

# Purdue Weed Science

|                                      |  |
|--------------------------------------|--|
| Trial ID: 17S-MGS-Soy-07             | <b>Cobra 64.02 - Liberty Link System</b> |
| Protocol ID: 17S-MGS-Soy-07          | Location: Meigs Trial Year: 2017         |
| Project ID: Cobra 64.02 - LL Soybean | Investigator: Dr. Bill Johnson           |
|                                      | Study Director: Taylor Campbell          |
|                                      | Sponsor Contact: Eric Ott - Valent       |

## General Trial Information

**Study Director:** Taylor Campbell  
**Investigator:** Dr. Bill Johnson

**Discipline:** H herbicide  
**Trial Status:** E established  
**Initiation Date:** 4/17/2017

## Trial Location

**City:** Indiana **Country:** USA United States  
**State/Prov.:** Lafayette  
**Postal Code:** 47909

**Conducted Under GLP:** No  
**Conducted Under GEP:** No

## Contacts

**Study Director:** Taylor Campbell  
**Organization:** Purdue University  
**Address:** 915 W State Street  
**City+State/Prov:** West Lafayette, IN  
**Postal Code:** 47907  
**Country:** USA United States

**Investigator:** Dr. Bill Johnson  
**Organization:** Purdue University  
**Address:** 915 W State Street  
**City+State/Prov:** West Lafayette, IN  
**Postal Code:** 47907  
**Country:** USA United States

**Cooperator:** Jay Young  
**Organization:** Purdue University  
**Address 1:** 8343 US 231 S  
**City:** Lafayette  
**State/Prov:** IN  
**Postal Code:** 47909  
**Country:** USA United States

**Cooperator/Landowner**  
**Role:** Superintendent

**Phone No.:** 765-538-3422  
**Fax No.:** 765-538-3423

**E-mail:** jayyoung@purdue.edu

## Crop Description

**Crop 1:** GLXMA Glycine max Soybean  
**Variety:** CZ2915LL

|   |  |
|---|--|
| <b>Planting Rate, Unit:</b> 140000 S/A    | <b>Planting Date:</b> 5/30/2017            |
| <b>Depth, Unit:</b> 1 IN                  | <b>Planting Method:</b> PLANTD planted     |
| <b>Row Spacing, Unit:</b> 30 IN           | <b>Planting Equipment:</b> PP Plot Planter |
| <b>Planting Density, Unit:</b> 140000 S/A | <b>Emergence Date:</b> 6/4/2017            |
| <b>Soil Temperature, Unit:</b> 70 F       |  |
| <b>Soil Moisture:</b> DAMP damp           |  |

## Pest Description

**Pest 1 Type:** W **Code:** AMATA Amaranthus tamariscinus  
**Common Name:** Common waterhemp

|  |   |
|--|---|
| <b>Treated Plot Width:</b> 6.67 FT<br><b>Treated Plot Length:</b> 25 FT<br><b>Treated Plot Area:</b> 166.75 FT <sup>2</sup> <b>Treatments:</b> 5<br><b>Replications:</b> 4 | <b>Site and Design</b><br><b>Site Type:</b> FIELD field<br><b>Experimental Unit:</b> 1 PLOT plot<br><b>Tillage Type:</b> NOTILL no-till<br><b>Study Design:</b> RACOB L Randomized Complete Block (RCB) |
|--|---|

| Maintenance |           |      |                          |           |           |           |      |           |
|-------------|-----------|------|--------------------------|-----------|-----------|-----------|------|-----------|
| No.         | Date      | Type | Maintenance Product Name | Form Conc | Form Unit | Form Type | Rate | Rate Unit |
| 1.          | 4/13/2017 | HERB | ROUNDUP POWERMAX         | 4.5       | LBAE/GA   | SL        | 32   | FL OZ/A   |
| 2.          | 4/13/2017 | HERB | SHREDDER 2,4-D LV4       | 3.8       | LBAE/GA   | SL        | 1    | PT/A      |
| 3.          | 4/13/2017 | ADJ  | N-PAK                    | 3.4       | LBA/GAL   | L         | 2.5  | % V/V     |
| 4.          | 5/22/2017 | HERB | GRAMOXONE SL             | 2         | LBAE/GA   | SL        | 4    | PT/A      |
| 5.          | 5/22/2017 | ADJ  | COC                      | 100       | %         | SL        | 1    | % V/V     |
| 6.          | 5/29/2017 | HERB | GRAMOXONE SL             | 2         | LBAE/GA   | SL        | 3    | PT/A      |
| 7.          | 5/29/2017 | ADJ  | COC                      | 100       | %         | SL        | 1    | % V/V     |

**Field Prep./Maintenance:**  
 The trial area was cleaned in early spring with glyphosate and 2,4-D to encourage germination of waterhemp. Paraquat was sprayed twice before planting to keep the trial clean at planting.

| Soil Description                |   |
|---------------------------------|---|
| <b>Description Name:</b> MGS-S3 |   |
| <b>% Sand:</b> 40.7             | <b>% OM:</b> 2.3 <b>Texture:</b> L loam                   |
| <b>% Silt:</b> 38.6             | <b>pH:</b> 6.5 <b>Soil Name:</b> Starks-Fincastle complex |
| <b>% Clay:</b> 20.7             | <b>CEC:</b> 14.3 <b>Fert. Level:</b> G good               |

| Application Description        |            |             |             |
|--------------------------------|------------|-------------|-------------|
|                                | A          | B           | C           |
| <b>Application Date:</b>       | 5/30/2017  | 6/20/2017   | 7/3/2017    |
| <b>Appl. Start Time:</b>       | 5:17 PM    | 8:45 AM     | 10:32 AM    |
| <b>Appl. Stop Time:</b>        | 5:30 PM    | 9:00 AM     | 10:35 AM    |
| <b>Application Method:</b>     | SPRAY      | SPRAY       | SPRAY       |
| <b>Application Timing:</b>     | PREPLA     | EAPOWE      | POSPOS      |
| <b>Application Placement:</b>  | BROADC     | BROADC      | BROADC      |
| <b>Applied By:</b>             | N. Steppig | T. Campbell | T. Campbell |
| <b>Air Temperature, Unit:</b>  | 83 F       | 70 F        | 87 F        |
| <b>% Relative Humidity:</b>    | 41         | 68          | 61          |
| <b>Wind Velocity, Unit:</b>    | 3 MPH      | 2 MPH       | 1 MPH       |
| <b>Wind Direction:</b>         | W          | NE          | NW          |
| <b>Dew Presence (Y/N):</b>     | N no       | N no        | N no        |
| <b>Soil Temperature, Unit:</b> | 80 F       | 63 F        | 90 F        |
| <b>Soil Moisture:</b>          | SLIWET     | SLIWET      | DRY         |
| <b>% Cloud Cover:</b>          | 50         | 2           | 20          |

