

**Comparison of commercial weed control programs in XtendFlex soybean**

Trial ID: SOY02-23 Study Dir.: Sprague, Stiles  
 Conducted: Campus, C-12 Investigator: Christy Sprague

**Planting Date:** May-10-2023 **Row Spacing:** 30 IN  
**Variety:** AG26FX3 **No. of Reps:** 4  
**Population:** 150000 seeds/A **% OM:** 2.9  
**Soil Type:** SCL sandy clay loam **pH:** 7.3  
**Plot Size:** 10 X 30 FT **Study Design:** Randomized Complete Block (RCB)

**Tillage/Previous Crops:** Fall chisel plowed, fall soil finished twice, spring soil finished twice  
**Fertilizer:**

**Crop and Weed Description**

| Weed | Code  | Common Name          | Scientific Name         |
|------|-------|----------------------|-------------------------|
| 1    | ANGR  | annual grass         | mainly foxtail species  |
| 2    | CHEAL | common lambsquarters | Chenopodium album       |
| 3    | AMAPO | Powell amaranth      | Amaranthus powellii     |
| 4    | AMBEL | common ragweed       | Ambrosia artemisiifolia |
| 5    | ABUTH | velvetleaf           | Abutilon theophrasti    |
| Crop | Code  | Common Name          |                         |
| 1    | GLXMA | Soybean              |                         |

**Application Description**

|                                       | A           | B           |
|---------------------------------------|-------------|-------------|
| <b>Application Timing:</b>            | PRE         | POST        |
| <b>Date Treated:</b>                  | May-10-2023 | Jun-13-2023 |
| <b>Time Treated:</b>                  | 11:30 AM    | 9:00 AM     |
| <b>% Cloud Cover:</b>                 | 0           | 50          |
| <b>Air Temp., Unit:</b>               | 70 F        | 56 F        |
| <b>% Relative Humidity:</b>           | 41          | 74          |
| <b>Wind Speed/Unit/Dir:</b>           | 4 MPH WSW   | 8 MPH SW    |
| <b>Soil Temp, Unit:</b>               | 58.6 F      | 60 F        |
| <b>Leaf Moist/Dew Presence (Y/N):</b> | N           | N           |
| <b>Soil Moist:</b>                    | 5           | 5           |

**Crop Stage at Each Application**

|                     | A     | B     |
|---------------------|-------|-------|
| <b>Crop 1 Name:</b> | GLXMA | GLXMA |
| <b>Height:</b>      |       | 4 "   |
| <b>Stage:</b>       |       | V2    |

**Weed Stage at Each Application**

|                     | A     | B           |
|---------------------|-------|-------------|
| <b>Weed 1 Name:</b> | ANGR  | ANGR        |
| <b>Height:</b>      |       | 1-8 " (4)   |
| <b>Stage:</b>       |       | 3-5L        |
| <b>Weed 2 Name:</b> | CHEAL | CHEAL       |
| <b>Height:</b>      |       | 2-6 " (4)   |
| <b>Stage:</b>       |       | 6-many      |
| <b>Weed 3 Name:</b> | AMAPO | AMAPO       |
| <b>Height:</b>      |       | 2-6 " (4)   |
| <b>Stage:</b>       |       | 6-many      |
| <b>Weed 4 Name:</b> | AMBEL | AMBEL       |
| <b>Height:</b>      |       | 2-5 " (3.5) |
| <b>Stage:</b>       |       | 4-8L        |
| <b>Weed 5 Name:</b> | ABUTH | ABUTH       |
| <b>Height:</b>      |       | 3-6 " (4)   |
| <b>Stage:</b>       |       | 3-6L        |

**Weed Density**

|                   | 1           | 2           | 3           | 4           | 5           |
|-------------------|-------------|-------------|-------------|-------------|-------------|
| <b>Date:</b>      | Jun-13-2023 | Jun-13-2023 | Jun-13-2023 | Jun-13-2023 | Jun-13-2023 |
| <b>Weed Name:</b> | ANGR        | CHEAL       | AMAPO       | AMBEL       | ABUTH       |
| <b>Density:</b>   | 6 FT2       | 5 FT2       | 1 FT2       | 4 FT2       | 1 FT2       |

**Application Equipment**

| Appl | Sprayer Type | Ground Speed | Nozzle Type | Nozzle Size | Nozzle Height | Nozzle Spacing | Boom Width | Spray Volume | Carrier | Operation Pressure |
|------|--------------|--------------|-------------|-------------|---------------|----------------|------------|--------------|---------|--------------------|
| A    | CUB          | 3.8 MPH      | TTI         | 11003       | 18.0 "        | 20.0 "         | 100.0 "    | 19 GAL/AC    | WATER   | 27 PSI             |
| B    | CUB          | 3.8 MPH      | TTI         | 11003       | 24.0 "        | 20.0 "         | 100.0 "    | 19 GAL/AC    | WATER   | 27 PSI             |

**Comments:** Common ragweed (AMBEL) at this location is resistant to the Group 2 (ALS-inhibiting) herbicides.

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Comparison of commercial weed control programs in XtendFlex soybean

Trial ID: SOY02-23

Protocol ID: SOY02-23 Location: Campus, C-12 Trial Year: 2023

Study Director: Sprague, Stiles Sponsor Contact:

Investigator: Christy Sprague

| Rating Date         | May-31-2023 | Jun-12-2023 | Jun-12-2023 | Jun-12-2023 | Jun-12-2023 | Jun-12-2023 |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Rating Type         | injury      | injury      | control     | control     | control     | control     |
| Rating Unit/Min/Max | %, 0, 100   | %, 0, 100   | %, 0, 100   | %, 0, 100   | %, 0, 100   | %, 0, 100   |
| Crop Type, Code     | C, GLXMA    | C, GLXMA    |             |             |             |             |
| Pest Code           |             |             | ANGR        | CHEAL       | AMAPO       | AMBEL       |
| Trt-Eval Interval   | 21 DA-A     | 33 DA-A     | 33 DA-A     | 33 DA-A     | 33 DA-A     | 33 DA-A     |
| Number of Decimals  | 0           | 0           | 0           | 0           | 0           | 0           |

