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## Grow more soybeans

Trial ID: 13S-THP-CTS-48      Protocol ID: 13S-THP-CTS-48  
 Location: Throckmorton      Study Director:  
 Project ID: USHES0Y007-2013      Investigator: Dr. Bill Johnson  
 Sponsor Contact: Syngenta- Steve Mroczkiewicz

## General Trial Information

**Study Director:** Bill Johnson  
**Investigator:** Dr. Bill Johnson    **Title:** Professor

**Trial Status:** E established  
**Initiation Date:** Mar-19-2013

## Trial Location

**City:** Lafayette  
**State/Prov.:** IN  
**Postal Code:** 47909  
**Country:** USA

## Personnel

**Study Director:** Bill Johnson  
**Investigator:** Dr. Bill Johnson      **Title:** Professor  
**Affiliation:** Purdue University  
**Address:** 915 W State Street  
**Location:** West Lafayette, IN, USA  
**Postal Code:** 47907      **E-mail:** wjj@purdue.edu  
**Phone No.:** 765-494-4656    **Mobile No.:** 765-404-9801

## Cooperator/Landowner

**Cooperator:** Throckmorton Purdue Ag Center      **Role:** Purdue Ag Center  
**Organization:** Purdue University  
**Address 1:** 8343 US 231 S  
  
**City:** Lafayette      **Phone No.:** 765-538-3422  
**State/Prov:** IN      **Fax No.:** 765-538-3423  
**Postal Code:** 47909      **E-mail:** jayyoung@purdue.edu  
**Country:** USA      United States

## Crop Description

**Crop 1:** GLXMA Glycine max Soybean  
**Variety:** NORTHROP KING S28-U7      **Description:** RR  
**BBCH Scale:** BSOY      **Planting Date:** May-16-2013  
**Planting Method:** SEEDED seeded      **Rate, Unit:** 130000 S/A  
**Depth, Unit:** 1 IN  
**Row Spacing, Unit:** 15 IN  
  
**Soil Moisture:** SLIWET slightly wet      **Soil Temperature, Unit:** 68 F  
**Emergence Date:** May-22-2013

## Pest Description

**Pest 1 Type:** W    **Code:** AMBTR Ambrosia trifida  
**Common Name:** Giant ragweed  
  
**Pest 2 Type:** W    **Code:** SETFA Setaria faberi  
**Common Name:** Giant foxtail  
  
**Pest 3 Type:** W    **Code:** ABUTH Abutilon theophrasti  
**Common Name:** velvetleaf  
  
**Pest 4 Type:** W    **Code:** CHEAL Chenopodium album  
**Common Name:** Common lambsquarters

## Site and Design

**Plot Width, Unit:** 10 FT      **Site Type:** FIELD field  
**Plot Length, Unit:** 30 FT    **Experimental Unit:** 1 PLOT plot  
**Plot Area, Unit:** 300 FT<sup>2</sup>    **Tillage Type:** CONTIL conventional-till  
**Replications:** 5      **Study Design:** RACOB� Randomized Complete Block (RCB)

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| Soil Description                        |                                     |
|---|-------------------------------------|
| <b>Description Name:</b> TPAC -Field 4A |                                     |
| <b>% OM:</b> 3.1                        | <b>Texture:</b> SIL silt loam       |
| <b>pH:</b> 6                            | <b>Soil Name:</b> Toronto-Millbrook |
| <b>CEC:</b> 11.1                        |                                     |

| Application Description        |             |             |             |            |             |
|--------------------------------|-------------|-------------|-------------|------------|-------------|
|                                | A           | B           | C           | D          | E           |
| <b>Application Date:</b>       | May-16-2013 | Jun-11-2013 | Jun-26-2013 | Jul-3-2013 | Jul-17-2013 |
| <b>Time of Day:</b>            | 11 AM       | 7:45 AM     | 8 AM        | 10 AM      |             |
| <b>Application Method:</b>     | SPRAY       | SPRAY       | SPRAY       | SPRAY      | SPRAY       |
| <b>Application Timing:</b>     | ATPLAN      | EAPOCR      | MIPOCR      | POSPOS     | LAPOCR      |
| <b>Application Placement:</b>  | SOIL        | FOLIAR      | FOLIAR      | FOLIAR     | FOLIAR      |
| <b>Applied By:</b>             | MW          | MW          | MW          | MW         |             |
| <b>Air Temperature, Unit:</b>  | 68 F        | 71 F        | 76 F        | 71 F       | 79 F        |
| <b>% Relative Humidity:</b>    | 73          | 71          | 80          | 80         | 84          |
| <b>Wind Velocity, Unit:</b>    | 3 MPH       | 1.6 MPH     | 8 MPH       | 5.5 MPH    | 2 MPH       |
| <b>Wind Direction:</b>         | E           | SW          | SW          | S          | SE          |
| <b>Dew Presence (Y/N):</b>     | Y yes       | Y yes       | Y yes       | N no       | Y yes       |
| <b>Soil Temperature, Unit:</b> | 68 F        | 70 F        | 78 F        | 76 F       | 80 F        |
| <b>Soil Moisture:</b>          | SLIWET      | SLIWET      | SLIWET      | DRY        | DRY         |
| <b>% Cloud Cover:</b>          | 80          | 10          | 90          | 35         | 5           |

| Crop Stage At Each Application  |            |            |            |            |            |
|---------------------------------|------------|------------|------------|------------|------------|
|                                 | A          | B          | C          | D          | E          |
| <b>Crop 1 Code, BBCH Scale:</b> | GLXMA BSOY | GLXMA BSOY | GLXMA BSOY | GLXMA BSOY | GLXMA BSOY |
| <b>Stage Scale Used:</b>        |            | BBCH       | BBCH       | BBCH       | BBCH       |
| <b>Stage Majority, Percent:</b> |            | V2         | R1         | V6         | R3         |

| Pest Stage At Each Application   |         |         |         |         |         |
|----------------------------------|---------|---------|---------|---------|---------|
|                                  | A       | B       | C       | D       | E       |
| <b>Pest 1 Code, Type, Scale:</b> | AMBTR W | AMBTR W | AMBTR W | AMBTR W | AMBTR W |
| <b>Height Minimum, Maximum:</b>  |         | 1 5     | 0.5 3   |         |         |
| <b>Density, Unit:</b>            |         | 3 YD2   | 3 YD2   |         |         |
| <b>Pest 2 Code, Type, Scale:</b> | SETFA W | SETFA W | SETFA W | SETFA W | SETFA W |
| <b>Height Minimum, Maximum:</b>  |         | 1 5     | 0.5 2   |         |         |
| <b>Density, Unit:</b>            |         | 12 FT2  | 7 YD2   |         |         |
| <b>Pest 3 Code, Type, Scale:</b> | ABUTH W | ABUTH W | ABUTH W | ABUTH W | ABUTH W |
| <b>Height, Unit:</b>             |         | 2 IN    |         |         |         |
| <b>Density, Unit:</b>            |         | 1 YD2   |         |         |         |
| <b>Pest 4 Code, Type, Scale:</b> | CHEAL W | CHEAL W | CHEAL W | CHEAL W | CHEAL W |
| <b>Height, Unit:</b>             |         | 1 IN    |         |         |         |
| <b>Density, Unit:</b>            |         | 1 YD2   |         |         |         |