| Crop Stage At Each Application  |            |            |            |
|---------------------------------|------------|------------|------------|
|                                 | A          | B          | C          |
| <b>Crop 1 Code, BBCH Scale:</b> | GLXMA BSOY | GLXMA BSOY | GLXMA BSOY |
| <b>Stage Scale Used:</b>        |            | BBCH       | BBCH       |
| <b>Stage Majority, Percent:</b> |            | 12         | 16         |
| <b>Stage Minimum, Percent:</b>  |            | 11         | 15         |
| <b>Stage Maximum, Percent:</b>  |            | 13         | 17         |
| <b>Height, Unit:</b>            |            | 5 IN       | 12 IN      |
| <b>Height Minimum, Maximum:</b> |            | 4 6        | 12 14      |

| <b>Pest Stage At Each Application</b> |          |          |          |
|---------------------------------------|----------|----------|----------|
|                                       | <b>A</b> | <b>B</b> | <b>C</b> |
| <b>Pest 1 Code, Type, Scale:</b>      | AMATA W  | AMATA W  | AMATA W  |
| <b>Stage Majority, Percent:</b>       |          | 16       | 17       |
| <b>Stage Minimum, Percent:</b>        |          | 15       | 16       |
| <b>Stage Maximum, Percent:</b>        |          | 19       | 19       |
| <b>Height, Unit:</b>                  |          | 4 IN     | 1 IN     |
| <b>Height Minimum, Maximum:</b>       |          | 2 6      | 1 2      |
| <b>Density, Unit:</b>                 |          | 20 FT2   | 10 FT2   |

| <b>Application Equipment</b>     |              |              |              |
|----------------------------------|--------------|--------------|--------------|
|                                  | <b>A</b>     | <b>B</b>     | <b>C</b>     |
| <b>Appl. Equipment:</b>          | CO2 BACKPACK | CO2 BACKPACK | CO2 BACKPACK |
| <b>Equipment Type:</b>           | BACCAI       | BACCAI       | BACCAI       |
| <b>Operation Pressure, Unit:</b> | 43 PSI       | 27 PSI       | 27 PSI       |
| <b>Nozzle Type:</b>              | TTI          | XR           | XR           |
| <b>Nozzle Size:</b>              | 11002        | 11002        | 11002        |
| <b>Nozzle Spacing, Unit:</b>     | 20 IN        | 20 IN        | 20 IN        |
| <b>Nozzles/Row:</b>              | 4            | 4            | 4            |
| <b>Boom Length, Unit:</b>        | 6.7 FT       | 6.7 FT       | 6.7 FT       |
| <b>Boom Height, Unit:</b>        | 15 IN        | 22 IN        | 25 IN        |
| <b>Ground Speed, Unit:</b>       | 3 MPH        | 3 MPH        | 3 MPH        |
| <b>Spray Volume, Unit:</b>       | 15 GAL/AC    | 15 GAL/AC    | 15 GAL/AC    |
| <b>Mix Size, Unit:</b>           | 945 mL       | 945 mL       | 945 mL       |
| <b>Propellant:</b>               | COMCO2       | COMCO2       | COMCO2       |

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|   |   |  |
|---|---|--|
| Trial ID: 17S-MGS-Soy-07<br>Protocol ID: 17S-MGS-Soy-07<br>Project ID: Cobra 64.02 - LL Soybean | <b>Cobra 64.02 - Liberty Link System</b><br>Location: Meigs Trial Year: 2017<br>Investigator: Dr. Bill Johnson<br>Study Director: Taylor Campbell<br>Sponsor Contact: Eric Ott - Valent |  |
|---|---|--|

Reps: 4                      Plots: 6.67 by 25 feet  
 Spray vol: 15 GAL/AC                      Mix Size: 945 mL (869.45 mL calculated mix size)

