER 9

HARVEST MOISTURE: 7.2%  
YIELDS ADJUSTED TO 13%.

### SUMMARY:

1) ON JUNE 4 (11 DAT), SIGNIFICANT SOYBEAN STUNTING WAS OBSERVED FROM THE FOLLOWING TREATMENTS:

ZIDUA @ 4 OZ/A = 21% STUNTING  
ZIDUA @ 2 OZ/A + SHARPEN @ 1 OZ/A = 21% STUNTING  
ZIDUA @ 1.5 OZ/A + VERDICT @ 5 OZ/A = 50% STUNTING  
DUAL MAGNUM @ 16 OZ/A = 45% STUNTING

2) SOYBEAN STUNTING FROM ZIDUA + SHARPEN OR VERDICT WAS STILL EVIDENT ON JUNE 14 (21 DAT).

3) ON JUNE 28 (35 DAT), ALL TREATMENTS PROVIDED > 90% CONTROL OF PALMER AMARANTH. AUTHORITY FIRST WAS LESS EFFECTIVE THAN THE OTHER PRE TREATMENTS (93% VS 99%).

4) THE ONLY TREATMENTS THAT PROVIDED > 90% CONTROL OF ANNUAL GRASSES ON JUNE 28 (35 DAT) WERE AS FOLLOWS:

ZIDUA @ 4 OZ/A = 90% CONTROL  
PREFIX @ 32 OZ/A = 90% CONTROL  
ZIDUA @ 1.5 OZ/A + VALOR SX @ 2 OZ/A = 93% CONTROL

5) ALL TREATMENTS RESULTED IN HIGHER YIELDS THAN THE NTC. HOWEVER SOYBEAN YIELDS WERE SIGNIFICANTLY REDUCED WITH ZIDUA + VERDICT WHEN COMPARED TO THE OTHER PRE TREATMENTS.

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***NOTE: SOYBEAN YIELDS WERE LESS THAN DESIRABLE FOR SEVERAL REASONS INCLUDING HIGH TEMPERATURES, DROUGHT, AND IRRIGATION SYSTEM PROBLEMS (I.E. POND WENT DRY).***

## ZIDUA PRE IN IN SOYBEANS

| CROP AND PEST DESCRIPTION |                       |                |                 |                        |
|---------------------------|-----------------------|----------------|-----------------|------------------------|
| Weed 1.                   | AMAPA PALMER AMARANTH | 2.             | GRASS           | CRAB + PANICUM + GOOSE |
| Crop 1:                   | GLYMA SOYBEAN         | Variety:       | PIONEER 95Y50   | Planting Date:         |
| Planting Method:          | MONOSEM               | Rate:          | 10 SEED/FT      | May-23-11              |
| Perennial Age:            | _____                 | Row Spacing:   | 36 IN           | Depth:                 |
| Soil Temperature:         | _____                 | Soil Moisture: | OPTIMUM         | 1.5 IN                 |
|                           |                       |                | Seed Bed:       | _____                  |
|                           |                       |                | Emergence Date: | _____                  |

| Previous: Crops | Pesticides | Year |
|-----------------|------------|------|
| 1.              |            |      |

[illegible]

**Texture:** SAND      **% OM:** 1.34    **% Sand:** 96    **% Silt:** 0    **% Clay:** 4  
**pH:** 6.0    **CEC:**      **Soil Name:** TIFTON      **Fertility Level:**

| On: Date     | Time | Amount | Unit | Type                     | Interval | Unit |
|--------------|------|--------|------|--------------------------|----------|------|
| 1. May-24-11 |      | 0.75   | IN   | SPRINKLER - LATERAL MOVE |          |      |
| 2. May-27-11 |      | 0.75   | IN   | SPRINKLER - LATERAL MOVE |          |      |
| 3. May-31-11 |      | 0.75   | IN   | SPRINKLER - LATERAL MOVE |          |      |