| Trt No. | Treatment Name     | Rate           | Unit | Appl Code | Appl Timing | May-31-2023 | Jun-12-2023 | Jun-12-2023 | Jun-12-2023 | Jun-12-2023 | Jun-12-2023 |
|---------|--------------------|----------------|------|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 1       | Zidua SC           | 2.5 fl oz/a    |      | A         | PRE         | 0           | 0           | 82          | 98          | 100         | 93          |
|         | Metribuzin         | 4 oz/a         |      | A         | PRE         |             |             |             |             |             |             |
|         | Engenia            | 12.8 fl oz/a   |      | A         | PRE         |             |             |             |             |             |             |
|         | Sentris            | 8 fl oz/a      |      | A         | PRE         |             |             |             |             |             |             |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | AMS                | 3 lb/a         |      | B         | POST        |             |             |             |             |             |             |
| 2       | Valor EZ           | 2 fl oz/a      |      | A         | PRE         | 3           | 0           | 85          | 95          | 100         | 94          |
|         | Mauler             | 8 fl oz/a      |      | A         | PRE         |             |             |             |             |             |             |
|         | XtendiMax          | 22 fl oz/a     |      | A         | PRE         |             |             |             |             |             |             |
|         | VaporGrip          | 20 fl oz/a     |      | A         | PRE         |             |             |             |             |             |             |
|         | Warrant            | 48 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | AMS                | 17 lb/100 gal  |      | B         | POST        |             |             |             |             |             |             |
| 3       | Outlook            | 5 fl oz/a      |      | A         | PRE         | 0           | 0           | 76          | 99          | 100         | 99          |
|         | Sharpen            | 1 fl oz/a      |      | A         | PRE         |             |             |             |             |             |             |
|         | Engenia            | 12.8 fl oz/a   |      | A         | PRE         |             |             |             |             |             |             |
|         | Sentris            | 8 fl oz/a      |      | A         | PRE         |             |             |             |             |             |             |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | AMS                | 3 lb/a         |      | B         | POST        |             |             |             |             |             |             |
| 4       | Untreated          |                |      |           |             | 0           | 0           | 0           | 0           | 0           | 0           |
| 5       | Fierce EZ          | 6 fl oz/a      |      | A         | PRE         | 3           | 0           | 79          | 68          | 95          | 74          |
|         | Perpetuo           | 6 fl oz/a      |      | B         | POST        |             |             |             |             |             |             |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | Surfactant         | 0.25 % v/v     |      | B         | POST        |             |             |             |             |             |             |
|         | AMS                | 8.5 lb/100 gal |      | B         | POST        |             |             |             |             |             |             |
| 6       | XtendiMax          | 22 fl oz/a     |      | B         | POST        | 0           | 0           | 0           | 0           | 0           | 0           |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | VaporGrip          | 20 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | Cognitive 1        | 0.5 % v/v      |      | B         | POST        |             |             |             |             |             |             |
| 7       | Fierce MTZ         | 1 pt/a         |      | A         | PRE         | 1           | 0           | 76          | 68          | 95          | 71          |
|         | Warrant            | 48 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | XtendiMax          | 22 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | VaporGrip          | 20 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | Cognitive 1        | 0.5 % v/v      |      | B         | POST        |             |             |             |             |             |             |
| 8       | Fierce MTZ         | 16 fl oz/a     |      | A         | PRE         | 1           | 0           | 80          | 63          | 100         | 74          |
|         | Perpetuo           | 6 fl oz/a      |      | B         | POST        |             |             |             |             |             |             |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | Surfactant         | 0.25 % v/v     |      | B         | POST        |             |             |             |             |             |             |
|         | AMS                | 8.5 lb/100 gal |      | B         | POST        |             |             |             |             |             |             |
| 9       | Sonic              | 5 oz/a         |      | A         | PRE         | 0           | 0           | 73          | 89          | 100         | 79          |
|         | Metribuzin         | 5 oz/a         |      | A         | PRE         |             |             |             |             |             |             |
|         | XtendiMax          | 22 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | VaporGrip          | 20 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | Cognitive 1        | 0.5 % v/v      |      | B         | POST        |             |             |             |             |             |             |
| 10      | Boundary           | 1.75 pt/a      |      | A         | PRE         | 0           | 0           | 72          | 60          | 100         | 65          |
|         | Dual Magnum        | 1.25 pt/a      |      | B         | POST        |             |             |             |             |             |             |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | AMS                | 3 lb/a         |      | B         | POST        |             |             |             |             |             |             |

Could not calculate LSD (% mean diff) for columns 2,12,14,20,26 because error mean square = 0.

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Trial ID: SOY02-23

Protocol ID: SOY02-23 Location: Campus, C-12 Trial Year: 2023

Study Director: Sprague, Stiles Sponsor Contact:

Investigator: Christy Sprague

| Rating Date         | May-31-2023        | Jun-12-2023    | Jun-12-2023 | Jun-12-2023 | Jun-12-2023 | Jun-12-2023 |     |       |       |      |      |
|---------------------|--------------------|----------------|-------------|-------------|-------------|-------------|-----|-------|-------|------|------|
| Rating Type         | injury             | injury         | control     | control     | control     | control     |     |       |       |      |      |
| Rating Unit/Min/Max | %, 0, 100          | %, 0, 100      | %, 0, 100   | %, 0, 100   | %, 0, 100   | %, 0, 100   |     |       |       |      |      |
| Crop Type, Code     | C, GLXMA           | C, GLXMA       |             |             |             |             |     |       |       |      |      |
| Pest Code           |                    |                | ANGR        | CHEAL       | AMAPO       | AMBEL       |     |       |       |      |      |
| Trt-Eval Interval   | 21 DA-A            | 33 DA-A        | 33 DA-A     | 33 DA-A     | 33 DA-A     | 33 DA-A     |     |       |       |      |      |
| Number of Decimals  | 0                  | 0              | 0           | 0           | 0           | 0           |     |       |       |      |      |
| Trt No.             | Treatment Name     | Rate           | Unit        | Appl Code   | Appl Timing |             |     |       |       |      |      |
| 11                  | Authority Edge     | 8 fl oz/a      |             | A           | PRE         | 0           | 0   | 77    | 94    | 95   | 67   |
|                     | Metribuzin         | 6 oz/a         |             | A           | PRE         |             |     |       |       |      |      |
|                     | Liberty            | 32 fl oz/a     |             | B           | POST        |             |     |       |       |      |      |
|                     | Roundup PowerMax 3 | 30 fl oz/a     |             | B           | POST        |             |     |       |       |      |      |
|                     | AMS                | 17 lb/100 gal  |             | B           | POST        |             |     |       |       |      |      |
| 12                  | Authority Edge     | 7 fl oz/a      |             | A           | PRE         | 0           | 0   | 80    | 98    | 100  | 69   |
|                     | Metribuzin         | 6 oz/a         |             | A           | PRE         |             |     |       |       |      |      |
|                     | Anthem MAXX        | 3 fl oz/a      |             | B           | POST        |             |     |       |       |      |      |
|                     | Liberty            | 32 fl oz/a     |             | B           | POST        |             |     |       |       |      |      |
|                     | Roundup PowerMax 3 | 30 fl oz/a     |             | B           | POST        |             |     |       |       |      |      |
|                     | AMS                | 17 lb/100 gal  |             | B           | POST        |             |     |       |       |      |      |
| 13                  | Tendovo            | 1.75 qt/a      |             | A           | PRE         | 0           | 0   | 85    | 70    | 91   | 83   |
|                     | Dual Magnum        | 1.25 pt/a      |             | B           | POST        |             |     |       |       |      |      |
|                     | Liberty            | 32 fl oz/a     |             | B           | POST        |             |     |       |       |      |      |
|                     | AMS                | 3 lb/a         |             | B           | POST        |             |     |       |       |      |      |
| 14                  | Fierce XLT         | 4 oz/a         |             | A           | PRE         | 5           | 0   | 79    | 83    | 100  | 75   |
|                     | Perpetuo           | 6 fl oz/a      |             | B           | POST        |             |     |       |       |      |      |
|                     | Liberty            | 32 fl oz/a     |             | B           | POST        |             |     |       |       |      |      |
|                     | Surfactant         | 0.25 % v/v     |             | B           | POST        |             |     |       |       |      |      |
|                     | AMS                | 8.5 lb/100 gal |             | B           | POST        |             |     |       |       |      |      |
| 15                  | XtendiMax          | 22 fl oz/a     |             | B           | POST        | 0           | 0   | 0     | 0     | 0    | 0    |
|                     | Roundup PowerMax 3 | 30 fl oz/a     |             | B           | POST        |             |     |       |       |      |      |
|                     | VaporGrip          | 20 fl oz/a     |             | B           | POST        |             |     |       |       |      |      |
|                     | Cognitive 1        | 0.5 % v/v      |             | B           | POST        |             |     |       |       |      |      |
| 16                  | Roundup PowerMax 3 | 30 fl oz/a     |             | B           | POST        | 0           | 0   | 0     | 0     | 0    | 0    |
|                     | AMS                | 17 lb/100 gal  |             | B           | POST        |             |     |       |       |      |      |
|                     | LSD P=.05          |                |             |             |             | 1.3         | .   | 10.8  | 14.4  | 5.9  | 9.1  |
|                     | Standard Deviation |                |             |             |             | 0.9         | 0.0 | 7.6   | 10.1  | 4.2  | 6.4  |
|                     | CV                 |                |             |             |             | 127.75      | 0.0 | 12.91 | 16.48 | 5.65 | 10.9 |