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| Application Equipment            |            |            |            |            |   |
|----------------------------------|------------|------------|------------|------------|---|
|                                  | A          | B          | C          | D          | E |
| <b>Appl. Equipment:</b>          | CO2 FORD   | CO2 FORD   | CO2 FORD   | CUB        |   |
| <b>Equipment Type:</b>           | SPTRMO     | SPTRMO     | SPTRMO     | TRMOSP     |   |
| <b>Operation Pressure, Unit:</b> |            |            |            | 20 PSI     |   |
| <b>Nozzle Type:</b>              | FLAT FAN   | FLAT FAN   | FLAT FAN   | FLAT FAN   |   |
| <b>Nozzle Size:</b>              | XR 100 02  | XR 100 02  | XR 100 02  | 110 02 XR  |   |
| <b>Nozzle Spacing, Unit:</b>     | 20 IN      | 20 IN      | 20 IN      | 20 IN      |   |
| <b>Nozzles/Row:</b>              | 6          | 6          | 6          | 6          |   |
| <b>Boom Length, Unit:</b>        | 10 FT      | 10 FT      | 10 FT      | 10 FT      |   |
| <b>Boom Height, Unit:</b>        | 20 IN      | 20 IN      | 20 IN      | 18 IN      |   |
| <b>Ground Speed, Unit:</b>       | 2.1 MPH    | 2.1 MPH    | 2.1 MPH    | 2.2 MPH    |   |
| <b>Carrier:</b>                  | MEIGS      | MEIGS      | MEIGS      | ACRE       |   |
| <b>Spray Volume, Unit:</b>       | 20 gal/ac  | 20 gal/ac  | 20 gal/ac  | 20 gal/ac  |   |
| <b>Mix Size, Unit:</b>           | 2.5 liters | 2.5 liters | 2.5 liters | 2.5 liters |   |
| <b>Propellant:</b>               | CO2        | CO2        | CO2        | CO2        |   |

| Date        | By | Notes                                    |
|-------------|----|--|
| Aug-27-2013 |    | No disease present. (Jeffery Ravellette) |

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## Grow more soybeans

Trial ID: 13S-THP-CTS-48      Protocol ID: 13S-THP-CTS-48  
 Location: Throckmorton      Study Director:  
 Project ID: USHES0Y007-2013      Investigator: Dr. Bill Johnson  
 Sponsor Contact: Syngenta- Steve Mroczkiewicz

Reps: 5      Plots: 10 by 30 feet  
 Spray vol: 20 gal/ac      Mix size: 3 liters (min 2.607)

| Trt No. | Treatment Name            | Form Conc     | Form Unit | Form Type | Rate Rate         | Unit | Other Rate    | Other Unit | Growth Stage | Appl Code | Appl Description | Amt Product to Measure | Rep 1 | 2   | 3   | 4   | 5    |
|---------|---------------------------|---------------|-----------|-----------|-------------------|------|---------------|------------|--------------|-----------|------------------|------------------------|-------|-----|-----|-----|------|
| 1       | Touchdown Total (4.17 SL) | 4.17 LBAE/GAL | SL        |           | 1.04 lb ae/a      |      | 32 fl oz/a    |            | EAPOCR B     |           | V2 SOYBEAN       | 37.41 ml/mx            | 101   | 302 | 602 | 703 | 1001 |
|         | AMS - Liquid              | 3.4 LB/GAL    | SL        |           | 8.5 lb ai/100 gal |      | 10 qt/100 gal |            | EAPOCR B     |           | V2 SOYBEAN       | 74.99 ml/mx            |       |     |     |     |      |
|         | Touchdown Total (4.17 SL) | 4.17 LBAE/GAL | SL        |           | 0.78 lb ae/a      |      | 24 fl oz/a    |            | POSPOS D     |           |                  | 28.05 ml/mx            |       |     |     |     |      |
|         | AMS - Liquid              | 3.4 LB/GAL    | SL        |           | 8.5 lb ai/100 gal |      | 10 qt/100 gal |            | POSPOS D     |           |                  | 74.99 ml/mx            |       |     |     |     |      |
| 2       | Boundary (6.5 EC)         | 6.6 LBA/GAL   | EC        |           | 1.44 lb ai/a      |      | 1.75 pt/a     |            | ATPLAN A     |           |                  | 32.72 ml/mx            | 102   | 401 | 503 | 803 | 902  |
|         | Flexstar GT 3.5 (2.82 SL) | 2.82 G/L      | SL        |           | 0.0103 lb ai/a    |      | 3.5 pt/a      |            | MIPOCR C     |           | R1 SOYBEAN       | 65.74 ml/mx            |       |     |     |     |      |
|         | MSO                       | 100 %         | L         |           | 1 % v/v           |      | 1 % v/v       |            | MIPOCR C     |           | R1 SOYBEAN       | 30.0 ml/mx             |       |     |     |     |      |
|         | Quilt Xcel (2.2 SC)       | 2.2 LB/GAL    | SC        |           | 2.9 oz ai/a       |      | 10.5 fl oz/a  |            | LAPOCR E     |           | R3 SOYBEAN       | 12.36 ml/mx            |       |     |     |     |      |
|         | Endigo ZCX (22.08 L)      | 22.08 G/L     | L         |           | 0.092 oz ai/a     |      | 4 fl oz/a     |            | LAPOCR E     |           | R3 SOYBEAN       | 4.687 ml/mx            |       |     |     |     |      |
| 3       | Boundary (6.5 EC)         | 6.6 LBA/GAL   | EC        |           | 1.44 lb ai/a      |      | 1.75 pt/a     |            | ATPLAN A     |           |                  | 32.72 ml/mx            | 103   | 403 | 502 | 701 | 1002 |
|         | Flexstar GT 3.5 (2.82 SL) | 2.82 G/L      | SL        |           | 0.0103 lb ai/a    |      | 3.5 pt/a      |            | MIPOCR C     |           | R1 SOYBEAN       | 65.74 ml/mx            |       |     |     |     |      |
|         | Quilt Xcel (2.2 SC)       | 2.2 LB/GAL    | SC        |           | 2.9 oz ai/a       |      | 10.5 fl oz/a  |            | MIPOCR C     |           | R1 SOYBEAN       | 12.36 ml/mx            |       |     |     |     |      |
|         | MSO                       | 100 %         | L         |           | 1 % v/v           |      | 1 % v/v       |            | MIPOCR C     |           | R1 SOYBEAN       | 30.0 ml/mx             |       |     |     |     |      |
|         | Quilt Xcel (2.2 SC)       | 2.2 LB/GAL    | SC        |           | 2.9 oz ai/a       |      | 10.5 fl oz/a  |            | LAPOCR E     |           | R3 SOYBEAN       | 12.36 ml/mx            |       |     |     |     |      |
|         | Endigo ZCX (22.08 L)      | 22.08 G/L     | L         |           | 0.092 oz ai/a     |      | 4 fl oz/a     |            | LAPOCR E     |           | R3 SOYBEAN       | 4.687 ml/mx            |       |     |     |     |      |
| 4       | Boundary (6.5 EC)         | 6.6 LBA/GAL   | EC        |           | 1.44 lb ai/a      |      | 1.75 pt/a     |            | ATPLAN A     |           |                  | 32.72 ml/mx            | 201   | 303 | 501 | 802 | 901  |
|         | Flexstar GT 3.5 (2.82 SL) | 2.82 G/L      | SL        |           | 0.0103 lb ai/a    |      | 3.5 pt/a      |            | MIPOCR C     |           | R1 SOYBEAN       | 65.74 ml/mx            |       |     |     |     |      |
|         | MSO                       | 100 %         | L         |           | 1 % v/v           |      | 1 % v/v       |            | MIPOCR C     |           | R1 SOYBEAN       | 30.0 ml/mx             |       |     |     |     |      |
| 5       | Prefix (5.29 EC)          | 5.29 LBA/GAL  | EC        |           | 1.32 lb ai/a      |      | 2 pt/a        |            | ATPLAN A     |           |                  | 37.43 ml/mx            | 202   | 301 | 601 | 702 | 903  |
|         | Touchdown Total (4.17 SL) | 4.17 LBAE/GAL | SL        |           | 0.78 lb ae/a      |      | 24 fl oz/a    |            | MIPOCR C     |           | R1 SOYBEAN       | 28.05 ml/mx            |       |     |     |     |      |
|         | AMS - Liquid              | 3.4 LB/GAL    | SL        |           | 8.5 lb ai/100 gal |      | 10 qt/100 gal |            | MIPOCR C     |           | R1 SOYBEAN       | 74.99 ml/mx            |       |     |     |     |      |
| 6       | Prefix (5.29 EC)          | 5.29 LBA/GAL  | EC        |           | 1.32 lb ai/a      |      | 2 pt/a        |            | ATPLAN A     |           |                  | 37.43 ml/mx            | 203   | 402 | 603 | 801 | 1003 |
|         | Touchdown Total (4.17 SL) | 4.17 LBAE/GAL | SL        |           | 0.78 lb ae/a      |      | 24 fl oz/a    |            | MIPOCR C     |           | R1 SOYBEAN       | 28.05 ml/mx            |       |     |     |     |      |
|         | AMS - Liquid              | 3.4 LB/GAL    | SL        |           | 8.5 lb ai/100 gal |      | 10 qt/100 gal |            | MIPOCR C     |           | R1 SOYBEAN       | 74.99 ml/mx            |       |     |     |     |      |
|         | Quilt Xcel (2.2 SC)       | 2.2 LB/GAL    | SC        |           | 2.9 oz ai/a       |      | 10.5 fl oz/a  |            | LAPOCR E     |           | R3 SOYBEAN       | 12.36 ml/mx            |       |     |     |     |      |
|         | Endigo ZCX (22.08 L)      | 22.08 G/L     | L         |           | 0.092 oz ai/a     |      | 4 fl oz/a     |            | LAPOCR E     |           | R3 SOYBEAN       | 4.687 ml/mx            |       |     |     |     |      |