| Trt No. | Treatment Name  | Form Conc | Form Unit | Form Type | Rate         | Rate Unit | Growth Stage | Appl Code | Amt to Measure | Rep 1 | Rep 2 | Rep 3 | Rep 4 |
|---------|-----------------|-----------|-----------|-----------|--------------|-----------|--------------|-----------|----------------|-------|-------|-------|-------|
| 1       | UNTREATED CHECK |           |           |           |              |           |              |           |                | 101   | 203   | 503   | 602   |
| 2       | LIBERTY 280     | 2.34      | LB/GAL    | SL        | 29 fl oz/a   |           | EPOT         | B         | 14.27 ml/mx    | 102   | 302   | 501   | 702   |
|         | N-PAK           | 3.4       | LBA/GAL   | L         | 2.5 % v/v    |           | EPOT         | B         | 23.62 ml/mx    |       |       |       |       |
|         | LIBERTY 280     | 2.34      | LB/GAL    | SL        | 29 fl oz/a   |           | LPOT         | C         | 14.27 ml/mx    |       |       |       |       |
|         | SELECT MAX      | 1         | LB/GAL    | EC        | 6 fl oz/a    |           | LPOT         | C         | 2.953 ml/mx    |       |       |       |       |
|         | N-PAK           | 3.4       | LBA/GAL   | L         | 2.5 % v/v    |           | LPOT         | C         | 23.62 ml/mx    |       |       |       |       |
|         | NIS             | 100       | %W/W      | SF        | 0.25 % v/v   |           | LPOT         | C         | 2.362 ml/mx    |       |       |       |       |
| 3       | FIERCE          | 76        | %W/W      | WG        | 3 oz wt/a    |           | PREE         | A         | 1.415 g/mx     | 103   | 303   | 402   | 603   |
|         | LIBERTY 280     | 2.34      | LB/GAL    | SL        | 29 fl oz/a   |           | EPOT         | B         | 14.27 ml/mx    |       |       |       |       |
|         | N-PAK           | 3.4       | LBA/GAL   | L         | 2.5 % v/v    |           | EPOT         | B         | 23.62 ml/mx    |       |       |       |       |
|         | LIBERTY 280     | 2.34      | LB/GAL    | SL        | 29 fl oz/a   |           | LPOT         | C         | 14.27 ml/mx    |       |       |       |       |
|         | SELECT MAX      | 1         | LB/GAL    | EC        | 6 fl oz/a    |           | LPOT         | C         | 2.953 ml/mx    |       |       |       |       |
|         | N-PAK           | 3.4       | LBA/GAL   | L         | 2.5 % v/v    |           | LPOT         | C         | 23.62 ml/mx    |       |       |       |       |
|         | NIS             | 100       | %W/W      | SF        | 0.25 % v/v   |           | LPOT         | C         | 2.362 ml/mx    |       |       |       |       |
| 4       | LIBERTY 280     | 2.34      | LB/GAL    | SL        | 29 fl oz/a   |           | EPOT         | B         | 14.27 ml/mx    | 201   | 401   | 502   | 701   |
|         | RESOURCE        | 0.83      | LB/GAL    | EC        | 4 fl oz/a    |           | EPOT         | B         | 1.969 ml/mx    |       |       |       |       |
|         | NIS             | 100       | %W/W      | SF        | 0.25 % v/v   |           | EPOT         | B         | 2.362 ml/mx    |       |       |       |       |
|         | N-PAK           | 3.4       | LBA/GAL   | L         | 2.5 % v/v    |           | EPOT         | B         | 23.62 ml/mx    |       |       |       |       |
|         | LIBERTY 280     | 2.34      | LB/GAL    | SL        | 29 fl oz/a   |           | LPOT         | C         | 14.27 ml/mx    |       |       |       |       |
|         | SELECT MAX      | 1         | LB/GAL    | EC        | 6 fl oz/a    |           | LPOT         | C         | 2.953 ml/mx    |       |       |       |       |
|         | N-PAK           | 3.4       | LBA/GAL   | L         | 2.5 % v/v    |           | LPOT         | C         | 23.62 ml/mx    |       |       |       |       |
|         | NIS             | 100       | %W/W      | SF        | 0.25 % v/v   |           | LPOT         | C         | 2.362 ml/mx    |       |       |       |       |
| 5       | LIBERTY 280     | 2.34      | LB/GAL    | SL        | 29 fl oz/a   |           | EPOT         | B         | 14.27 ml/mx    | 202   | 301   | 403   | 601   |
|         | COBRA           | 2         | LB/GAL    | EC        | 12.5 fl oz/a |           | EPOT         | B         | 6.152 ml/mx    |       |       |       |       |
|         | NIS             | 100       | %W/W      | SF        | 0.25 % v/v   |           | EPOT         | B         | 2.362 ml/mx    |       |       |       |       |
|         | N-PAK           | 3.4       | LBA/GAL   | L         | 2.5 % v/v    |           | EPOT         | B         | 23.62 ml/mx    |       |       |       |       |
|         | LIBERTY 280     | 2.34      | LB/GAL    | SL        | 29 fl oz/a   |           | LPOT         | C         | 14.27 ml/mx    |       |       |       |       |
|         | SELECT MAX      | 1         | LB/GAL    | EC        | 6 fl oz/a    |           | LPOT         | C         | 2.953 ml/mx    |       |       |       |       |
|         | N-PAK           | 3.4       | LBA/GAL   | L         | 2.5 % v/v    |           | LPOT         | C         | 23.62 ml/mx    |       |       |       |       |
|         | NIS             | 100       | %W/W      | SF        | 0.25 % v/v   |           | LPOT         | C         | 2.362 ml/mx    |       |       |       |       |

Sort Order: Replicate 1

# Purdue Weed Science

|  |                                  |
|--|----------------------------------|
| <b>Cobra 64.02 - Liberty Link System</b> |                                  |
| Trial ID: 17S-MGS-Soy-07                 | Location: Meigs Trial Year: 2017 |
| Protocol ID: 17S-MGS-Soy-07              | Investigator: Dr. Bill Johnson   |
| Project ID: Cobra 64.02 - LL Soybean     | Study Director: Taylor Campbell  |
| Sponsor Contact: Eric Ott - Valent       |                                  |

| Pest Type                     | W Weed          | W Weed          |             |
|-------------------------------|-----------------|-----------------|-------------|
| Pest Code                     | AMATA           | AMATA           |             |
| Pest Name                     | Common waterhe> | Common waterhe> |             |
| Crop Code                     |                 |                 | GLXMA       |
| Crop Name                     |                 |                 | Soybean     |
| Rating Date                   | 6/6/2017        | 6/12/2017       | 6/12/2017   |
| Rating Type                   | CONTRO          | CONTRO          | PHYGEN      |
| Rating Unit                   | %               | %               | %           |
| Number of Subsamples          | 1               | 1               | 1           |
| Assessed By                   | T. Campbell     | T. Campbell     | T. Campbell |
| Days After First/Last Applic. | 7 7             | 13 13           | 13 13       |
| Trt-Eval Interval             | 7 DA-A          | 13 DA-A         | 13 DA-A     |
| Days After Emergence          | 2 DE-1          | 8 DE-1          | 8 DE-1      |
| ARM Action Codes              | P               | P               | P           |
| Number of Decimals            | 0               | 0               | 0           |
| Trt Treatment                 | Rate            | Appl            |             |
| No. Name                      | Rate Unit       | Code Plot       |             |
|                               |                 | 1               | 2           |
|                               |                 | 3               |             |
| 1 UNTREATED CHECK             |                 | 101             | 0           |
|                               |                 | 203             | 0           |
|                               |                 | 503             | 0           |
|                               |                 | 602             | 0           |
|                               |                 | Mean =          | 0           |
| 2 LIBERTY 280                 | 29 fl oz/a B    | 102             | 0           |
| N-PAK                         | 2.5 % v/v B     | 302             | 0           |
| LIBERTY 280                   | 29 fl oz/a C    | 501             | 0           |
| SELECT MAX                    | 6 fl oz/a C     | 702             | 0           |
| N-PAK                         | 2.5 % v/v C     |                 |             |
| NIS                           | 0.25 % v/v C    |                 |             |
|                               |                 | Mean =          | 0           |
| 3 FIERCE                      | 3 oz wt/a A     | 103             | 100         |
| LIBERTY 280                   | 29 fl oz/a B    | 303             | 100         |
| N-PAK                         | 2.5 % v/v B     | 402             | 98          |
| LIBERTY 280                   | 29 fl oz/a C    | 603             | 98          |
| SELECT MAX                    | 6 fl oz/a C     |                 |             |
| N-PAK                         | 2.5 % v/v C     |                 |             |
| NIS                           | 0.25 % v/v C    |                 |             |
|                               |                 | Mean =          | 100         |
| 4 LIBERTY 280                 | 29 fl oz/a B    | 201             | 0           |
| RESOURCE                      | 4 fl oz/a B     | 401             | 0           |
| NIS                           | 0.25 % v/v B    | 502             | 0           |
| N-PAK                         | 2.5 % v/v B     | 701             | 0           |
| LIBERTY 280                   | 29 fl oz/a C    |                 |             |
| SELECT MAX                    | 6 fl oz/a C     |                 |             |
| N-PAK                         | 2.5 % v/v C     |                 |             |
| NIS                           | 0.25 % v/v C    |                 |             |
|                               |                 | Mean =          | 0           |
| 5 LIBERTY 280                 | 29 fl oz/a B    | 202             | 0           |
| COBRA                         | 12.5 fl oz/a B  | 301             | 0           |
| NIS                           | 0.25 % v/v B    | 403             | 0           |
| N-PAK                         | 2.5 % v/v B     | 601             | 0           |
| LIBERTY 280                   | 29 fl oz/a C    |                 |             |
| SELECT MAX                    | 6 fl oz/a C     |                 |             |
| N-PAK                         | 2.5 % v/v C     |                 |             |
| NIS                           | 0.25 % v/v C    |                 |             |
|                               |                 | Mean =          | 0           |