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Study Director: Sprague, Stiles Sponsor Contact:

Investigator: Christy Sprague

| Rating Date         | Jun-12-2023 | Jun-20-2023 | Jun-27-2023 | Jun-27-2023 | Jun-27-2023 | Jun-27-2023 |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Rating Type         | control     | injury      | injury      | control     | control     | control     |
| Rating Unit/Min/Max | %, 0, 100   | %, 0, 100   | %, 0, 100   | %, 0, 100   | %, 0, 100   | %, 0, 100   |
| Crop Type, Code     |             | C, GLXMA    | C, GLXMA    |             |             |             |
| Pest Code           | ABUTH       |             |             | ANGR        | CHEAL       | AMAPO       |
| Trt-Eval Interval   | 33 DA-A     | 7 DA-B      | 14 DA-B     | 14 DA-B     | 14 DA-B     | 14 DA-B     |
| Number of Decimals  | 0           | 0           | 0           | 0           | 0           | 0           |

| Trt No. | Treatment Name     | Rate           | Unit | Appl Code | Appl Timing | Jun-12-2023 | Jun-20-2023 | Jun-27-2023 | Jun-27-2023 | Jun-27-2023 | Jun-27-2023 |
|---------|--------------------|----------------|------|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 1       | Zidua SC           | 2.5 fl oz/a    |      | A         | PRE         | 98          | 6           | 3           | 99          | 100         | 100         |
|         | Metribuzin         | 4 oz/a         |      | A         | PRE         |             |             |             |             |             |             |
|         | Engenia            | 12.8 fl oz/a   |      | A         | PRE         |             |             |             |             |             |             |
|         | Sentris            | 8 fl oz/a      |      | A         | PRE         |             |             |             |             |             |             |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | AMS                | 3 lb/a         |      | B         | POST        |             |             |             |             |             |             |
| 2       | Valor EZ           | 2 fl oz/a      |      | A         | PRE         | 100         | 6           | 6           | 100         | 100         | 100         |
|         | Mauler             | 8 fl oz/a      |      | A         | PRE         |             |             |             |             |             |             |
|         | XtendiMax          | 22 fl oz/a     |      | A         | PRE         |             |             |             |             |             |             |
|         | VaporGrip          | 20 fl oz/a     |      | A         | PRE         |             |             |             |             |             |             |
|         | Warrant            | 48 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | AMS                | 17 lb/100 gal  |      | B         | POST        |             |             |             |             |             |             |
| 3       | Outlook            | 5 fl oz/a      |      | A         | PRE         | 100         | 5           | 6           | 100         | 100         | 100         |
|         | Sharpen            | 1 fl oz/a      |      | A         | PRE         |             |             |             |             |             |             |
|         | Engenia            | 12.8 fl oz/a   |      | A         | PRE         |             |             |             |             |             |             |
|         | Sentris            | 8 fl oz/a      |      | A         | PRE         |             |             |             |             |             |             |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | AMS                | 3 lb/a         |      | B         | POST        |             |             |             |             |             |             |
| 4       | Untreated          |                |      |           |             | 0           | 0           | 0           | 0           | 0           | 0           |
| 5       | Fierce EZ          | 6 fl oz/a      |      | A         | PRE         | 100         | 20          | 18          | 100         | 87          | 100         |
|         | Perpetuo           | 6 fl oz/a      |      | B         | POST        |             |             |             |             |             |             |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | Surfactant         | 0.25 % v/v     |      | B         | POST        |             |             |             |             |             |             |
|         | AMS                | 8.5 lb/100 gal |      | B         | POST        |             |             |             |             |             |             |
| 6       | XtendiMax          | 22 fl oz/a     |      | B         | POST        | 0           | 3           | 4           | 98          | 100         | 100         |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | VaporGrip          | 20 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | Cognitive 1        | 0.5 % v/v      |      | B         | POST        |             |             |             |             |             |             |
| 7       | Fierce MTZ         | 1 pt/a         |      | A         | PRE         | 98          | 3           | 4           | 100         | 100         | 100         |
|         | Warrant            | 48 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | XtendiMax          | 22 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | VaporGrip          | 20 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | Cognitive 1        | 0.5 % v/v      |      | B         | POST        |             |             |             |             |             |             |
| 8       | Fierce MTZ         | 16 fl oz/a     |      | A         | PRE         | 100         | 18          | 18          | 100         | 98          | 100         |
|         | Perpetuo           | 6 fl oz/a      |      | B         | POST        |             |             |             |             |             |             |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | Surfactant         | 0.25 % v/v     |      | B         | POST        |             |             |             |             |             |             |
|         | AMS                | 8.5 lb/100 gal |      | B         | POST        |             |             |             |             |             |             |
| 9       | Sonic              | 5 oz/a         |      | A         | PRE         | 100         | 2           | 3           | 97          | 100         | 100         |
|         | Metribuzin         | 5 oz/a         |      | A         | PRE         |             |             |             |             |             |             |
|         | XtendiMax          | 22 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | VaporGrip          | 20 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | Cognitive 1        | 0.5 % v/v      |      | B         | POST        |             |             |             |             |             |             |
| 10      | Boundary           | 1.75 pt/a      |      | A         | PRE         | 100         | 7           | 12          | 99          | 98          | 100         |
|         | Dual Magnum        | 1.25 pt/a      |      | B         | POST        |             |             |             |             |             |             |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |             |             |             |             |             |             |
|         | AMS                | 3 lb/a         |      | B         | POST        |             |             |             |             |             |             |