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**Closest Weather Station:** \_\_\_\_\_ **Distance:** \_\_\_\_\_ **Unit:** \_\_\_\_\_

|                      | A         | B | C | D | E | F |
|----------------------|-----------|---|---|---|---|---|
| Application Date:    | May-24-11 |   |   |   |   |   |
| Time of Day:         | 8:00 am   |   |   |   |   |   |
| Application Method:  | BROADCAST |   |   |   |   |   |
| Application Timing:  | PRE       |   |   |   |   |   |
| Applic. Placement:   | SOIL      |   |   |   |   |   |
| Air Temp., Unit:     | 75 F      |   |   |   |   |   |
| % Relative Humidity: | 63        |   |   |   |   |   |
| Wind Velocity, Unit: | 1 MPH     |   |   |   |   |   |
| Dew Presence (Y/N):  | N         |   |   |   |   |   |
| Water Hardness:      | --        |   |   |   |   |   |
| Soil Temp., Unit:    | 77 F      |   |   |   |   |   |
| Soil Moisture:       | OPTIMUM   |   |   |   |   |   |
| % Cloud Cover:       | 30        |   |   |   |   |   |

|        |               | A | B | C | D | E | F |
|--------|---------------|---|---|---|---|---|---|
| Crop 1 | Stage: GLYMA  |   |   |   |   |   |   |
|        | Stage Scale:  |   |   |   |   |   |   |
|        | Height, Unit: |   |   |   |   |   |   |

|        |                | A | B | C | D | E | F |
|--------|----------------|---|---|---|---|---|---|
| Weed 1 | Stage: AMAPA   |   |   |   |   |   |   |
|        | Stage Scale:   |   |   |   |   |   |   |
|        | Density, Unit: |   |   |   |   |   |   |

| ZIDUA PRE IN IN SOYBEANS     |          |                               |   |   |   |   |   |
|------------------------------|----------|-------------------------------|---|---|---|---|---|
| Trial ID: SB-14-11           |          | Study Dir.: SANDY NEWELL      |   |   |   |   |   |
| Location: PONDER FARM        |          | Investigator: Eric P. Prostko |   |   |   |   |   |
|                              |          | APPLICATION EQUIPMENT         |   |   |   |   |   |
|                              |          | A                             | B | C | D | E | F |
| <b>Appl. Equipment:</b>      | BACKPACK |                               |   |   |   |   |   |
| <b>Operating Pressure:</b>   | 38       |                               |   |   |   |   |   |
| <b>Nozzle Type:</b>          | FLAT FAN |                               |   |   |   |   |   |
| <b>Nozzle Size:</b>          | 11002DG  |                               |   |   |   |   |   |
| <b>Nozzle Spacing, Unit:</b> | 20       | IN                            |   |   |   |   |   |
| <b>Nozzles/Row:</b>          |          |                               |   |   |   |   |   |
| <b>Band Width, Unit:</b>     |          |                               |   |   |   |   |   |
| <b>Boom Length, Unit:</b>    | 60       | IN                            |   |   |   |   |   |
| <b>Boom Height, Unit:</b>    | 17       | IN                            |   |   |   |   |   |
| <b>Ground Speed, Unit:</b>   | 3.5      | MPH                           |   |   |   |   |   |
| <b>Incorporation Equip.:</b> |          |                               |   |   |   |   |   |
| <b>Hours to Incorp.:</b>     |          |                               |   |   |   |   |   |
| <b>Incorp. Depth, Unit:</b>  |          |                               |   |   |   |   |   |
| <b>Carrier:</b>              | WATER    |                               |   |   |   |   |   |
| <b>Spray Volume, Unit:</b>   | 15       | GPA                           |   |   |   |   |   |
| <b>Spray pH:</b>             |          |                               |   |   |   |   |   |
| <b>Propellant:</b>           | CO2      |                               |   |   |   |   |   |
| <b>Tank Mix (Y/N):</b>       |          |                               |   |   |   |   |   |