| Pest Type                     |                 |              |           | W Weed          |    | W Weed          |    |
|-------------------------------|-----------------|--------------|-----------|-----------------|----|-----------------|----|
| Pest Code                     |                 |              |           | AMATA           |    | AMATA           |    |
| Pest Name                     |                 |              |           | Common waterhe> |    | Common waterhe> |    |
| Crop Code                     |                 |              |           | GLXMA           |    | GLXMA           |    |
| Crop Name                     |                 |              |           | Soybean         |    | Soybean         |    |
| Rating Date                   |                 |              |           | 6/26/2017       |    | 7/3/2017        |    |
| Rating Type                   |                 |              |           | CONTRO          |    | CONTRO          |    |
| Rating Unit                   |                 |              |           | %               |    | %               |    |
| Number of Subsamples          |                 |              |           | 1               |    | 1               |    |
| Assessed By                   |                 |              |           | T. Campbell     |    | T. Campbell     |    |
| Days After First/Last Applic. |                 |              |           | 27 6            |    | 34 13           |    |
| Trt-Eval Interval             |                 |              |           |                 |    |                 |    |
| Days After Emergence          |                 |              |           | 22 DE-1         |    | 29 DE-1         |    |
| ARM Action Codes              |                 |              |           | P               |    | P               |    |
| Number of Decimals            |                 |              |           | 0               |    | 0               |    |
| Trt                           | Treatment       | Rate         | Appl      |                 |    |                 |    |
| No.                           | Name            | Rate Unit    | Code Plot | 4               | 5  | 6               | 7  |
| 1                             | UNTREATED CHECK |              | 101       | 0               | 0  | 0               | 0  |
|                               |                 |              | 203       | 0               | 0  | 0               | 0  |
|                               |                 |              | 503       | 0               | 0  | 0               | 0  |
|                               |                 |              | 602       | 0               | 0  | 0               | 0  |
|                               |                 |              | Mean =    | 0               | 0  | 0               | 0  |
| 2                             | LIBERTY 280     | 29 fl oz/a   | B 102     | 90              | 2  | 80              | 0  |
|                               | N-PAK           | 2.5 % v/v    | B 302     | 90              | 2  | 75              | 0  |
|                               | LIBERTY 280     | 29 fl oz/a   | C 501     | 90              | 2  | 70              | 0  |
|                               | SELECT MAX      | 6 fl oz/a    | C 702     | 95              | 2  | 70              | 0  |
|                               | N-PAK           | 2.5 % v/v    | C         |                 |    |                 |    |
|                               | NIS             | 0.25 % v/v   | C         |                 |    |                 |    |
|                               |                 |              | Mean =    | 91              | 2  | 74              | 0  |
| 3                             | FIERCE          | 3 oz wt/a    | A 103     | 100             | 5  | 100             | 0  |
|                               | LIBERTY 280     | 29 fl oz/a   | B 303     | 100             | 0  | 100             | 0  |
|                               | N-PAK           | 2.5 % v/v    | B 402     | 100             | 5  | 100             | 0  |
|                               | LIBERTY 280     | 29 fl oz/a   | C 603     | 100             | 5  | 100             | 0  |
|                               | SELECT MAX      | 6 fl oz/a    | C         |                 |    |                 |    |
|                               | N-PAK           | 2.5 % v/v    | C         |                 |    |                 |    |
|                               | NIS             | 0.25 % v/v   | C         |                 |    |                 |    |
|                               |                 |              | Mean =    | 100             | 4  | 100             | 0  |
| 4                             | LIBERTY 280     | 29 fl oz/a   | B 201     | 90              | 30 | 80              | 20 |
|                               | RESOURCE        | 4 fl oz/a    | B 401     | 98              | 40 | 75              | 20 |
|                               | NIS             | 0.25 % v/v   | B 502     | 95              | 30 | 65              | 20 |
|                               | N-PAK           | 2.5 % v/v    | B 701     | 100             | 30 | 85              | 10 |
|                               | LIBERTY 280     | 29 fl oz/a   | C         |                 |    |                 |    |
|                               | SELECT MAX      | 6 fl oz/a    | C         |                 |    |                 |    |
|                               | N-PAK           | 2.5 % v/v    | C         |                 |    |                 |    |
|                               | NIS             | 0.25 % v/v   | C         |                 |    |                 |    |
|                               |                 |              | Mean =    | 96              | 33 | 76              | 18 |
| 5                             | LIBERTY 280     | 29 fl oz/a   | B 202     | 100             | 60 | 100             | 40 |
|                               | COBRA           | 12.5 fl oz/a | B 301     | 100             | 40 | 100             | 30 |
|                               | NIS             | 0.25 % v/v   | B 403     | 100             | 50 | 100             | 40 |
|                               | N-PAK           | 2.5 % v/v    | B 601     | 100             | 55 | 100             | 40 |
|                               | LIBERTY 280     | 29 fl oz/a   | C         |                 |    |                 |    |
|                               | SELECT MAX      | 6 fl oz/a    | C         |                 |    |                 |    |
|                               | N-PAK           | 2.5 % v/v    | C         |                 |    |                 |    |
|                               | NIS             | 0.25 % v/v   | C         |                 |    |                 |    |
|                               |                 |              | Mean =    | 100             | 51 | 100             | 38 |