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Investigator: Christy Sprague

| Rating Date         |                    | Jun-12-2023    | Jun-20-2023 | Jun-27-2023 | Jun-27-2023 | Jun-27-2023 | Jun-27-2023 |      |      |     |
|---------------------|--------------------|----------------|-------------|-------------|-------------|-------------|-------------|------|------|-----|
| Rating Type         |                    | control        | injury      | injury      | control     | control     | control     |      |      |     |
| Rating Unit/Min/Max |                    | %, 0, 100      | %, 0, 100   | %, 0, 100   | %, 0, 100   | %, 0, 100   | %, 0, 100   |      |      |     |
| Crop Type, Code     |                    |                | C, GLXMA    | C, GLXMA    |             |             |             |      |      |     |
| Pest Code           |                    | ABUTH          |             |             | ANGR        | CHEAL       | AMAPO       |      |      |     |
| Trt-Eval Interval   |                    | 33 DA-A        | 7 DA-B      | 14 DA-B     | 14 DA-B     | 14 DA-B     | 14 DA-B     |      |      |     |
| Number of Decimals  |                    | 0              | 0           | 0           | 0           | 0           | 0           |      |      |     |
| Trt No.             | Treatment          | Rate           | Appl Code   | Appl Timing |             |             |             |      |      |     |
| 11                  | Authority Edge     | 8 fl oz/a      | A           | PRE         | 100         | 6           | 4           | 99   | 100  | 100 |
|                     | Metribuzin         | 6 oz/a         | A           | PRE         |             |             |             |      |      |     |
|                     | Liberty            | 32 fl oz/a     | B           | POST        |             |             |             |      |      |     |
|                     | Roundup PowerMax 3 | 30 fl oz/a     | B           | POST        |             |             |             |      |      |     |
|                     | AMS                | 17 lb/100 gal  | B           | POST        |             |             |             |      |      |     |
| 12                  | Authority Edge     | 7 fl oz/a      | A           | PRE         | 100         | 20          | 18          | 100  | 100  | 100 |
|                     | Metribuzin         | 6 oz/a         | A           | PRE         |             |             |             |      |      |     |
|                     | Anthem MAXX        | 3 fl oz/a      | B           | POST        |             |             |             |      |      |     |
|                     | Liberty            | 32 fl oz/a     | B           | POST        |             |             |             |      |      |     |
|                     | Roundup PowerMax 3 | 30 fl oz/a     | B           | POST        |             |             |             |      |      |     |
|                     | AMS                | 17 lb/100 gal  | B           | POST        |             |             |             |      |      |     |
| 13                  | Tendovo            | 1.75 qt/a      | A           | PRE         | 100         | 7           | 12          | 99   | 98   | 100 |
|                     | Dual Magnum        | 1.25 pt/a      | B           | POST        |             |             |             |      |      |     |
|                     | Liberty            | 32 fl oz/a     | B           | POST        |             |             |             |      |      |     |
|                     | AMS                | 3 lb/a         | B           | POST        |             |             |             |      |      |     |
| 14                  | Fierce XLT         | 4 oz/a         | A           | PRE         | 100         | 19          | 19          | 97   | 98   | 100 |
|                     | Perpetuo           | 6 fl oz/a      | B           | POST        |             |             |             |      |      |     |
|                     | Liberty            | 32 fl oz/a     | B           | POST        |             |             |             |      |      |     |
|                     | Surfactant         | 0.25 % v/v     | B           | POST        |             |             |             |      |      |     |
|                     | AMS                | 8.5 lb/100 gal | B           | POST        |             |             |             |      |      |     |
| 15                  | XtendiMax          | 22 fl oz/a     | B           | POST        | 0           | 3           | 5           | 100  | 99   | 100 |
|                     | Roundup PowerMax 3 | 30 fl oz/a     | B           | POST        |             |             |             |      |      |     |
|                     | VaporGrip          | 20 fl oz/a     | B           | POST        |             |             |             |      |      |     |
|                     | Cognitive 1        | 0.5 % v/v      | B           | POST        |             |             |             |      |      |     |
| 16                  | Roundup PowerMax 3 | 30 fl oz/a     | B           | POST        | 0           | 0           | 2           | 100  | 96   | 100 |
|                     | AMS                | 17 lb/100 gal  | B           | POST        |             |             |             |      |      |     |
|                     | LSD P=.05          |                |             |             | 2.5         | 2.5         | 2.8         | 2.8  | 3.0  | .   |
|                     | Standard Deviation |                |             |             | 1.8         | 1.7         | 1.9         | 2.0  | 2.1  | 0.0 |
|                     | CV                 |                |             |             | 2.39        | 22.28       | 23.89       | 2.12 | 2.27 | 0.0 |

Could not calculate LSD (% mean diff) for columns 2,12,14,20,26 because error mean square = 0.

Michigan State University

Comparison of commercial weed control programs in XtendFlex soybean

Trial ID: SOY02-23

Protocol ID: SOY02-23 Location: Campus, C-12 Trial Year: 2023

Study Director: Sprague, Stiles Sponsor Contact:

Investigator: Christy Sprague

| Rating Date         | Jun-27-2023 | Jun-27-2023 | Jul-11-2023 | Jul-11-2023 | Jul-11-2023 | Jul-11-2023 |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Rating Type         | control     | control     | injury      | control     | control     | control     |
| Rating Unit/Min/Max | %, 0, 100   | %, 0, 100   | %, 0, 100   | %, 0, 100   | %, 0, 100   | %, 0, 100   |
| Crop Type, Code     |             |             | C, GLXMA    |             |             |             |
| Pest Code           | AMBEL       | ABUTH       |             | ANGR        | CHEAL       | AMAPO       |
| Trt-Eval Interval   | 14 DA-B     | 14 DA-B     | 28 DA-B     | 28 DA-B     | 28 DA-B     | 28 DA-B     |
| Number of Decimals  | 0           | 0           | 0           | 0           | 0           | 0           |