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|--------------------------|-----------------|------|-------------------------------|-----------|------|---------------------|---------------------|----------------------|----------------------|----------------------|------------------------------------|----------------------|
| Trial ID: SB-14-11       |                 |      | Study Dir.: SANDY NEWELL      |           |      |                     |                     |                      |                      |                      |                                    |                      |
| Location: PONDER FARM    |                 |      | Investigator: Eric P. Prostko |           |      |                     |                     |                      |                      |                      |                                    |                      |
| Weed Code                |                 |      |                               |           |      | -----<br>GLYMA      | AMAPA<br>-----      | -----<br>GLYMA       | AMAPA<br>-----       | ANNUAL<br>GRASS      | -----<br>GLYMA<br>PLANT -<br>STAND | AMAPA<br>-----       |
| Crop Code                |                 |      |                               |           |      | STUNT               | CONTROL             | STUNT                | CONTROL              | CONTROL              |                                    | CONTROL              |
| Part Rated               |                 |      |                               |           |      |                     |                     |                      |                      |                      |                                    |                      |
| Rating Data Type         |                 |      |                               |           |      | PERCENT             | PERCENT             | PERCENT              | PERCENT              | PERCENT              | #/METER                            | PERCENT              |
| Rating Unit              |                 |      |                               |           |      | Jun-4-11<br>11 DA-A | Jun-4-11<br>11 DA-A | Jun-14-11<br>21 DA-A | Jun-14-11<br>21 DA-A | Jun-14-11<br>21 DA-A | Jun-16-11<br>23 DA-A               | Jun-28-11<br>35 DA-A |
| Rating Date              |                 |      |                               |           |      |                     |                     |                      |                      |                      |                                    |                      |
| Trt-Eval Interval        |                 |      |                               |           |      |                     |                     |                      |                      |                      |                                    |                      |
| PRM Data Type            |                 |      |                               |           |      |                     |                     |                      |                      |                      |                                    |                      |
| # Subsamples, Dec.       |                 |      |                               |           |      |                     |                     |                      |                      |                      |                                    |                      |
| Trt                      | Treatment       | Form | Form                          | Rate      | Grow | Appl                |                     |                      |                      |                      |                                    |                      |
| No.                      | Name            | Conc | Type                          | Rate      | Unit | Stg                 | Code                | 1                    | 2                    | 3                    | 4                                  | 5                    |
|                          |                 |      |                               |           |      |                     |                     | 6                    | 7                    |                      |                                    |                      |
| 1                        | ZIDUA           | 85   | WG                            | 1.5 oz/a  | PRE  | A                   |                     | 11.3 bc              | 100.0 a              | 0.0 c                | 99.0 a                             | 80.0 c               |
| 2                        | ZIDUA           | 85   | WG                            | 2.0 oz/a  | PRE  | A                   |                     | 15.0 bc              | 100.0 a              | 2.5 bc               | 99.0 a                             | 86.3 bc              |
| 3                        | ZIDUA           | 85   | WG                            | 4.0 oz/a  | PRE  | A                   |                     | 21.3 b               | 100.0 a              | 2.5 bc               | 99.0 a                             | 95.8 a               |
| 4                        | ZIDUA           | 85   | WG                            | 2.0 oz/a  | PRE  | A                   |                     | 21.3 b               | 100.0 a              | 5.0 b                | 99.0 a                             | 83.5 c               |