| Pest Type                     |                 |              |           | W Weed          |             | W Weed          |
|-------------------------------|-----------------|--------------|-----------|-----------------|-------------|-----------------|
| Pest Code                     |                 |              |           | AMATA           |             | AMATA           |
| Pest Name                     |                 |              |           | Common waterhe> |             | Common waterhe> |
| Crop Code                     |                 |              |           |                 | GLXMA       |                 |
| Crop Name                     |                 |              |           |                 | Soybean     |                 |
| Rating Date                   |                 |              |           | 7/9/2017        | 7/9/2017    | 7/9/2017        |
| Rating Type                   |                 |              |           | CONTRO          | PHYGEN      | CONTRO          |
| Rating Unit                   |                 |              |           | %               | %           | %               |
| Number of Subsamples          |                 |              |           | 1               | 1           | 1               |
| Assessed By                   |                 |              |           | T. Campbell     | T. Campbell | T. Campbell     |
| Days After First/Last Applic. |                 |              |           | 40 6            | 40 6        | 40 6            |
| Trt-Eval Interval             |                 |              |           |                 |             |                 |
| Days After Emergence          |                 |              |           | 35 DE-1         | 35 DE-1     | 35 DE-1         |
| ARM Action Codes              |                 |              |           | P               | P           | P               |
| Number of Decimals            |                 |              |           | 0               | 0           | 0               |
| Trt                           | Treatment       | Rate         | Appl      |                 |             |                 |
| No.                           | Name            | Rate Unit    | Code Plot | 8               | 9           | 10              |
| 1                             | UNTREATED CHECK |              | 101       | 0               | 0           | 0               |
|                               |                 |              | 203       | 0               | 0           | 0               |
|                               |                 |              | 503       | 0               | 0           | 0               |
|                               |                 |              | 602       | 0               | 0           | 0               |
|                               |                 |              | Mean =    | 0               | 0           | 0               |
| 2                             | LIBERTY 280     | 29 fl oz/a   | B 102     | 100             | 0           | 95              |
|                               | N-PAK           | 2.5 % v/v    | B 302     | 100             | 0           | 90              |
|                               | LIBERTY 280     | 29 fl oz/a   | C 501     | 95              | 0           | 90              |
|                               | SELECT MAX      | 6 fl oz/a    | C 702     | 100             | 0           | 100             |
|                               | N-PAK           | 2.5 % v/v    | C         |                 |             |                 |
|                               | NIS             | 0.25 % v/v   | C         |                 |             |                 |
|                               |                 |              | Mean =    | 99              | 0           | 94              |
| 3                             | FIERCE          | 3 oz wt/a    | A 103     | 100             | 0           | 95              |
|                               | LIBERTY 280     | 29 fl oz/a   | B 303     | 100             | 0           | 100             |
|                               | N-PAK           | 2.5 % v/v    | B 402     | 100             | 0           | 100             |
|                               | LIBERTY 280     | 29 fl oz/a   | C 603     | 100             | 0           | 100             |
|                               | SELECT MAX      | 6 fl oz/a    | C         |                 |             |                 |
|                               | N-PAK           | 2.5 % v/v    | C         |                 |             |                 |
|                               | NIS             | 0.25 % v/v   | C         |                 |             |                 |
|                               |                 |              | Mean =    | 100             | 0           | 99              |
| 4                             | LIBERTY 280     | 29 fl oz/a   | B 201     | 98              | 0           | 95              |
|                               | RESOURCE        | 4 fl oz/a    | B 401     | 100             | 0           | 98              |
|                               | NIS             | 0.25 % v/v   | B 502     | 100             | 0           | 98              |
|                               | N-PAK           | 2.5 % v/v    | B 701     | 100             | 0           | 100             |
|                               | LIBERTY 280     | 29 fl oz/a   | C         |                 |             |                 |
|                               | SELECT MAX      | 6 fl oz/a    | C         |                 |             |                 |
|                               | N-PAK           | 2.5 % v/v    | C         |                 |             |                 |
|                               | NIS             | 0.25 % v/v   | C         |                 |             |                 |
|                               |                 |              | Mean =    | 100             | 0           | 98              |
| 5                             | LIBERTY 280     | 29 fl oz/a   | B 202     | 100             | 25          | 90              |
|                               | COBRA           | 12.5 fl oz/a | B 301     | 100             | 5           | 95              |
|                               | NIS             | 0.25 % v/v   | B 403     | 100             | 5           | 100             |
|                               | N-PAK           | 2.5 % v/v    | B 601     | 100             | 10          | 95              |
|                               | LIBERTY 280     | 29 fl oz/a   | C         |                 |             |                 |
|                               | SELECT MAX      | 6 fl oz/a    | C         |                 |             |                 |
|                               | N-PAK           | 2.5 % v/v    | C         |                 |             |                 |
|                               | NIS             | 0.25 % v/v   | C         |                 |             |                 |
|                               |                 |              | Mean =    | 100             | 11          | 95              |

# Purdue Weed Science

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| <p>Trial ID: 17S-MGS-Soy-07<br/>Protocol ID: 17S-MGS-Soy-07<br/>Project ID: Cobra 64.02 - LL Soybean</p> | <p><b>Cobra 64.02 - Liberty Link System</b><br/>Location: Meigs Trial Year: 2017<br/>Investigator: Dr. Bill Johnson<br/>Study Director: Taylor Campbell<br/>Sponsor Contact: Eric Ott - Valent</p> |
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| <p><u>Pest Type</u><br/>W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop</p> <p><u>Pest Code</u><br/>AMATA, Amaranthus tamariscinus, Common waterhemp = US</p> <p><u>Crop Code</u><br/>GLXMA, BSOY, Glycine max, Soybean = US</p> <p><u>Rating Type</u><br/>CONTRO = control / burndown or knockdown<br/>PHYGEN = phytotoxicity - general / injury</p> <p><u>Rating Unit</u><br/>% = percent</p> <p><u>ARM Action Codes</u><br/>P = Rating scale of 0 to 100 (e.g. % control or injury)</p> |
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# Purdue Weed Science