| Trt No. | Treatment Name     | Rate           | Unit | Appl Code | Appl Timing | Jun-27-2023 control | Jun-27-2023 control | Jul-11-2023 injury | Jul-11-2023 control | Jul-11-2023 control | Jul-11-2023 control |
|---------|--------------------|----------------|------|-----------|-------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|
| 1       | Zidua SC           | 2.5 fl oz/a    |      | A         | PRE         | 100                 | 100                 | 0                  | 97                  | 99                  | 100                 |
|         | Metribuzin         | 4 oz/a         |      | A         | PRE         |                     |                     |                    |                     |                     |                     |
|         | Engenia            | 12.8 fl oz/a   |      | A         | PRE         |                     |                     |                    |                     |                     |                     |
|         | Sentris            | 8 fl oz/a      |      | A         | PRE         |                     |                     |                    |                     |                     |                     |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | AMS                | 3 lb/a         |      | B         | POST        |                     |                     |                    |                     |                     |                     |
| 2       | Valor EZ           | 2 fl oz/a      |      | A         | PRE         | 100                 | 100                 | 1                  | 100                 | 100                 | 100                 |
|         | Mauler             | 8 fl oz/a      |      | A         | PRE         |                     |                     |                    |                     |                     |                     |
|         | XtendiMax          | 22 fl oz/a     |      | A         | PRE         |                     |                     |                    |                     |                     |                     |
|         | VaporGrip          | 20 fl oz/a     |      | A         | PRE         |                     |                     |                    |                     |                     |                     |
|         | Warrant            | 48 fl oz/a     |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | AMS                | 17 lb/100 gal  |      | B         | POST        |                     |                     |                    |                     |                     |                     |
| 3       | Outlook            | 5 fl oz/a      |      | A         | PRE         | 100                 | 100                 | 0                  | 97                  | 99                  | 100                 |
|         | Sharpen            | 1 fl oz/a      |      | A         | PRE         |                     |                     |                    |                     |                     |                     |
|         | Engenia            | 12.8 fl oz/a   |      | A         | PRE         |                     |                     |                    |                     |                     |                     |
|         | Sentris            | 8 fl oz/a      |      | A         | PRE         |                     |                     |                    |                     |                     |                     |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | AMS                | 3 lb/a         |      | B         | POST        |                     |                     |                    |                     |                     |                     |
| 4       | Untreated          |                |      |           |             | 0                   | 0                   | 0                  | 0                   | 0                   | 0                   |
| 5       | Fierce EZ          | 6 fl oz/a      |      | A         | PRE         | 100                 | 100                 | 5                  | 99                  | 87                  | 100                 |
|         | Perpetuo           | 6 fl oz/a      |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | Surfactant         | 0.25 % v/v     |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | AMS                | 8.5 lb/100 gal |      | B         | POST        |                     |                     |                    |                     |                     |                     |
| 6       | XtendiMax          | 22 fl oz/a     |      | B         | POST        | 88                  | 100                 | 0                  | 90                  | 99                  | 100                 |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | VaporGrip          | 20 fl oz/a     |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | Cognitive 1        | 0.5 % v/v      |      | B         | POST        |                     |                     |                    |                     |                     |                     |
| 7       | Fierce MTZ         | 1 pt/a         |      | A         | PRE         | 94                  | 100                 | 1                  | 100                 | 100                 | 100                 |
|         | Warrant            | 48 fl oz/a     |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | XtendiMax          | 22 fl oz/a     |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | VaporGrip          | 20 fl oz/a     |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | Cognitive 1        | 0.5 % v/v      |      | B         | POST        |                     |                     |                    |                     |                     |                     |
| 8       | Fierce MTZ         | 16 fl oz/a     |      | A         | PRE         | 100                 | 100                 | 2                  | 99                  | 96                  | 100                 |
|         | Perpetuo           | 6 fl oz/a      |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | Surfactant         | 0.25 % v/v     |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | AMS                | 8.5 lb/100 gal |      | B         | POST        |                     |                     |                    |                     |                     |                     |
| 9       | Sonic              | 5 oz/a         |      | A         | PRE         | 100                 | 100                 | 0                  | 98                  | 100                 | 100                 |
|         | Metribuzin         | 5 oz/a         |      | A         | PRE         |                     |                     |                    |                     |                     |                     |
|         | XtendiMax          | 22 fl oz/a     |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | VaporGrip          | 20 fl oz/a     |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | Cognitive 1        | 0.5 % v/v      |      | B         | POST        |                     |                     |                    |                     |                     |                     |
| 10      | Boundary           | 1.75 pt/a      |      | A         | PRE         | 100                 | 100                 | 0                  | 99                  | 93                  | 98                  |
|         | Dual Magnum        | 1.25 pt/a      |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |                     |                     |                    |                     |                     |                     |
|         | AMS                | 3 lb/a         |      | B         | POST        |                     |                     |                    |                     |                     |                     |

Could not calculate LSD (% mean diff) for columns 2,12,14,20,26 because error mean square = 0.

Michigan State University

Comparison of commercial weed control programs in XtendFlex soybean

Trial ID: SOY02-23

Protocol ID: SOY02-23 Location: Campus, C-12 Trial Year: 2023

Study Director: Sprague, Stiles Sponsor Contact:

Investigator: Christy Sprague

| Rating Date         | Jun-27-2023        | Jun-27-2023    | Jul-11-2023 | Jul-11-2023 | Jul-11-2023 | Jul-11-2023 |     |        |      |      |      |
|---------------------|--------------------|----------------|-------------|-------------|-------------|-------------|-----|--------|------|------|------|
| Rating Type         | control            | control        | injury      | control     | control     | control     |     |        |      |      |      |
| Rating Unit/Min/Max | %, 0, 100          | %, 0, 100      | %, 0, 100   | %, 0, 100   | %, 0, 100   | %, 0, 100   |     |        |      |      |      |
| Crop Type, Code     |                    |                | C, GLXMA    |             |             |             |     |        |      |      |      |
| Pest Code           | AMBEL              | ABUTH          |             | ANGR        | CHEAL       | AMAPO       |     |        |      |      |      |
| Trt-Eval Interval   | 14 DA-B            | 14 DA-B        | 28 DA-B     | 28 DA-B     | 28 DA-B     | 28 DA-B     |     |        |      |      |      |
| Number of Decimals  | 0                  | 0              | 0           | 0           | 0           | 0           |     |        |      |      |      |
| Trt No.             | Treatment Name     | Rate           | Unit        | Appl Code   | Appl Timing |             |     |        |      |      |      |
| 11                  | Authority Edge     | 8 fl oz/a      |             | A           | PRE         | 99          | 100 | 0      | 98   | 99   | 100  |
|                     | Metribuzin         | 6 oz/a         |             | A           | PRE         |             |     |        |      |      |      |
|                     | Liberty            | 32 fl oz/a     |             | B           | POST        |             |     |        |      |      |      |
|                     | Roundup PowerMax 3 | 30 fl oz/a     |             | B           | POST        |             |     |        |      |      |      |
|                     | AMS                | 17 lb/100 gal  |             | B           | POST        |             |     |        |      |      |      |
| 12                  | Authority Edge     | 7 fl oz/a      |             | A           | PRE         | 100         | 100 | 2      | 100  | 100  | 100  |
|                     | Metribuzin         | 6 oz/a         |             | A           | PRE         |             |     |        |      |      |      |
|                     | Anthem MAXX        | 3 fl oz/a      |             | B           | POST        |             |     |        |      |      |      |
|                     | Liberty            | 32 fl oz/a     |             | B           | POST        |             |     |        |      |      |      |
|                     | Roundup PowerMax 3 | 30 fl oz/a     |             | B           | POST        |             |     |        |      |      |      |
|                     | AMS                | 17 lb/100 gal  |             | B           | POST        |             |     |        |      |      |      |
| 13                  | Tendovo            | 1.75 qt/a      |             | A           | PRE         | 100         | 100 | 0      | 100  | 97   | 100  |
|                     | Dual Magnum        | 1.25 pt/a      |             | B           | POST        |             |     |        |      |      |      |
|                     | Liberty            | 32 fl oz/a     |             | B           | POST        |             |     |        |      |      |      |
|                     | AMS                | 3 lb/a         |             | B           | POST        |             |     |        |      |      |      |
| 14                  | Fierce XLT         | 4 oz/a         |             | A           | PRE         | 100         | 100 | 1      | 97   | 93   | 100  |
|                     | Perpetuo           | 6 fl oz/a      |             | B           | POST        |             |     |        |      |      |      |
|                     | Liberty            | 32 fl oz/a     |             | B           | POST        |             |     |        |      |      |      |
|                     | Surfactant         | 0.25 % v/v     |             | B           | POST        |             |     |        |      |      |      |
|                     | AMS                | 8.5 lb/100 gal |             | B           | POST        |             |     |        |      |      |      |
| 15                  | XtendiMax          | 22 fl oz/a     |             | B           | POST        | 86          | 100 | 0      | 88   | 99   | 100  |
|                     | Roundup PowerMax 3 | 30 fl oz/a     |             | B           | POST        |             |     |        |      |      |      |
|                     | VaporGrip          | 20 fl oz/a     |             | B           | POST        |             |     |        |      |      |      |
|                     | Cognitive 1        | 0.5 % v/v      |             | B           | POST        |             |     |        |      |      |      |
| 16                  | Roundup PowerMax 3 | 30 fl oz/a     |             | B           | POST        | 85          | 100 | 0      | 79   | 87   | 91   |
|                     | AMS                | 17 lb/100 gal  |             | B           | POST        |             |     |        |      |      |      |
|                     | LSD P=.05          |                |             |             |             | 3.9         | .   | 1.7    | 4.5  | 5.6  | 2.8  |
|                     | Standard Deviation |                |             |             |             | 2.7         | 0.0 | 1.2    | 3.1  | 3.9  | 2.0  |
|                     | CV                 |                |             |             |             | 3.02        | 0.0 | 177.78 | 3.49 | 4.36 | 2.15 |