Sort Order: Treatment

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## Grow more soybeans

Trial ID: 13S-THP-CTS-48      Protocol ID: 13S-THP-CTS-48  
 Location: Throckmorton      Study Director:  
 Project ID: USHES0Y007-2013      Investigator: Dr. Bill Johnson  
 Sponsor Contact: Syngenta- Steve Mroczkiewicz

| Pest Type                     | W Weed            | W Weed          | W Weed          | W Weed          | W Weed         | W Weed          |      |      |
|-------------------------------|-------------------|-----------------|-----------------|-----------------|----------------|-----------------|------|------|
| Pest Code                     | SETFA             | AMBTR           | ABUTH           | CHEAL           | SETFA          | AMBTR           |      |      |
| Pest Scientific Name          | Setaria faberi    | Ambrosia trifi> | Abutilon theop> | Chenopodium al> | Setaria faberi | Ambrosia trifi> |      |      |
| Pest Name                     | Giant foxtail     | Giant ragweed   | velvetleaf      | Common lambsqu> | Giant foxtail  | Giant ragweed   |      |      |
| Crop Code                     |                   |                 |                 |                 |                |                 |      |      |
| BBCB Scale                    |                   |                 |                 |                 |                |                 |      |      |
| Crop Scientific Name          |                   |                 |                 |                 |                |                 |      |      |
| Crop Name                     |                   |                 |                 |                 |                |                 |      |      |
| Rating Date                   | Jun-25-2013       | Jun-25-2013     | Jun-25-2013     | Jun-25-2013     | Jul-9-2013     | Jul-9-2013      |      |      |
| Rating Type                   | CONTRO            | CONTRO          | CONTRO          | CONTRO          | CONTRO         | CONTRO          |      |      |
| Rating Unit                   | %                 | %               | %               | %               | %              | %               |      |      |
| Number of Subsamples          | 1                 | 1               | 1               | 1               | 1              | 1               |      |      |
| Crop Stage Majority           | R1                | R1              | R1              | R1              |                |                 |      |      |
| Pest Stage Majority           | 3 IN              | 4 IN            | 0.5 IN          | 2 IN            |                |                 |      |      |
| Pest Density, Unit            | 8 FT2             | 2 YD2           | 8 YD2           | 1 YD2           |                |                 |      |      |
| Assessed By                   | MW                | MW              | MW              | MW              | MW             | MW              |      |      |
| Days After First/Last Applic. | 40 14             | 40 14           | 40 14           | 40 14           | 54 6           | 54 6            |      |      |
| Plant-Eval Interval           | 40 DP-1           | 40 DP-1         | 40 DP-1         | 40 DP-1         | 54 DP-1        | 54 DP-1         |      |      |
| Days After Emergence          | 34 DE-1           | 34 DE-1         | 34 DE-1         | 34 DE-1         | 48 DE-1        | 48 DE-1         |      |      |
| Trt Treatment                 | Rate              | Appl            |                 |                 |                |                 |      |      |
| No. Name                      | Rate Unit         | Code Plot       | 1               | 2               | 3              | 4               | 5    | 6    |
| 1 Touchdown Total (4.17 SL)   | 1.04 lb ae/a      | B 101           | 95.0            | 90.0            | 90.0           | 99.0            | 95.0 | 95.0 |
| AMS - Liquid                  | 8.5 lb ai/100 gal | B 302           | 95.0            | 95.0            | 99.0           | 99.0            | 99.0 | 93.0 |
| Touchdown Total (4.17 SL)     | 0.78 lb ae/a      | D 602           | 99.0            | 93.0            | 99.0           | 90.0            | 99.0 | 95.0 |
| AMS - Liquid                  | 8.5 lb ai/100 gal | D 703           | 95.0            | 90.0            | 99.0           | 99.0            | 99.0 | 95.0 |
|                               |                   | 1001            | 93.0            | 90.0            | 99.0           | 99.0            | 99.0 | 93.0 |
|                               |                   | Mean =          | 95.4            | 91.6            | 97.2           | 97.2            | 98.2 | 94.2 |
| 2 Boundary (6.5 EC)           | 1.44 lb ai/a      | A 102           | 95.0            | 50.0            | 99.0           | 90.0            | 99.0 | 87.0 |
| Flexstar GT 3.5 (2.82 SL)     | 0.0103 lb ai/a    | C 401           | 99.0            | 0.0             | 99.0           | 99.0            | 99.0 | 70.0 |
| MSO                           | 1 % v/v           | C 503           | 99.0            | 10.0            | 99.0           | 99.0            | 99.0 | 75.0 |
| Quilt Xcel (2.2 SC)           | 2.9 oz ai/a       | E 803           | 99.0            | 0.0             | 99.0           | 99.0            | 99.0 | 80.0 |
| Endigo ZCX (22.08 L)          | 0.092 oz ai/a     | E 902           | 99.0            | 75.0            | 99.0           | 99.0            | 99.0 | 85.0 |
|                               |                   | Mean =          | 98.2            | 27.0            | 99.0           | 97.2            | 99.0 | 79.4 |
| 3 Boundary (6.5 EC)           | 1.44 lb ai/a      | A 103           | 99.0            | 0.0             | 99.0           | 99.0            | 99.0 | 85.0 |
| Flexstar GT 3.5 (2.82 SL)     | 0.0103 lb ai/a    | C 403           | 99.0            | 0.0             | 99.0           | 99.0            | 99.0 | 80.0 |
| Quilt Xcel (2.2 SC)           | 2.9 oz ai/a       | C 502           | 95.0            | 60.0            | 99.0           | 99.0            | 99.0 | 85.0 |
| MSO                           | 1 % v/v           | C 701           | 95.0            | 0.0             | 99.0           | 99.0            | 99.0 | 70.0 |
| Quilt Xcel (2.2 SC)           | 2.9 oz ai/a       | E 1002          | 90.0            | 55.0            | 99.0           | 99.0            | 99.0 | 85.0 |
| Endigo ZCX (22.08 L)          | 0.092 oz ai/a     | E               |                 |                 |                |                 |      |      |
|                               |                   | Mean =          | 95.6            | 23.0            | 99.0           | 99.0            | 99.0 | 81.0 |
| 4 Boundary (6.5 EC)           | 1.44 lb ai/a      | A 201           | 99.0            | 70.0            | 99.0           | 99.0            | 99.0 | 93.0 |
| Flexstar GT 3.5 (2.82 SL)     | 0.0103 lb ai/a    | C 303           | 90.0            | 20.0            | 99.0           | 99.0            | 99.0 | 80.0 |
| MSO                           | 1 % v/v           | C 501           | 99.0            | 0.0             | 99.0           | 99.0            | 99.0 | 80.0 |
|                               |                   | 802             | 90.0            | 0.0             | 99.0           | 90.0            | 99.0 | 75.0 |
|                               |                   | 901             | 95.0            | 20.0            | 99.0           | 99.0            | 99.0 | 83.0 |
|                               |                   | Mean =          | 94.6            | 22.0            | 99.0           | 97.2            | 99.0 | 82.2 |
| 5 Prefix (5.29 EC)            | 1.32 lb ai/a      | A 202           | 90.0            | 70.0            | 99.0           | 0.0             | 99.0 | 90.0 |
| Touchdown Total (4.17 SL)     | 0.78 lb ae/a      | C 301           | 90.0            | 60.0            | 99.0           | 99.0            | 99.0 | 83.0 |
| AMS - Liquid                  | 8.5 lb ai/100 gal | C 601           | 90.0            | 20.0            | 99.0           | 0.0             | 99.0 | 83.0 |
|                               |                   | 702             | 90.0            | 50.0            | 90.0           | 60.0            | 99.0 | 85.0 |
|                               |                   | 903             | 95.0            | 60.0            | 99.0           | 0.0             | 99.0 | 85.0 |
|                               |                   | Mean =          | 91.0            | 52.0            | 97.2           | 31.8            | 99.0 | 85.2 |