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|---|---|--|
| Trial ID: 17S-MGS-Soy-07<br>Protocol ID: 17S-MGS-Soy-07<br>Project ID: Cobra 64.02 - LL Soybean | <b>Cobra 64.02 - Liberty Link System</b><br>Location: Meigs Trial Year: 2017<br>Investigator: Dr. Bill Johnson<br>Study Director: Taylor Campbell<br>Sponsor Contact: Eric Ott - Valent |  |
|---|---|--|

| Pest Type<br>Pest Code<br>Pest Name  | W Weed<br>AMATA<br>Common waterhe>   | W Weed<br>AMATA<br>Common waterhe>   |             | W Weed<br>AMATA<br>Common waterhe> |     |       |
|--|--|--------------------------------------|-------------|------------------------------------|-----|-------|
| Crop Code  |  |                                      | GLXMA       |                                    |     |       |
| Crop Name  |  |                                      | Soybean     |                                    |     |       |
| Rating Date  | 6/6/2017   | 6/12/2017                            | 6/12/2017   | 6/26/2017                          |     |       |
| Rating Type  | CONTRO   | CONTRO                               | PHYGEN      | CONTRO                             |     |       |
| Rating Unit  | %  | %                                    | %           | %                                  |     |       |
| Number of Subsamples   | 1  | 1                                    | 1           | 1                                  |     |       |
| Assessed By  | T. Campbell  | T. Campbell                          | T. Campbell | T. Campbell                        |     |       |
| Days After First/Last Applic.  | 7 7  | 13 13                                | 13 13       | 27 6                               |     |       |
| Trt-Eval Interval  | 7 DA-A   | 13 DA-A                              | 13 DA-A     |                                    |     |       |
| Days After Emergence   | 2 DE-1   | 8 DE-1                               | 8 DE-1      | 22 DE-1                            |     |       |
| ARM Action Codes   | P  | P                                    | P           | P                                  |     |       |
| Number of Decimals   | 0  | 0                                    | 0           | 0                                  |     |       |
| Trt Treatment<br>No. Name  | Rate<br>Rate Unit  | Appl<br>Code                         | 1           | 2                                  | 3   | 4     |
| 1 UNTREATED CHECK  |  |                                      | 0 b         | 0 b                                | 0 a | 0 d   |
| 2 LIBERTY 280<br>N-PAK<br>LIBERTY 280<br>SELECT MAX<br>N-PAK<br>NIS                    | 29 fl oz/a<br>2.5 % v/v<br>29 fl oz/a<br>6 fl oz/a<br>2.5 % v/v<br>0.25 % v/v                            | B<br>B<br>C<br>C<br>C<br>C           | 0 b         | 0 b                                | 0 a | 91 c  |
| 3 FIERCE<br>LIBERTY 280<br>N-PAK<br>LIBERTY 280<br>SELECT MAX<br>N-PAK<br>NIS          | 3 oz wt/a<br>29 fl oz/a<br>2.5 % v/v<br>29 fl oz/a<br>6 fl oz/a<br>2.5 % v/v<br>0.25 % v/v               | A<br>B<br>B<br>C<br>C<br>C<br>C      | 100 a       | 99 a                               | 0 a | 100 a |
| 4 LIBERTY 280<br>RESOURCE<br>NIS<br>N-PAK<br>LIBERTY 280<br>SELECT MAX<br>N-PAK<br>NIS | 29 fl oz/a<br>4 fl oz/a<br>0.25 % v/v<br>2.5 % v/v<br>29 fl oz/a<br>6 fl oz/a<br>2.5 % v/v<br>0.25 % v/v | B<br>B<br>B<br>B<br>C<br>C<br>C<br>C | 0 b         | 0 b                                | 0 a | 96 b  |

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls)  
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.  
 Could not calculate LSD (% mean diff) for columns 1,3 because error mean square = 0.

|                               |                 |                 |             |                 |
|-------------------------------|-----------------|-----------------|-------------|-----------------|
| Pest Type                     | W Weed          | W Weed          |             | W Weed          |
| Pest Code                     | AMATA           | AMATA           |             | AMATA           |
| Pest Name                     | Common waterhe> | Common waterhe> |             | Common waterhe> |
| Crop Code                     |                 |                 | GLXMA       |                 |
| Crop Name                     |                 |                 | Soybean     |                 |
| Rating Date                   | 6/6/2017        | 6/12/2017       | 6/12/2017   | 6/26/2017       |
| Rating Type                   | CONTRO          | CONTRO          | PHYGEN      | CONTRO          |
| Rating Unit                   | %               | %               | %           | %               |
| Number of Subsamples          | 1               | 1               | 1           | 1               |
| Assessed By                   | T. Campbell     | T. Campbell     | T. Campbell | T. Campbell     |
| Days After First/Last Applic. | 7 7             | 13 13           | 13 13       | 27 6            |
| Trt-Eval Interval             | 7 DA-A          | 13 DA-A         | 13 DA-A     |                 |
| Days After Emergence          | 2 DE-1          | 8 DE-1          | 8 DE-1      | 22 DE-1         |
| ARM Action Codes              | P               | P               | P           | P               |
| Number of Decimals            | 0               | 0               | 0           | 0               |
| Trt Treatment                 | Rate            | Appl            |             |                 |
| No. Name                      | Rate Unit       | Code            | 1           | 2               |
| 5 LIBERTY 280                 | 29 fl oz/a      | B               | 0 b         | 0 b             |
| COBRA                         | 12.5 fl oz/a    | B               |             |                 |
| NIS                           | 0.25 % v/v      | B               |             |                 |
| N-PAK                         | 2.5 % v/v       | B               |             |                 |
| LIBERTY 280                   | 29 fl oz/a      | C               |             |                 |
| SELECT MAX                    | 6 fl oz/a       | C               |             |                 |
| N-PAK                         | 2.5 % v/v       | C               |             |                 |
| NIS                           | 0.25 % v/v      | C               |             |                 |
| LSD P=.05                     |                 |                 |             | 3.2             |
| Standard Deviation            | 0.0             | 0.4             | 0.0         | 2.1             |
| CV                            | 0.0             | 2.27            | 0.0         | 2.69            |
| Bartlett's X2                 | 0.0             | 0.0             | 0.0         | 0.848           |
| P(Bartlett's X2)              | .               | .               | .           | 0.357           |
| Skewness                      | 1.6245*         | 1.6249*         | .           | -1.5872*        |
| Kurtosis                      | 0.6985          | 0.7008          | .           | 0.6355          |
| Replicate F                   | 0.000           | 1.000           | 0.000       | 1.819           |
| Replicate Prob(F)             | 1.0000          | 0.4262          | 1.0000      | 0.1974          |
| Treatment F                   | 0.000           | 38809.004       | 0.000       | 1743.544        |
| Treatment Prob(F)             | 1.0000          | 0.0001          | 1.0000      | 0.0001          |