|                          | SHARPEN         | 2.85 | SC                            | 1.0 oz/a  | PRE  | A                   |                     |                      |                      |                      |                                    | 24.3 ab              |
| 5                        | ZIDUA           | 85   | WG                            | 1.5 oz/a  | PRE  | A                   |                     | 50.0 a               | 100.0 a              | 10.0 a               | 99.0 a                             | 87.5 bc              |
|                          | VERDICT         | 5.57 | EC                            | 5.0 oz/a  | PRE  | A                   |                     |                      |                      |                      |                                    | 20.5 bc              |
| 6                        | DUAL MAGNUM     | 7.62 | EC                            | 16.0 oz/a | PRE  | A                   |                     | 45.0 a               | 100.0 a              | 0.0 c                | 99.0 a                             | 61.3 d               |
| 7                        | VALOR SX        | 51   | WG                            | 2.0 oz/a  | PRE  | A                   |                     | 12.5 bc              | 100.0 a              | 2.5 bc               | 99.0 a                             | 84.8 c               |
| 8                        | PREFIX          | 5.29 | EC                            | 32.0 oz/a | PRE  | A                   |                     | 10.0 bc              | 100.0 a              | 0.0 c                | 99.0 a                             | 93.5 ab              |
| 9                        | ZIDUA           | 85   | WG                            | 1.5 oz/a  | PRE  | A                   |                     | 16.3 bc              | 100.0 a              | 0.0 c                | 99.0 a                             | 97.0 a               |
|                          | VALOR SX        | 51   | WG                            | 2.0 oz/a  | PRE  | A                   |                     |                      |                      |                      |                                    | 21.8 bc              |
| 10                       | AUTHORITY FIRST | 70   | DF                            | 3.0 oz/a  | PRE  | A                   |                     | 6.3 bc               | 100.0 a              | 0.0 c                | 99.0 a                             | 66.3 d               |
| 11                       | NTC             |      |                               |           |      |                     |                     | 0.0 c                | 0.0 b                | 0.0 c                | 0.0 b                              | 0.0 e                |
| LSD (P=.10)              |                 |      |                               |           |      |                     |                     | 17.24                | 0.03                 | 3.68                 | 0.00                               | 7.80                 |
| Standard Deviation       |                 |      |                               |           |      |                     |                     | 14.37                | 0.03                 | 3.06                 | 0.00                               | 6.50                 |
| CV                       |                 |      |                               |           |      |                     |                     | 75.72                | 0.03                 | 149.84               | 0.0                                | 8.55                 |
| Grand Mean               |                 |      |                               |           |      |                     |                     | 18.98                | 90.91                | 2.05                 | 90.0                               | 75.98                |
| Bartlett's X2            |                 |      |                               |           |      |                     |                     | 48.522               | 0.0                  | 0.094                | 0.0                                | 17.168               |
| P(Bartlett's X2)         |                 |      |                               |           |      |                     |                     | 0.001*               | .                    | 0.993                | .                                  | 0.046*               |
| Replicate F              |                 |      |                               |           |      |                     |                     | 2.219                | 0.000                | 1.532                | 0.000                              | 11.836               |
| Replicate Prob(F)        |                 |      |                               |           |      |                     |                     | 0.1064               | 1.0000               | 0.2264               | 1.0000                             | 0.0001               |
| Treatment F              |                 |      |                               |           |      |                     |                     | 4.606                | 5242875.524          | 4.161                | 0.000                              | 72.093               |
| Treatment Prob(F)        |                 |      |                               |           |      |                     |                     | 0.0005               | 0.0001               | 0.0011               | 1.0000                             | 0.0001               |