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|                               |                   |                 |                 |                 |                |                 |
|-------------------------------|-------------------|-----------------|-----------------|-----------------|----------------|-----------------|
| Pest Type                     | W Weed            | W Weed          | W Weed          | W Weed          | W Weed         | W Weed          |
| Pest Code                     | SETFA             | AMBTR           | ABUTH           | CHEAL           | SETFA          | AMBTR           |
| Pest Scientific Name          | Setaria faberi    | Ambrosia trifi> | Abutilon theop> | Chenopodium al> | Setaria faberi | Ambrosia trifi> |
| Pest Name                     | Giant foxtail     | Giant ragweed   | velvetleaf      | Common lambsqu> | Giant foxtail  | Giant ragweed   |
| Crop Code                     |                   |                 |                 |                 |                |                 |
| BBCH Scale                    |                   |                 |                 |                 |                |                 |
| Crop Scientific Name          |                   |                 |                 |                 |                |                 |
| Crop Name                     |                   |                 |                 |                 |                |                 |
| Rating Date                   | Jun-25-2013       | Jun-25-2013     | Jun-25-2013     | Jun-25-2013     | Jul-9-2013     | Jul-9-2013      |
| Rating Type                   | CONTRO            | CONTRO          | CONTRO          | CONTRO          | CONTRO         | CONTRO          |
| Rating Unit                   | %                 | %               | %               | %               | %              | %               |
| Number of Subsamples          | 1                 | 1               | 1               | 1               | 1              | 1               |
| Crop Stage Majority           | R1                | R1              | R1              | R1              |                |                 |
| Pest Stage Majority           | 3 IN              | 4 IN            | 0.5 IN          | 2 IN            |                |                 |
| Pest Density, Unit            | 8 FT2             | 2 YD2           | 8 YD2           | 1 YD2           |                |                 |
| Assessed By                   | MW                | MW              | MW              | MW              | MW             | MW              |
| Days After First/Last Applic. | 40 14             | 40 14           | 40 14           | 40 14           | 54 6           | 54 6            |
| Plant-Eval Interval           | 40 DP-1           | 40 DP-1         | 40 DP-1         | 40 DP-1         | 54 DP-1        | 54 DP-1         |
| Days After Emergence          | 34 DE-1           | 34 DE-1         | 34 DE-1         | 34 DE-1         | 48 DE-1        | 48 DE-1         |
| Trt Treatment                 | Rate              | Appl            |                 |                 |                |                 |
| No. Name                      | Rate Unit         | Code Plot       | 1               | 2               | 3              | 4               |
| 6 Prefix (5.29 EC)            | 1.32 lb ai/a      | A 203           | 90.0            | 60.0            | 99.0           | 40.0            |
| Touchdown Total (4.17 SL)     | 0.78 lb ae/a      | C 402           | 99.0            | 50.0            | 99.0           | 70.0            |
| AMS - Liquid                  | 8.5 lb ai/100 gal | C 603           | 90.0            | 55.0            | 99.0           | 40.0            |
| Quilt Xcel (2.2 SC)           | 2.9 oz ai/a       | E 801           | 95.0            | 60.0            | 99.0           | 99.0            |
| Endigo ZCX (22.08 L)          | 0.092 oz ai/a     | E 1003          | 90.0            | 85.0            | 99.0           | 60.0            |
|                               | Mean =            |                 | 92.8            | 62.0            | 99.0           | 61.8            |
|                               |                   |                 |                 |                 |                | 99.0            |
|                               |                   |                 |                 |                 |                | 88.4            |