Could not calculate LSD (% mean diff) for columns 2,12,14,20,26 because error mean square = 0.

Michigan State University

Comparison of commercial weed control programs in XtendFlex soybean

Trial ID: SOY02-23

Protocol ID: SOY02-23 Location: Campus, C-12 Trial Year: 2023

Study Director: Sprague, Stiles Sponsor Contact:

Investigator: Christy Sprague

| Rating Date         | Jul-11-2023 | Jul-11-2023 | Aug-8-2023 | Aug-8-2023 | Aug-8-2023 | Aug-8-2023 | Aug-8-2023 |
|---------------------|-------------|-------------|------------|------------|------------|------------|------------|
| Rating Type         | control     | control     | injury     | control    | control    | control    | control    |
| Rating Unit/Min/Max | %, 0, 100   | %, 0, 100   | %, 0, 100  | %, 0, 100  | %, 0, 100  | %, 0, 100  | %, 0, 100  |
| Crop Type, Code     | C, GLXMA    |             |            |            |            |            |            |
| Pest Code           | AMBEL       | ABUTH       |            | ANGR       | CHEAL      | AMAPO      | AMBEL      |
| Trt-Eval Interval   | 28 DA-B     | 28 DA-B     | 56 DA-B    | 56 DA-B    | 56 DA-B    | 56 DA-B    | 56 DA-B    |
| Number of Decimals  | 0           | 0           | 0          | 0          | 0          | 0          | 0          |

| Trt No. | Treatment Name     | Rate           | Unit | Appl Code | Appl Timing | Jul-11-2023 control | Jul-11-2023 control | Aug-8-2023 injury | Aug-8-2023 control | Aug-8-2023 control | Aug-8-2023 control | Aug-8-2023 control |
|---------|--------------------|----------------|------|-----------|-------------|---------------------|---------------------|-------------------|--------------------|--------------------|--------------------|--------------------|
| 1       | Zidua SC           | 2.5 fl oz/a    |      | A         | PRE         | 100                 | 100                 | 0                 | 97                 | 100                | 100                | 97                 |
|         | Metribuzin         | 4 oz/a         |      | A         | PRE         |                     |                     |                   |                    |                    |                    |                    |
|         | Engenia            | 12.8 fl oz/a   |      | A         | PRE         |                     |                     |                   |                    |                    |                    |                    |
|         | Sentris            | 8 fl oz/a      |      | A         | PRE         |                     |                     |                   |                    |                    |                    |                    |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | AMS                | 3 lb/a         |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
| 2       | Valor EZ           | 2 fl oz/a      |      | A         | PRE         | 100                 | 100                 | 0                 | 100                | 100                | 100                | 100                |
|         | Mauler             | 8 fl oz/a      |      | A         | PRE         |                     |                     |                   |                    |                    |                    |                    |
|         | XtendiMax          | 22 fl oz/a     |      | A         | PRE         |                     |                     |                   |                    |                    |                    |                    |
|         | VaporGrip          | 20 fl oz/a     |      | A         | PRE         |                     |                     |                   |                    |                    |                    |                    |
|         | Warrant            | 48 fl oz/a     |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | AMS                | 17 lb/100 gal  |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
| 3       | Outlook            | 5 fl oz/a      |      | A         | PRE         | 99                  | 100                 | 0                 | 93                 | 100                | 100                | 92                 |
|         | Sharpen            | 1 fl oz/a      |      | A         | PRE         |                     |                     |                   |                    |                    |                    |                    |
|         | Engenia            | 12.8 fl oz/a   |      | A         | PRE         |                     |                     |                   |                    |                    |                    |                    |
|         | Sentris            | 8 fl oz/a      |      | A         | PRE         |                     |                     |                   |                    |                    |                    |                    |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | AMS                | 3 lb/a         |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
| 4       | Untreated          |                |      |           |             | 0                   | 0                   | 0                 | 0                  | 0                  | 0                  | 0                  |
| 5       | Fierce EZ          | 6 fl oz/a      |      | A         | PRE         | 100                 | 100                 | 0                 | 100                | 87                 | 100                | 100                |
|         | Perpetuo           | 6 fl oz/a      |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | Surfactant         | 0.25 % v/v     |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | AMS                | 8.5 lb/100 gal |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
| 6       | XtendiMax          | 22 fl oz/a     |      | B         | POST        | 99                  | 100                 | 0                 | 78                 | 97                 | 100                | 91                 |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | VaporGrip          | 20 fl oz/a     |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | Cognitive 1        | 0.5 % v/v      |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
| 7       | Fierce MTZ         | 1 pt/a         |      | A         | PRE         | 100                 | 100                 | 0                 | 100                | 100                | 100                | 100                |
|         | Warrant            | 48 fl oz/a     |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | XtendiMax          | 22 fl oz/a     |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | VaporGrip          | 20 fl oz/a     |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | Cognitive 1        | 0.5 % v/v      |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
| 8       | Fierce MTZ         | 16 fl oz/a     |      | A         | PRE         | 100                 | 100                 | 3                 | 99                 | 95                 | 100                | 100                |
|         | Perpetuo           | 6 fl oz/a      |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | Surfactant         | 0.25 % v/v     |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | AMS                | 8.5 lb/100 gal |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
| 9       | Sonic              | 5 oz/a         |      | A         | PRE         | 100                 | 100                 | 0                 | 97                 | 100                | 100                | 99                 |
|         | Metribuzin         | 5 oz/a         |      | A         | PRE         |                     |                     |                   |                    |                    |                    |                    |
|         | XtendiMax          | 22 fl oz/a     |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | VaporGrip          | 20 fl oz/a     |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | Cognitive 1        | 0.5 % v/v      |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
| 10      | Boundary           | 1.75 pt/a      |      | A         | PRE         | 98                  | 100                 | 0                 | 99                 | 95                 | 98                 | 91                 |
|         | Dual Magnum        | 1.25 pt/a      |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |
|         | AMS                | 3 lb/a         |      | B         | POST        |                     |                     |                   |                    |                    |                    |                    |

Could not calculate LSD (% mean diff) for columns 2,12,14,20,26 because error mean square = 0.