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls)  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.  
Could not calculate LSD (% mean diff) for columns 1,3 because error mean square = 0.

| Pest Type                     |             |      | W Weed          |       | W Weed          |
|-------------------------------|-------------|------|-----------------|-------|-----------------|
| Pest Code                     |             |      | AMATA           |       | AMATA           |
| Pest Name                     |             |      | Common waterhe> |       | Common waterhe> |
| Crop Code                     | GLXMA       |      | GLXMA           |       | GLXMA           |
| Crop Name                     | Soybean     |      | Soybean         |       | Soybean         |
| Rating Date                   | 6/26/2017   |      | 7/3/2017        |       | 7/9/2017        |
| Rating Type                   | PHYGEN      |      | CONTRO          |       | CONTRO          |
| Rating Unit                   | %           |      | %               |       | %               |
| Number of Subsamples          | 1           |      | 1               |       | 1               |
| Assessed By                   | T. Campbell |      | T. Campbell     |       | T. Campbell     |
| Days After First/Last Applic. | 27 6        |      | 34 13           |       | 34 13           |
| Trt-Eval Interval             |             |      |                 |       | 40 6            |
| Days After Emergence          | 22 DE-1     |      | 29 DE-1         |       | 29 DE-1         |
| ARM Action Codes              | P           |      | P               |       | P               |
| Number of Decimals            | 0           |      | 0               |       | 0               |
| Trt Treatment                 | Rate        | Appl |                 |       |                 |
| No. Name                      | Rate Unit   | Code | 5               | 6     | 7               |
| 1 UNTREATED CHECK             |             |      | 0 c             | 0 c   | 0 c             |
| 2 LIBERTY 280                 | 29 fl oz/a  | B    | 2 c             | 74 b  | 0 c             |
| N-PAK                         | 2.5 % v/v   | B    |                 |       |                 |
| LIBERTY 280                   | 29 fl oz/a  | C    |                 |       |                 |
| SELECT MAX                    | 6 fl oz/a   | C    |                 |       |                 |
| N-PAK                         | 2.5 % v/v   | C    |                 |       |                 |
| NIS                           | 0.25 % v/v  | C    |                 |       |                 |
| 3 FIERCE                      | 3 oz wt/a   | A    | 4 c             | 100 a | 0 c             |
| LIBERTY 280                   | 29 fl oz/a  | B    |                 |       |                 |
| N-PAK                         | 2.5 % v/v   | B    |                 |       |                 |
| LIBERTY 280                   | 29 fl oz/a  | C    |                 |       |                 |
| SELECT MAX                    | 6 fl oz/a   | C    |                 |       |                 |
| N-PAK                         | 2.5 % v/v   | C    |                 |       |                 |
| NIS                           | 0.25 % v/v  | C    |                 |       |                 |
| 4 LIBERTY 280                 | 29 fl oz/a  | B    | 33 b            | 76 b  | 18 b            |
| RESOURCE                      | 4 fl oz/a   | B    |                 |       |                 |
| NIS                           | 0.25 % v/v  | B    |                 |       |                 |
| N-PAK                         | 2.5 % v/v   | B    |                 |       |                 |
| LIBERTY 280                   | 29 fl oz/a  | C    |                 |       |                 |
| SELECT MAX                    | 6 fl oz/a   | C    |                 |       |                 |
| N-PAK                         | 2.5 % v/v   | C    |                 |       |                 |
| NIS                           | 0.25 % v/v  | C    |                 |       |                 |

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls)  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.  
Could not calculate LSD (% mean diff) for columns 1,3 because error mean square = 0.

|                               |              |                 |             |                 |
|-------------------------------|--------------|-----------------|-------------|-----------------|
| Pest Type                     |              | W Weed          |             | W Weed          |
| Pest Code                     |              | AMATA           |             | AMATA           |
| Pest Name                     |              | Common waterhe> |             | Common waterhe> |
| Crop Code                     | GLXMA        |                 | GLXMA       |                 |
| Crop Name                     | Soybean      |                 | Soybean     |                 |
| Rating Date                   | 6/26/2017    | 7/3/2017        | 7/3/2017    | 7/9/2017        |
| Rating Type                   | PHYGEN       | CONTRO          | PHYGEN      | CONTRO          |
| Rating Unit                   | %            | %               | %           | %               |
| Number of Subsamples          | 1            | 1               | 1           | 1               |
| Assessed By                   | T. Campbell  | T. Campbell     | T. Campbell | T. Campbell     |
| Days After First/Last Applic. | 27 6         | 34 13           | 34 13       | 40 6            |
| Trt-Eval Interval             |              |                 |             |                 |
| Days After Emergence          | 22 DE-1      | 29 DE-1         | 29 DE-1     | 35 DE-1         |
| ARM Action Codes              | P            | P               | P           | P               |
| Number of Decimals            | 0            | 0               | 0           | 0               |
| Trt Treatment                 | Rate         | Appl            |             |                 |
| No. Name                      | Rate Unit    | Code            | 5           | 6               |
| 5 LIBERTY 280                 | 29 fl oz/a   | B               | 51 a        | 100 a           |
| COBRA                         | 12.5 fl oz/a | B               |             |                 |
| NIS                           | 0.25 % v/v   | B               |             |                 |
| N-PAK                         | 2.5 % v/v    | B               |             |                 |
| LIBERTY 280                   | 29 fl oz/a   | C               |             |                 |
| SELECT MAX                    | 6 fl oz/a    | C               |             |                 |
| N-PAK                         | 2.5 % v/v    | C               |             |                 |
| NIS                           | 0.25 % v/v   | C               |             |                 |
| LSD P=.05                     |              |                 | 7.5         | 6.6             |
| Standard Deviation            |              |                 | 4.9         | 4.3             |
| CV                            |              |                 | 27.34       | 6.08            |
| Bartlett's X2                 |              |                 | 3.686       | 0.922           |
| P(Bartlett's X2)              |              |                 | 0.158       | 0.337           |
| Skewness                      |              |                 | 0.8015      | -1.2353*        |
| Kurtosis                      |              |                 | -0.9628     | 0.0506          |
| Replicate F                   |              |                 | 0.348       | 1.287           |
| Replicate Prob(F)             |              |                 | 0.7914      | 0.3234          |
| Treatment F                   |              |                 | 87.603      | 372.586         |
| Treatment Prob(F)             |              |                 | 0.0001      | 0.0001          |

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls)  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.  
Could not calculate LSD (% mean diff) for columns 1,3 because error mean square = 0.