# Purdue University

|                               |                           |                   |      |                | W Weed<br>SETFA | W Weed<br>AMBTR | W Weed<br>AMBTR |             |
|-------------------------------|---------------------------|-------------------|------|----------------|-----------------|-----------------|-----------------|-------------|
| Pest Type                     |                           |                   |      |                | Setaria faberi  | Ambrosia trifi> | Ambrosia trifi> |             |
| Pest Code                     |                           |                   |      |                | Giant foxtail   | Giant ragweed   | Giant ragweed   |             |
| Pest Scientific Name          |                           |                   |      |                |                 |                 |                 | GLXMA       |
| Pest Name                     |                           |                   |      |                |                 |                 |                 | BSOY        |
| Crop Code                     |                           |                   |      |                |                 |                 |                 | Glycine max |
| BBCH Scale                    |                           |                   |      |                |                 |                 |                 | Soybean     |
| Crop Scientific Name          |                           |                   |      |                |                 |                 |                 |             |
| Crop Name                     |                           |                   |      |                |                 |                 |                 |             |
| Rating Date                   |                           |                   |      |                | Jul-22-2013     | Jul-22-2013     | Sep-23-2013     | Sep-24-2013 |
| Rating Type                   |                           |                   |      |                | CONTRO          | CONTRO          | CONTRO          | YIELD       |
| Rating Unit                   |                           |                   |      |                | %               | %               | %               | bu/ac       |
| Number of Subsamples          |                           |                   |      |                | 1               | 1               | 1               | 1           |
| Crop Stage Majority           |                           |                   |      |                | R3              | R3              |                 |             |
| Pest Stage Majority           |                           |                   |      |                |                 |                 |                 |             |
| Pest Density, Unit            |                           |                   |      |                |                 |                 |                 |             |
| Assessed By                   |                           |                   |      |                | MW              | MW              |                 |             |
| Days After First/Last Applic. |                           |                   |      |                | 67 5            | 67 5            | 130 68          | 131 69      |
| Plant-Eval Interval           |                           |                   |      |                | 67 DP-1         | 67 DP-1         | 130 DP-1        | 131 DP-1    |
| Days After Emergence          |                           |                   |      |                | 61 DE-1         | 61 DE-1         | 124 DE-1        | 125 DE-1    |
| Trt No.                       | Treatment Name            | Rate              | Unit | Appl Code Plot | 7               | 8               | 9               | 10          |
| 1                             | Touchdown Total (4.17 SL) | 1.04 lb ae/a      | B    | 101            | 99.0            | 99.0            | 99.0            | 72.70       |
|                               | AMS - Liquid              | 8.5 lb ai/100 gal | B    | 302            | 99.0            | 99.0            | 98.0            | 76.40       |
|                               | Touchdown Total (4.17 SL) | 0.78 lb ae/a      | D    | 602            | 99.0            | 99.0            | 99.0            | 84.20       |
|                               | AMS - Liquid              | 8.5 lb ai/100 gal | D    | 703            | 99.0            | 99.0            | 94.0            | 73.70       |
|                               |                           |                   |      | 1001           | 99.0            | 99.0            | 99.0            | 79.80       |
|                               |                           |                   |      | Mean =         | 99.0            | 99.0            | 97.8            | 77.36       |
| 2                             | Boundary (6.5 EC)         | 1.44 lb ai/a      | A    | 102            | 99.0            | 85.0            | 93.0            | 68.80       |
|                               | Flexstar GT 3.5 (2.82 SL) | 0.0103 lb ai/a    | C    | 401            | 99.0            | 75.0            | 86.0            | 60.00       |
|                               | MSO                       | 1 % v/v           | C    | 503            | 99.0            | 83.0            | 86.0            | 55.50       |
|                               | Quilt Xcel (2.2 SC)       | 2.9 oz ai/a       | E    | 803            | 99.0            | 85.0            | 87.0            | 56.20       |
|                               | Endigo ZCX (22.08 L)      | 0.092 oz ai/a     | E    | 902            | 99.0            | 87.0            | 92.0            | 69.40       |
|                               |                           |                   |      | Mean =         | 99.0            | 83.0            | 88.8            | 61.98       |
| 3                             | Boundary (6.5 EC)         | 1.44 lb ai/a      | A    | 103            | 99.0            | 80.0            | 85.0            | 65.40       |
|                               | Flexstar GT 3.5 (2.82 SL) | 0.0103 lb ai/a    | C    | 403            | 99.0            | 70.0            | 50.0            | 57.60       |
|                               | Quilt Xcel (2.2 SC)       | 2.9 oz ai/a       | C    | 502            | 99.0            | 85.0            | 80.0            | 63.30       |
|                               | MSO                       | 1 % v/v           | C    | 701            | 99.0            | 85.0            | 50.0            | 43.90       |
|                               | Quilt Xcel (2.2 SC)       | 2.9 oz ai/a       | E    | 1002           | 99.0            | 90.0            | 94.0            | 80.20       |
|                               | Endigo ZCX (22.08 L)      | 0.092 oz ai/a     | E    |                |                 |                 |                 |             |
|                               |                           |                   |      | Mean =         | 99.0            | 82.0            | 71.8            | 62.08       |
| 4                             | Boundary (6.5 EC)         | 1.44 lb ai/a      | A    | 201            | 99.0            | 93.0            | 90.0            | 71.00       |
|                               | Flexstar GT 3.5 (2.82 SL) | 0.0103 lb ai/a    | C    | 303            | 99.0            | 75.0            | 87.0            | 49.10       |
|                               | MSO                       | 1 % v/v           | C    | 501            | 99.0            | 87.0            | 87.0            | 51.60       |
|                               |                           |                   |      | 802            | 99.0            | 85.0            | 89.0            | 56.10       |
|                               |                           |                   |      | 901            | 99.0            | 80.0            | 85.0            | 54.60       |
|                               |                           |                   |      | Mean =         | 99.0            | 84.0            | 87.6            | 56.48       |
| 5                             | Prefix (5.29 EC)          | 1.32 lb ai/a      | A    | 202            | 99.0            | 95.0            | 97.0            | 79.50       |
|                               | Touchdown Total (4.17 SL) | 0.78 lb ae/a      | C    | 301            | 99.0            | 87.0            | 80.0            | 59.00       |
|                               | AMS - Liquid              | 8.5 lb ai/100 gal | C    | 601            | 99.0            | 85.0            | 88.0            | 69.30       |
|                               |                           |                   |      | 702            | 99.0            | 87.0            | 95.0            | 69.90       |
|                               |                           |                   |      | 903            | 99.0            | 87.0            | 89.0            | 72.80       |
|                               |                           |                   |      | Mean =         | 99.0            | 88.2            | 89.8            | 70.10       |