Michigan State University

Comparison of commercial weed control programs in XtendFlex soybean

Trial ID: SOY02-23

Protocol ID: SOY02-23 Location: Campus, C-12 Trial Year: 2023

Study Director: Sprague, Stiles Sponsor Contact:

Investigator: Christy Sprague

| Rating Date         | Jul-11-2023        | Jul-11-2023    | Aug-8-2023 | Aug-8-2023 | Aug-8-2023  | Aug-8-2023 | Aug-8-2023 |        |      |     |      |      |
|---------------------|--------------------|----------------|------------|------------|-------------|------------|------------|--------|------|-----|------|------|
| Rating Type         | control            | control        | injury     | control    | control     | control    | control    |        |      |     |      |      |
| Rating Unit/Min/Max | %, 0, 100          | %, 0, 100      | %, 0, 100  | %, 0, 100  | %, 0, 100   | %, 0, 100  | %, 0, 100  |        |      |     |      |      |
| Crop Type, Code     | C, GLXMA           |                |            |            |             |            |            |        |      |     |      |      |
| Pest Code           | AMBEL              | ABUTH          |            | ANGR       | CHEAL       | AMAPO      | AMBEL      |        |      |     |      |      |
| Trt-Eval Interval   | 28 DA-B            | 28 DA-B        | 56 DA-B    | 56 DA-B    | 56 DA-B     | 56 DA-B    | 56 DA-B    |        |      |     |      |      |
| Number of Decimals  | 0                  | 0              | 0          | 0          | 0           | 0          | 0          |        |      |     |      |      |
| Trt No.             | Treatment Name     | Rate           | Unit       | Appl Code  | Appl Timing |            |            |        |      |     |      |      |
| 11                  | Authority Edge     | 8 fl oz/a      |            | A          | PRE         | 100        | 100        | 0      | 98   | 99  | 100  | 93   |
|                     | Metribuzin         | 6 oz/a         |            | A          | PRE         |            |            |        |      |     |      |      |
|                     | Liberty            | 32 fl oz/a     |            | B          | POST        |            |            |        |      |     |      |      |
|                     | Roundup PowerMax 3 | 30 fl oz/a     |            | B          | POST        |            |            |        |      |     |      |      |
|                     | AMS                | 17 lb/100 gal  |            | B          | POST        |            |            |        |      |     |      |      |
| 12                  | Authority Edge     | 7 fl oz/a      |            | A          | PRE         | 100        | 100        | 0      | 100  | 100 | 100  | 99   |
|                     | Metribuzin         | 6 oz/a         |            | A          | PRE         |            |            |        |      |     |      |      |
|                     | Anthem MAXX        | 3 fl oz/a      |            | B          | POST        |            |            |        |      |     |      |      |
|                     | Liberty            | 32 fl oz/a     |            | B          | POST        |            |            |        |      |     |      |      |
|                     | Roundup PowerMax 3 | 30 fl oz/a     |            | B          | POST        |            |            |        |      |     |      |      |
|                     | AMS                | 17 lb/100 gal  |            | B          | POST        |            |            |        |      |     |      |      |
| 13                  | Tendovo            | 1.75 qt/a      |            | A          | PRE         | 99         | 100        | 0      | 100  | 98  | 100  | 96   |
|                     | Dual Magnum        | 1.25 pt/a      |            | B          | POST        |            |            |        |      |     |      |      |
|                     | Liberty            | 32 fl oz/a     |            | B          | POST        |            |            |        |      |     |      |      |
|                     | AMS                | 3 lb/a         |            | B          | POST        |            |            |        |      |     |      |      |
| 14                  | Fierce XLT         | 4 oz/a         |            | A          | PRE         | 99         | 100        | 0      | 98   | 93  | 100  | 100  |
|                     | Perpetuo           | 6 fl oz/a      |            | B          | POST        |            |            |        |      |     |      |      |
|                     | Liberty            | 32 fl oz/a     |            | B          | POST        |            |            |        |      |     |      |      |
|                     | Surfactant         | 0.25 % v/v     |            | B          | POST        |            |            |        |      |     |      |      |
|                     | AMS                | 8.5 lb/100 gal |            | B          | POST        |            |            |        |      |     |      |      |
| 15                  | XtendiMax          | 22 fl oz/a     |            | B          | POST        | 96         | 100        | 0      | 82   | 95  | 100  | 91   |
|                     | Roundup PowerMax 3 | 30 fl oz/a     |            | B          | POST        |            |            |        |      |     |      |      |
|                     | VaporGrip          | 20 fl oz/a     |            | B          | POST        |            |            |        |      |     |      |      |
|                     | Cognitive 1        | 0.5 % v/v      |            | B          | POST        |            |            |        |      |     |      |      |
| 16                  | Roundup PowerMax 3 | 30 fl oz/a     |            | B          | POST        | 89         | 100        | 0      | 72   | 80  | 96   | 86   |
|                     | AMS                | 17 lb/100 gal  |            | B          | POST        |            |            |        |      |     |      |      |
|                     | LSD P=.05          |                |            |            |             | 2.5        | .          | 1.2    | 4.9  | 6.9 | 3.2  | 5.7  |
|                     | Standard Deviation |                |            |            |             | 1.8        | 0.0        | 0.8    | 3.4  | 4.8 | 2.3  | 4.0  |
|                     | CV                 |                |            |            |             | 1.93       | 0.0        | 530.66 | 3.88 | 5.4 | 2.44 | 4.44 |

Could not calculate LSD (% mean diff) for columns 2,12,14,20,26 because error mean square = 0.

Michigan State University

Comparison of commercial weed control programs in XtendFlex soybean

Trial ID: SOY02-23

Protocol ID: SOY02-23 Location: Campus, C-12 Trial Year: 2023

Study Director: Sprague, Stiles Sponsor Contact:

Investigator: Christy Sprague

|                     |            |             |             |
|---------------------|------------|-------------|-------------|
| Rating Date         | Aug-8-2023 | Oct-17-2023 | Oct-17-2023 |
| Rating Type         | control    | moisture    | yield       |
| Rating Unit/Min/Max | %, 0, 100  | %, 0, 100   | bu/A, -, -  |
| Crop Type, Code     |            | C, GLXMA    | C, GLXMA    |
| Pest Code           | ABUTH      |             |             |
| Trt-Eval Interval   | 56 DA-B    | 126 DA-B    | @13% mois   |
| Number of Decimals  | 0          | 1           | 1           |