|                               |             |      |                 |
|-------------------------------|-------------|------|-----------------|
| Pest Type                     |             |      | W Weed          |
| Pest Code                     |             |      | AMATA           |
| Pest Name                     |             |      | Common waterhe> |
| Crop Code                     | GLXMA       |      |                 |
| Crop Name                     | Soybean     |      |                 |
| Rating Date                   | 7/9/2017    |      | 7/9/2017        |
| Rating Type                   | PHYGEN      |      | CONTRO          |
| Rating Unit                   | %           |      | %               |
| Number of Subsamples          | 1           |      | 1               |
| Assessed By                   | T. Campbell |      | T. Campbell     |
| Days After First/Last Applic. | 40 6        |      | 40 6            |
| Trt-Eval Interval             |             |      |                 |
| Days After Emergence          | 35 DE-1     |      | 35 DE-1         |
| ARM Action Codes              | P           |      | P               |
| Number of Decimals            | 0           |      | 0               |
| Trt Treatment                 | Rate        | Appl |                 |
| No. Name                      | Rate Unit   | Code |                 |
|                               |             |      | 9 10            |
| 1 UNTREATED CHECK             |             |      | 0 b 0 b         |
| 2 LIBERTY 280                 | 29 fl oz/a  | B    | 0 b 94 a        |
| N-PAK                         | 2.5 % v/v   | B    |                 |
| LIBERTY 280                   | 29 fl oz/a  | C    |                 |
| SELECT MAX                    | 6 fl oz/a   | C    |                 |
| N-PAK                         | 2.5 % v/v   | C    |                 |
| NIS                           | 0.25 % v/v  | C    |                 |
| 3 FIERCE                      | 3 oz wt/a   | A    | 0 b 99 a        |
| LIBERTY 280                   | 29 fl oz/a  | B    |                 |
| N-PAK                         | 2.5 % v/v   | B    |                 |
| LIBERTY 280                   | 29 fl oz/a  | C    |                 |
| SELECT MAX                    | 6 fl oz/a   | C    |                 |
| N-PAK                         | 2.5 % v/v   | C    |                 |
| NIS                           | 0.25 % v/v  | C    |                 |
| 4 LIBERTY 280                 | 29 fl oz/a  | B    | 0 b 98 a        |
| RESOURCE                      | 4 fl oz/a   | B    |                 |
| NIS                           | 0.25 % v/v  | B    |                 |
| N-PAK                         | 2.5 % v/v   | B    |                 |
| LIBERTY 280                   | 29 fl oz/a  | C    |                 |
| SELECT MAX                    | 6 fl oz/a   | C    |                 |
| N-PAK                         | 2.5 % v/v   | C    |                 |
| NIS                           | 0.25 % v/v  | C    |                 |

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls)  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.  
Could not calculate LSD (% mean diff) for columns 1,3 because error mean square = 0.

|                               |              |      |                 |
|-------------------------------|--------------|------|-----------------|
| Pest Type                     |              |      | W Weed          |
| Pest Code                     |              |      | AMATA           |
| Pest Name                     |              |      | Common waterhe> |
| Crop Code                     | GLXMA        |      |                 |
| Crop Name                     | Soybean      |      |                 |
| Rating Date                   | 7/9/2017     |      | 7/9/2017        |
| Rating Type                   | PHYGEN       |      | CONTRO          |
| Rating Unit                   | %            |      | %               |
| Number of Subsamples          | 1            |      | 1               |
| Assessed By                   | T. Campbell  |      | T. Campbell     |
| Days After First/Last Applic. | 40 6         |      | 40 6            |
| Trt-Eval Interval             |              |      |                 |
| Days After Emergence          | 35 DE-1      |      | 35 DE-1         |
| ARM Action Codes              | P            |      | P               |
| Number of Decimals            | 0            |      | 0               |
| Trt Treatment                 | Rate         | Appl |                 |
| No. Name                      | Rate Unit    | Code |                 |
|                               |              |      | 9 10            |
| 5 LIBERTY 280                 | 29 fl oz/a   | B    | 11 a 95 a       |
| COBRA                         | 12.5 fl oz/a | B    |                 |
| NIS                           | 0.25 % v/v   | B    |                 |
| N-PAK                         | 2.5 % v/v    | B    |                 |
| LIBERTY 280                   | 29 fl oz/a   | C    |                 |
| SELECT MAX                    | 6 fl oz/a    | C    |                 |
| N-PAK                         | 2.5 % v/v    | C    |                 |
| NIS                           | 0.25 % v/v   | C    |                 |
| LSD P=.05                     | 6.5          |      | 4.6             |
| Standard Deviation            | 4.2          |      | 3.0             |
| CV                            | 188.12       |      | 3.89            |
| Bartlett's X2                 | 0.0          |      | 2.45            |
| P(Bartlett's X2)              | .            |      | 0.484           |
| Skewness                      | 3.3508*      |      | -1.5957*        |
| Kurtosis                      | 12.0871*     |      | 0.6508          |
| Replicate F                   | 1.000        |      | 1.580           |
| Replicate Prob(F)             | 0.4262       |      | 0.2455          |
| Treatment F                   | 5.651        |      | 828.655         |
| Treatment Prob(F)             | 0.0086       |      | 0.0001          |

Means followed by same letter or symbol do not significantly differ (P=.05, Student-Newman-Keuls)  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.  
Could not calculate LSD (% mean diff) for columns 1,3 because error mean square = 0.

# Purdue Weed Science

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| <p>Trial ID: 17S-MGS-Soy-07<br/>Protocol ID: 17S-MGS-Soy-07<br/>Project ID: Cobra 64.02 - LL Soybean</p> | <p><b>Cobra 64.02 - Liberty Link System</b><br/>Location: Meigs Trial Year: 2017<br/>Investigator: Dr. Bill Johnson<br/>Study Director: Taylor Campbell<br/>Sponsor Contact: Eric Ott - Valent</p> |
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| <p><u>Pest Type</u><br/>W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop</p> <p><u>Pest Code</u><br/>AMATA, Amaranthus tamariscinus, Common waterhemp = US</p> <p><u>Crop Code</u><br/>GLXMA, BSOY, Glycine max, Soybean = US</p> <p><u>Rating Type</u><br/>CONTRO = control / burndown or knockdown<br/>PHYGEN = phytotoxicity - general / injury</p> <p><u>Rating Unit</u><br/>% = percent</p> <p><u>ARM Action Codes</u><br/>P = Rating scale of 0 to 100 (e.g. % control or injury)</p> |
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