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|                               |                   |                 |                 |             |
|-------------------------------|-------------------|-----------------|-----------------|-------------|
| Pest Type                     | W Weed            | W Weed          | W Weed          |             |
| Pest Code                     | SETFA             | AMBTR           | AMBTR           |             |
| Pest Scientific Name          | Setaria faberi    | Ambrosia trifi> | Ambrosia trifi> |             |
| Pest Name                     | Giant foxtail     | Giant ragweed   | Giant ragweed   |             |
| Crop Code                     |                   |                 |                 | GLXMA       |
| BBCH Scale                    |                   |                 |                 | BSOY        |
| Crop Scientific Name          |                   |                 |                 | Glycine max |
| Crop Name                     |                   |                 |                 | Soybean     |
| Rating Date                   | Jul-22-2013       | Jul-22-2013     | Sep-23-2013     | Sep-24-2013 |
| Rating Type                   | CONTRO            | CONTRO          | CONTRO          | YIELD       |
| Rating Unit                   | %                 | %               | %               | bu/ac       |
| Number of Subsamples          | 1                 | 1               | 1               | 1           |
| Crop Stage Majority           | R3                | R3              |                 |             |
| Pest Stage Majority           |                   |                 |                 |             |
| Pest Density, Unit            |                   |                 |                 |             |
| Assessed By                   | MW                | MW              |                 |             |
| Days After First/Last Applic. | 67 5              | 67 5            | 130 68          | 131 69      |
| Plant-Eval Interval           | 67 DP-1           | 67 DP-1         | 130 DP-1        | 131 DP-1    |
| Days After Emergence          | 61 DE-1           | 61 DE-1         | 124 DE-1        | 125 DE-1    |
| Trt Treatment                 | Rate              | Appl            |                 |             |
| No. Name                      | Rate Unit         | Code Plot       | 7               | 8           |
| 6 Prefix (5.29 EC)            | 1.32 lb ai/a      | A 203           | 99.0            | 87.0        |
| Touchdown Total (4.17 SL)     | 0.78 lb ae/a      | C 402           | 99.0            | 90.0        |
| AMS - Liquid                  | 8.5 lb ai/100 gal | C 603           | 99.0            | 93.0        |
| Quilt Xcel (2.2 SC)           | 2.9 oz ai/a       | E 801           | 99.0            | 99.0        |
| Endigo ZCX (22.08 L)          | 0.092 oz ai/a     | E 1003          | 99.0            | 95.0        |
|                               |                   | Mean =          | 99.0            | 92.8        |
|                               |                   |                 |                 | 89.2        |
|                               |                   |                 |                 | 80.28       |



# Purdue University

## Grow more soybeans

Trial ID: 13S-THP-CTS-48      Protocol ID: 13S-THP-CTS-48  
Location: Throckmorton      Study Director:  
Project ID: USHES0Y007-2013      Investigator: Dr. Bill Johnson  
Sponsor Contact: Syngenta- Steve Mroczkiewicz

### Pest Type

W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

### Pest Code

SETFA, Setaria faberi, = US

AMBTR, Ambrosia trifida, = US

ABUTH, Abutilon theophrasti, = US

CHEAL, Chenopodium album, = US

### Crop Code

GLXMA, BSOY, Glycine max, = US

### Rating Type

CONTRO = control / burndown or knockdown

YIELD = yield

### Rating Unit

% = percent

bu/ac = bushels per acre

FT2 = per square foot

YD2 = per square yard

### Plant-Eval Interval

40 DP-1 = 1 GLXMA May-16-2013

54 DP-1 = 1 GLXMA May-16-2013

67 DP-1 = 1 GLXMA May-16-2013

130 DP-1 = 1 GLXMA May-16-2013

131 DP-1 = 1 GLXMA May-16-2013

# Purdue University

## Grow more soybeans

Trial ID: 13S-THP-CTS-48 Protocol ID: 13S-THP-CTS-48  
 Location: Throckmorton Study Director:  
 Project ID: USHES0Y007-2013 Investigator: Dr. Bill Johnson  
 Sponsor Contact: Syngenta- Steve Mroczkiewicz

| Pest Type                     | W Weed            | W Weed          | W Weed          | W Weed          | W Weed         | W Weed          |        |         |
|-------------------------------|-------------------|-----------------|-----------------|-----------------|----------------|-----------------|--------|---------|
| Pest Code                     | SETFA             | AMBTR           | ABUTH           | CHEAL           | SETFA          | AMBTR           |        |         |
| Pest Scientific Name          | Setaria faberi    | Ambrosia trifi> | Abutilon theop> | Chenopodium al> | Setaria faberi | Ambrosia trifi> |        |         |
| Pest Name                     | Giant foxtail     | Giant ragweed   | velvetleaf      | Common lambsqu> | Giant foxtail  | Giant ragweed   |        |         |
| Crop Code                     |                   |                 |                 |                 |                |                 |        |         |
| BBCB Scale                    |                   |                 |                 |                 |                |                 |        |         |
| Crop Scientific Name          |                   |                 |                 |                 |                |                 |        |         |
| Crop Name                     |                   |                 |                 |                 |                |                 |        |         |
| Rating Date                   | Jun-25-2013       | Jun-25-2013     | Jun-25-2013     | Jun-25-2013     | Jul-9-2013     | Jul-9-2013      |        |         |
| Rating Type                   | CONTRO            | CONTRO          | CONTRO          | CONTRO          | CONTRO         | CONTRO          |        |         |
| Rating Unit                   | %                 | %               | %               | %               | %              | %               |        |         |
| Number of Subsamples          | 1                 | 1               | 1               | 1               | 1              | 1               |        |         |
| Crop Stage Majority           | R1                | R1              | R1              | R1              |                |                 |        |         |
| Pest Stage Majority           | 3 IN              | 4 IN            | 0.5 IN          | 2 IN            |                |                 |        |         |
| Pest Density, Unit            | 8 FT2             | 2 YD2           | 8 YD2           | 1 YD2           |                |                 |        |         |
| Assessed By                   | MW                | MW              | MW              | MW              | MW             | MW              |        |         |
| Days After First/Last Applic. | 40 14             | 40 14           | 40 14           | 40 14           | 54 6           | 54 6            |        |         |
| Plant-Eval Interval           | 40 DP-1           | 40 DP-1         | 40 DP-1         | 40 DP-1         | 54 DP-1        | 54 DP-1         |        |         |
| Days After Emergence          | 34 DE-1           | 34 DE-1         | 34 DE-1         | 34 DE-1         | 48 DE-1        | 48 DE-1         |        |         |
| Trt Treatment                 | Rate              | Appl            | 1               | 2               | 3              | 4               | 5      | 6       |
| No. Name                      | Rate Unit         | Code            |                 |                 |                |                 |        |         |
| 1 Touchdown Total (4.17 SL)   | 1.04 lb ae/a      | B               | 95.4 a          | 91.6 a          | 97.2 a         | 97.2 a          | 98.2 a | 94.2 a  |
| AMS - Liquid                  | 8.5 lb ai/100 gal | B               |                 |                 |                |                 |        |         |
| Touchdown Total (4.17 SL)     | 0.78 lb ae/a      | D               |                 |                 |                |                 |        |         |
| AMS - Liquid                  | 8.5 lb ai/100 gal | D               |                 |                 |                |                 |        |         |
| 2 Boundary (6.5 EC)           | 1.44 lb ai/a      | A               | 98.2 a          | 27.0 b          | 99.0 a         | 97.2 a          | 99.0 a | 79.4 c  |
| Flexstar GT 3.5 (2.82 SL)     | 0.0103 lb ai/a    | C               |                 |                 |                |                 |        |         |
| MSO                           | 1 % v/v           | C               |                 |                 |                |                 |        |         |
| Quilt Xcel (2.2 SC)           | 2.9 oz ai/a       | E               |                 |                 |                |                 |        |         |
| Endigo ZCX (22.08 L)          | 0.092 oz ai/a     | E               |                 |                 |                |                 |        |         |
| 3 Boundary (6.5 EC)           | 1.44 lb ai/a      | A               | 95.6 a          | 23.0 b          | 99.0 a         | 99.0 a          | 99.0 a | 81.0 bc |
| Flexstar GT 3.5 (2.82 SL)     | 0.0103 lb ai/a    | C               |                 |                 |                |                 |        |         |
| Quilt Xcel (2.2 SC)           | 2.9 oz ai/a       | C               |                 |                 |                |                 |        |         |
| MSO                           | 1 % v/v           | C               |                 |                 |                |                 |        |         |
| Quilt Xcel (2.2 SC)           | 2.9 oz ai/a       | E               |                 |                 |                |                 |        |         |
| Endigo ZCX (22.08 L)          | 0.092 oz ai/a     | E               |                 |                 |                |                 |        |         |
| 4 Boundary (6.5 EC)           | 1.44 lb ai/a      | A               | 94.6 a          | 22.0 b          | 99.0 a         | 97.2 a          | 99.0 a | 82.2 bc |
| Flexstar GT 3.5 (2.82 SL)     | 0.0103 lb ai/a    | C               |                 |                 |                |                 |        |         |
| MSO                           | 1 % v/v           | C               |                 |                 |                |                 |        |         |
| 5 Prefix (5.29 EC)            | 1.32 lb ai/a      | A               | 91.0 a          | 52.0 b          | 97.2 a         | 31.8 b          | 99.0 a | 85.2 bc |
| Touchdown Total (4.17 SL)     | 0.78 lb ae/a      | C               |                 |                 |                |                 |        |         |
| AMS - Liquid                  | 8.5 lb ai/100 gal | C               |                 |                 |                |                 |        |         |