Means followed by same letter do not significantly differ (P=.10, Duncan's New MRT)

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

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|--------------------------|-----------------|-----------|-------------------------------|-----------|-----------|----------|------|----------|--------|-------|
| Trial ID: SB-14-11       |                 |           | Study Dir.: SANDY NEWELL      |           |           |          |      |          |        |       |
| Location: PONDER FARM    |                 |           | Investigator: Eric P. Prostko |           |           |          |      |          |        |       |
| Weed Code                |                 |           |                               | ANNUAL    |           | -----    |      | -----    |        |       |
| Crop Code                |                 |           |                               | GRASS     |           | GLYMA    |      | GLYMA    |        |       |
| Part Rated               |                 |           |                               |           |           |          |      |          |        |       |
| Rating Data Type         |                 |           |                               | CONTROL   |           | YIELD    |      | YIELD    |        |       |
| Rating Unit              |                 |           |                               | PERCENT   |           | LBS/PLOT |      | BU/A     |        |       |
| Rating Date              |                 |           |                               | Jun-28-11 |           | Oct-3-11 |      | Oct-3-11 |        |       |
| Trt-Eval Interval        |                 |           |                               | 35 DA-A   |           | 132 DA-A |      | 132 DA-A |        |       |
| PRM Data Type            |                 |           |                               |           |           |          |      | TY1      |        |       |
| # Subsamples, Dec.       |                 |           |                               |           |           | - 1      |      | - 0      |        |       |
| Trt No.                  | Treatment Name  | Form Conc | Form Type                     | Rate      | Grow Unit | Appl Stg | Code | 8        | 9      | 10    |
| 1                        | ZIDUA           | 85        | WG                            | 1.5 oz/a  | PRE       | A        |      | 75.0 b   | 5.1 a  | 26 a  |
| 2                        | ZIDUA           | 85        | WG                            | 2.0 oz/a  | PRE       | A        |      | 75.0 b   | 4.8 a  | 25 a  |
| 3                        | ZIDUA           | 85        | WG                            | 4.0 oz/a  | PRE       | A        |      | 90.0 ab  | 4.0 b  | 21 b  |
| 4                        | ZIDUA           | 85        | WG                            | 2.0 oz/a  | PRE       | A        |      | 73.8 b   | 4.9 a  | 25 a  |
|                          | SHARPEN         | 2.85      | SC                            | 1.0 oz/a  | PRE       | A        |      |          |        |       |
| 5                        | ZIDUA           | 85        | WG                            | 1.5 oz/a  | PRE       | A        |      | 73.8 b   | 2.9 c  | 15 c  |
|                          | VERDICT         | 5.57      | EC                            | 5.0 oz/a  | PRE       | A        |      |          |        |       |
| 6                        | DUAL MAGNUM     | 7.62      | EC                            | 16.0 oz/a | PRE       | A        |      | 38.8 c   | 4.7 a  | 24 a  |
| 7                        | VALOR SX        | 51        | WG                            | 2.0 oz/a  | PRE       | A        |      | 76.3 b   | 5.1 a  | 26 a  |
| 8                        | PREFIX          | 5.29      | EC                            | 32.0 oz/a | PRE       | A        |      | 90.0 ab  | 4.6 ab | 24 ab |
| 9                        | ZIDUA           | 85        | WG                            | 1.5 oz/a  | PRE       | A        |      | 92.5 a   | 4.9 a  | 25 a  |
|                          | VALOR SX        | 51        | WG                            | 2.0 oz/a  | PRE       | A        |      |          |        |       |
| 10                       | AUTHORITY FIRST | 70        | DF                            | 3.0 oz/a  | PRE       | A        |      | 30.0 c   | 5.0 a  | 26 a  |
| 11                       | NTC             |           |                               |           |           |          |      | 0.0 d    | 0.0 d  | 0 d   |
| LSD (P=.10)              |                 |           |                               | 14.91     |           | 0.63     |      | 3.2      |        |       |
| Standard Deviation       |                 |           |                               | 12.43     |           | 0.52     |      | 2.7      |        |       |
| CV                       |                 |           |                               | 19.12     |           | 12.48    |      | 12.48    |        |       |
| Grand Mean               |                 |           |                               | 65.0      |           | 4.17     |      | 21.54    |        |       |
| Bartlett's X2            |                 |           |                               | 18.038    |           | 5.954    |      | 5.954    |        |       |
| P(Bartlett's X2)         |                 |           |                               | 0.035*    |           | 0.744    |      | 0.744    |        |       |
| Replicate F              |                 |           |                               | 7.272     |           | 12.639   |      | 12.638   |        |       |
| Replicate Prob(F)        |                 |           |                               | 0.0008    |           | 0.0001   |      | 0.0001   |        |       |
| Treatment F              |                 |           |                               | 22.345    |           | 34.382   |      | 34.380   |        |       |
| Treatment Prob(F)        |                 |           |                               | 0.0001    |           | 0.0001   |      | 0.0001   |        |       |

Means followed by same letter do not significantly differ (P=.10, Duncan's New MRT)

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

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Location: PONDER FARM Investigator: Eric P. Prostko

Weed Code

AMAPA = AMARANTH, PALMER / AMARANTHUS PALMERI S.WATS.

Part Rated

PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)

PRM Data Type

TY1 = 5.162667\*[9]