| Trt No. | Treatment Name     | Rate           | Unit | Appl Code | Appl Timing |     |      |      |
|---------|--------------------|----------------|------|-----------|-------------|-----|------|------|
| 1       | Zidua SC           | 2.5 fl oz/a    |      | A         | PRE         | 100 | 16.0 | 73.5 |
|         | Metribuzin         | 4 oz/a         |      | A         | PRE         |     |      |      |
|         | Engenia            | 12.8 fl oz/a   |      | A         | PRE         |     |      |      |
|         | Sentris            | 8 fl oz/a      |      | A         | PRE         |     |      |      |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |     |      |      |
|         | AMS                | 3 lb/a         |      | B         | POST        |     |      |      |
| 2       | Valor EZ           | 2 fl oz/a      |      | A         | PRE         | 100 | 16.1 | 75.4 |
|         | Mauler             | 8 fl oz/a      |      | A         | PRE         |     |      |      |
|         | XtendiMax          | 22 fl oz/a     |      | A         | PRE         |     |      |      |
|         | VaporGrip          | 20 fl oz/a     |      | A         | PRE         |     |      |      |
|         | Warrant            | 48 fl oz/a     |      | B         | POST        |     |      |      |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |     |      |      |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |     |      |      |
|         | AMS                | 17 lb/100 gal  |      | B         | POST        |     |      |      |
| 3       | Outlook            | 5 fl oz/a      |      | A         | PRE         | 100 | 16.5 | 74.7 |
|         | Sharpen            | 1 fl oz/a      |      | A         | PRE         |     |      |      |
|         | Engenia            | 12.8 fl oz/a   |      | A         | PRE         |     |      |      |
|         | Sentris            | 8 fl oz/a      |      | A         | PRE         |     |      |      |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |     |      |      |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |     |      |      |
|         | AMS                | 3 lb/a         |      | B         | POST        |     |      |      |
| 4       | Untreated          |                |      |           |             | 0   | 18.0 | 30.4 |
| 5       | Fierce EZ          | 6 fl oz/a      |      | A         | PRE         | 100 | 16.2 | 67.9 |
|         | Perpetuo           | 6 fl oz/a      |      | B         | POST        |     |      |      |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |     |      |      |
|         | Surfactant         | 0.25 % v/v     |      | B         | POST        |     |      |      |
|         | AMS                | 8.5 lb/100 gal |      | B         | POST        |     |      |      |
| 6       | XtendiMax          | 22 fl oz/a     |      | B         | POST        | 100 | 16.4 | 65.1 |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |     |      |      |
|         | VaporGrip          | 20 fl oz/a     |      | B         | POST        |     |      |      |
|         | Cognitive 1        | 0.5 % v/v      |      | B         | POST        |     |      |      |
| 7       | Fierce MTZ         | 1 pt/a         |      | A         | PRE         | 100 | 16.1 | 67.2 |
|         | Warrant            | 48 fl oz/a     |      | B         | POST        |     |      |      |
|         | XtendiMax          | 22 fl oz/a     |      | B         | POST        |     |      |      |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |     |      |      |
|         | VaporGrip          | 20 fl oz/a     |      | B         | POST        |     |      |      |
|         | Cognitive 1        | 0.5 % v/v      |      | B         | POST        |     |      |      |
| 8       | Fierce MTZ         | 16 fl oz/a     |      | A         | PRE         | 100 | 16.5 | 65.9 |
|         | Perpetuo           | 6 fl oz/a      |      | B         | POST        |     |      |      |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |     |      |      |
|         | Surfactant         | 0.25 % v/v     |      | B         | POST        |     |      |      |
|         | AMS                | 8.5 lb/100 gal |      | B         | POST        |     |      |      |
| 9       | Sonic              | 5 oz/a         |      | A         | PRE         | 100 | 16.0 | 72.8 |
|         | Metribuzin         | 5 oz/a         |      | A         | PRE         |     |      |      |
|         | XtendiMax          | 22 fl oz/a     |      | B         | POST        |     |      |      |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |     |      |      |
|         | VaporGrip          | 20 fl oz/a     |      | B         | POST        |     |      |      |
|         | Cognitive 1        | 0.5 % v/v      |      | B         | POST        |     |      |      |
| 10      | Boundary           | 1.75 pt/a      |      | A         | PRE         | 100 | 16.7 | 69.0 |
|         | Dual Magnum        | 1.25 pt/a      |      | B         | POST        |     |      |      |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |     |      |      |
|         | AMS                | 3 lb/a         |      | B         | POST        |     |      |      |

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Michigan State University

Comparison of commercial weed control programs in XtendFlex soybean

Trial ID: SOY02-23

Protocol ID: SOY02-23 Location: Campus, C-12 Trial Year: 2023

Study Director: Sprague, Stiles Sponsor Contact:

Investigator: Christy Sprague

|                     |            |             |             |
|---------------------|------------|-------------|-------------|
| Rating Date         | Aug-8-2023 | Oct-17-2023 | Oct-17-2023 |
| Rating Type         | control    | moisture    | yield       |
| Rating Unit/Min/Max | %, 0, 100  | %, 0, 100   | bu/A, -, -  |
| Crop Type, Code     |            | C, GLXMA    | C, GLXMA    |
| Pest Code           | ABUTH      |             |             |
| Trt-Eval Interval   | 56 DA-B    | 126 DA-B    | @13% mois   |
| Number of Decimals  | 0          | 1           | 1           |

| Trt No. | Treatment Name     | Rate           | Unit | Appl Code | Appl Timing |     |      |      |
|---------|--------------------|----------------|------|-----------|-------------|-----|------|------|
| 11      | Authority Edge     | 8 fl oz/a      |      | A         | PRE         | 100 | 16.2 | 76.0 |
|         | Metribuzin         | 6 oz/a         |      | A         | PRE         |     |      |      |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |     |      |      |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |     |      |      |
|         | AMS                | 17 lb/100 gal  |      | B         | POST        |     |      |      |
| 12      | Authority Edge     | 7 fl oz/a      |      | A         | PRE         | 100 | 16.3 | 68.0 |
|         | Metribuzin         | 6 oz/a         |      | A         | PRE         |     |      |      |
|         | Anthem MAXX        | 3 fl oz/a      |      | B         | POST        |     |      |      |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |     |      |      |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |     |      |      |
|         | AMS                | 17 lb/100 gal  |      | B         | POST        |     |      |      |
| 13      | Tendovo            | 1.75 qt/a      |      | A         | PRE         | 100 | 16.1 | 70.4 |
|         | Dual Magnum        | 1.25 pt/a      |      | B         | POST        |     |      |      |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |     |      |      |
|         | AMS                | 3 lb/a         |      | B         | POST        |     |      |      |
| 14      | Fierce XLT         | 4 oz/a         |      | A         | PRE         | 100 | 16.4 | 69.3 |
|         | Perpetuo           | 6 fl oz/a      |      | B         | POST        |     |      |      |
|         | Liberty            | 32 fl oz/a     |      | B         | POST        |     |      |      |
|         | Surfactant         | 0.25 % v/v     |      | B         | POST        |     |      |      |
|         | AMS                | 8.5 lb/100 gal |      | B         | POST        |     |      |      |
| 15      | XtendiMax          | 22 fl oz/a     |      | B         | POST        | 100 | 15.6 | 70.1 |
|         | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        |     |      |      |
|         | VaporGrip          | 20 fl oz/a     |      | B         | POST        |     |      |      |
|         | Cognitive 1        | 0.5 % v/v      |      | B         | POST        |     |      |      |
| 16      | Roundup PowerMax 3 | 30 fl oz/a     |      | B         | POST        | 100 | 16.4 | 70.4 |
|         | AMS                | 17 lb/100 gal  |      | B         | POST        |     |      |      |
|         | LSD P=.05          |                |      |           |             |     | 0.70 | 6.09 |
|         | Standard Deviation |                |      |           |             | 0.0 | 0.49 | 4.27 |
|         | CV                 |                |      |           |             | 0.0 | 2.99 | 6.3  |

Could not calculate LSD (% mean diff) for columns 2,12,14,20,26 because error mean square = 0.