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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|                               |                   |                 |                 |                 |                |                 |
|-------------------------------|-------------------|-----------------|-----------------|-----------------|----------------|-----------------|
| Pest Type                     | W Weed            | W Weed          | W Weed          | W Weed          | W Weed         | W Weed          |
| Pest Code                     | SETFA             | AMBTR           | ABUTH           | CHEAL           | SETFA          | AMBTR           |
| Pest Scientific Name          | Setaria faberi    | Ambrosia trifi> | Abutilon theop> | Chenopodium al> | Setaria faberi | Ambrosia trifi> |
| Pest Name                     | Giant foxtail     | Giant ragweed   | velvetleaf      | Common lambsqu> | Giant foxtail  | Giant ragweed   |
| Crop Code                     |                   |                 |                 |                 |                |                 |
| BBCH Scale                    |                   |                 |                 |                 |                |                 |
| Crop Scientific Name          |                   |                 |                 |                 |                |                 |
| Crop Name                     |                   |                 |                 |                 |                |                 |
| Rating Date                   | Jun-25-2013       | Jun-25-2013     | Jun-25-2013     | Jun-25-2013     | Jul-9-2013     | Jul-9-2013      |
| Rating Type                   | CONTRO            | CONTRO          | CONTRO          | CONTRO          | CONTRO         | CONTRO          |
| Rating Unit                   | %                 | %               | %               | %               | %              | %               |
| Number of Subsamples          | 1                 | 1               | 1               | 1               | 1              | 1               |
| Crop Stage Majority           | R1                | R1              | R1              | R1              |                |                 |
| Pest Stage Majority           | 3 IN              | 4 IN            | 0.5 IN          | 2 IN            |                |                 |
| Pest Density, Unit            | 8 FT2             | 2 YD2           | 8 YD2           | 1 YD2           |                |                 |
| Assessed By                   | MW                | MW              | MW              | MW              | MW             | MW              |
| Days After First/Last Applic. | 40 14             | 40 14           | 40 14           | 40 14           | 54 6           | 54 6            |
| Plant-Eval Interval           | 40 DP-1           | 40 DP-1         | 40 DP-1         | 40 DP-1         | 54 DP-1        | 54 DP-1         |
| Days After Emergence          | 34 DE-1           | 34 DE-1         | 34 DE-1         | 34 DE-1         | 48 DE-1        | 48 DE-1         |
| Trt Treatment                 | Rate              | Rate            | Rate            | Rate            | Rate           | Rate            |
| No. Name                      | Unit              | Unit            | Unit            | Unit            | Unit           | Unit            |
|                               | 1                 | 2               | 3               | 4               | 5              | 6               |
| 6 Prefix (5.29 EC)            | 1.32 lb ai/a      |                 |                 |                 |                |                 |
| Touchdown Total (4.17 SL)     | 0.78 lb ae/a      |                 |                 |                 |                |                 |
| AMS - Liquid                  | 8.5 lb ai/100 gal |                 |                 |                 |                |                 |
| Quilt Xcel (2.2 SC)           | 2.9 oz ai/a       |                 |                 |                 |                |                 |
| Endigo ZCX (22.08 L)          | 0.092 oz ai/a     |                 |                 |                 |                |                 |
| LSD (P=.05)                   | 4.58              | 29.16           | 3.14            | 26.38           | 0.96           | 5.65            |
| Standard Deviation            | 3.47              | 22.11           | 2.38            | 20.00           | 0.73           | 4.28            |
| CV                            | 3.67              | 47.78           | 2.42            | 24.78           | 0.74           | 5.04            |
| Bartlett's X2                 | 5.151             | 17.76           | 0.0             | 34.226          | 0.0            | 13.028          |
| P(Bartlett's X2)              | 0.398             | 0.003*          | .               | 0.001*          | .              | 0.023*          |
| Replicate F                   | 0.287             | 2.199           | 0.714           | 1.843           | 1.000          | 3.487           |
| Replicate Prob(F)             | 0.8827            | 0.1060          | 0.5919          | 0.1601          | 0.4307         | 0.0257          |
| Treatment F                   | 2.552             | 7.852           | 0.762           | 9.755           | 1.000          | 8.253           |
| Treatment Prob(F)             | 0.0608            | 0.0003          | 0.5878          | 0.0001          | 0.4430         | 0.0002          |

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|                               |                           |                   |                 |             |
|-------------------------------|---------------------------|-------------------|-----------------|-------------|
| Pest Type                     | W Weed                    | W Weed            | W Weed          |             |
| Pest Code                     | SETFA                     | AMBTR             | AMBTR           |             |
| Pest Scientific Name          | Setaria faberi            | Ambrosia trifi>   | Ambrosia trifi> |             |
| Pest Name                     | Giant foxtail             | Giant ragweed     | Giant ragweed   |             |
| Crop Code                     |                           |                   |                 | GLXMA       |
| BBCB Scale                    |                           |                   |                 | BSOY        |
| Crop Scientific Name          |                           |                   |                 | Glycine max |
| Crop Name                     |                           |                   |                 | Soybean     |
| Rating Date                   | Jul-22-2013               | Jul-22-2013       | Sep-23-2013     | Sep-24-2013 |
| Rating Type                   | CONTRO                    | CONTRO            | CONTRO          | YIELD       |
| Rating Unit                   | %                         | %                 | %               | bu/ac       |
| Number of Subsamples          | 1                         | 1                 | 1               | 1           |
| Crop Stage Majority           | R3                        | R3                |                 |             |
| Pest Stage Majority           |                           |                   |                 |             |
| Pest Density, Unit            |                           |                   |                 |             |
| Assessed By                   | MW                        | MW                |                 |             |
| Days After First/Last Applic. | 67 5                      | 67 5              | 130 68          | 131 69      |
| Plant-Eval Interval           | 67 DP-1                   | 67 DP-1           | 130 DP-1        | 131 DP-1    |
| Days After Emergence          | 61 DE-1                   | 61 DE-1           | 124 DE-1        | 125 DE-1    |
| Trt No.                       | Treatment                 | Rate              | Appl            |             |
|                               | Name                      | Rate Unit         | Code            |             |
|                               |                           |                   |                 | 7 8 9 10    |
| 1                             | Touchdown Total (4.17 SL) | 1.04 lb ae/a      | B               | 99.0 a      |
|                               | AMS - Liquid              | 8.5 lb ai/100 gal | B               |             |
|                               | Touchdown Total (4.17 SL) | 0.78 lb ae/a      | D               |             |
|                               | AMS - Liquid              | 8.5 lb ai/100 gal | D               |             |
| 2                             | Boundary (6.5 EC)         | 1.44 lb ai/a      | A               | 99.0 a      |
|                               | Flexstar GT 3.5 (2.82 SL) | 0.0103 lb ai/a    | C               | 83.0 c      |
|                               | MSO                       | 1 % v/v           | C               | 88.8 a      |
|                               | Quilt Xcel (2.2 SC)       | 2.9 oz ai/a       | E               | 61.98 bc    |
|                               | Endigo ZCX (22.08 L)      | 0.092 oz ai/a     | E               |             |
| 3                             | Boundary (6.5 EC)         | 1.44 lb ai/a      | A               | 99.0 a      |
|                               | Flexstar GT 3.5 (2.82 SL) | 0.0103 lb ai/a    | C               | 82.0 c      |
|                               | Quilt Xcel (2.2 SC)       | 2.9 oz ai/a       | C               | 71.8 b      |
|                               | MSO                       | 1 % v/v           | C               | 62.08 bc    |
|                               | Quilt Xcel (2.2 SC)       | 2.9 oz ai/a       | E               |             |
|                               | Endigo ZCX (22.08 L)      | 0.092 oz ai/a     | E               |             |
| 4                             | Boundary (6.5 EC)         | 1.44 lb ai/a      | A               | 99.0 a      |
|                               | Flexstar GT 3.5 (2.82 SL) | 0.0103 lb ai/a    | C               | 84.0 c      |
|                               | MSO                       | 1 % v/v           | C               | 87.6 a      |
|                               |                           |                   |                 | 56.48 c     |
| 5                             | Prefix (5.29 EC)          | 1.32 lb ai/a      | A               | 99.0 a      |
|                               | Touchdown Total (4.17 SL) | 0.78 lb ae/a      | C               | 88.2 bc     |
|                               | AMS - Liquid              | 8.5 lb ai/100 gal | C               | 89.8 a      |
|                               |                           |                   |                 | 70.10 ab    |

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|                               |                   |                 |                 |             |
|-------------------------------|-------------------|-----------------|-----------------|-------------|
| Pest Type                     | W Weed            | W Weed          | W Weed          |             |
| Pest Code                     | SETFA             | AMBTR           | AMBTR           |             |
| Pest Scientific Name          | Setaria faberi    | Ambrosia trifi> | Ambrosia trifi> |             |
| Pest Name                     | Giant foxtail     | Giant ragweed   | Giant ragweed   |             |
| Crop Code                     |                   |                 |                 | GLXMA       |
| BBCH Scale                    |                   |                 |                 | BSOY        |
| Crop Scientific Name          |                   |                 |                 | Glycine max |
| Crop Name                     |                   |                 |                 | Soybean     |
| Rating Date                   | Jul-22-2013       | Jul-22-2013     | Sep-23-2013     | Sep-24-2013 |
| Rating Type                   | CONTRO            | CONTRO          | CONTRO          | YIELD       |
| Rating Unit                   | %                 | %               | %               | bu/ac       |
| Number of Subsamples          | 1                 | 1               | 1               | 1           |
| Crop Stage Majority           | R3                | R3              |                 |             |
| Pest Stage Majority           |                   |                 |                 |             |
| Pest Density, Unit            |                   |                 |                 |             |
| Assessed By                   | MW                | MW              |                 |             |
| Days After First/Last Applic. | 67 5              | 67 5            | 130 68          | 131 69      |
| Plant-Eval Interval           | 67 DP-1           | 67 DP-1         | 130 DP-1        | 131 DP-1    |
| Days After Emergence          | 61 DE-1           | 61 DE-1         | 124 DE-1        | 125 DE-1    |
| Trt Treatment                 | Rate              | Appl            |                 |             |
| No. Name                      | Rate Unit         | Code            | 7               | 8           |
| 6 Prefix (5.29 EC)            | 1.32 lb ai/a      | A               | 99.0 a          | 92.8 b      |
| Touchdown Total (4.17 SL)     | 0.78 lb ae/a      | C               |                 | 89.2 a      |
| AMS - Liquid                  | 8.5 lb ai/100 gal | C               |                 | 80.28 a     |
| Quilt Xcel (2.2 SC)           | 2.9 oz ai/a       | E               |                 |             |
| Endigo ZCX (22.08 L)          | 0.092 oz ai/a     | E               |                 |             |
| LSD (P=.05)                   | 0.00              |                 | 0.00            | 6.03        |
| Standard Deviation            | 0.00              |                 | 0.00            | 4.57        |
| CV                            | 0.0               |                 | 0.0             | 5.19        |
| Bartlett's X2                 | 0.0               |                 | 0.0             | 2.438       |
| P(Bartlett's X2)              | .                 |                 | .               | 0.656       |
| Replicate F                   | 0.000             |                 | 0.000           | 2.789       |
| Replicate Prob(F)             | 1.0000            |                 | 1.0000          | 0.0544      |
| Treatment F                   | 0.000             |                 | 0.000           | 10.563      |
| Treatment Prob(F)             | 1.0000            |                 | 1.0000          | 0.0001      |

# Purdue University

## Grow more soybeans

Trial ID: 13S-THP-CTS-48      Protocol ID: 13S-THP-CTS-48  
 Location: Throckmorton      Study Director:  
 Project ID: USHES0Y007-2013      Investigator: Dr. Bill Johnson  
 Sponsor Contact: Syngenta- Steve Mroczkiewicz

### Pest Type

W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

### Pest Code

SETFA, Setaria faberi, = US  
 AMBTR, Ambrosia trifida, = US  
 ABUTH, Abutilon theophrasti, = US  
 CHEAL, Chenopodium album, = US

### Crop Code

GLXMA, BSOY, Glycine max, = US

### Rating Type

CONTRO = control / burndown or knockdown  
 YIELD = yield

### Rating Unit

% = percent  
 bu/ac = bushels per acre

FT2 = per square foot

YD2 = per square yard

### Plant-Eval Interval

40 DP-1 = 1 GLXMA May-16-2013  
 54 DP-1 = 1 GLXMA May-16-2013  
 67 DP-1 = 1 GLXMA May-16-2013  
 130 DP-1 = 1 GLXMA May-16-2013  
 131 DP-1 = 1 GLXMA May-16-2013