

**Economic comparisons of commercial weed control programs in soybean**

Trial ID: SOY02-20 Study Dir.: Sprague, Powell, Stiles  
 Conducted: Campus, T-10 Investigator: Christy Sprague

**Planting Date:** May-24-2020 **Row Spacing:** 30 IN  
**Variety:** P25T09E **No. of Reps:** 4  
**Population:** 156000 seeds/A **% OM:** 2.6  
**Soil Type:** L loam **pH:** 7.5  
**Plot Size:** 10 X 35 FT **Study Design:** Randomized Complete Block (RCB)

**Tillage/Previous Crops:** Fall chisel plow, Fall soil finish; Spring soil finish (2X)

**Fertilizer:**

**Crop and Weed Description**

| Weed | Code  | Common Name            | Scientific Name         |
|------|-------|------------------------|-------------------------|
| 1    | ANGR  | mainly foxtail species | Annual grass            |
| 2    | CHEAL | lambsquarters, common  | Chenopodium album       |
| 3    | AMAPO | amaranth, Powell       | Amaranthus powellii     |
| 4    | AMBEL | ragweed, common        | Ambrosia artemisiifolia |
| 5    | SINAR | Wild mustard           | Sinapis arvensis        |
| 6    | 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-24-2020 | Jun-22-2020 |
| <b>Time Treated:</b>                  | 8:30 AM     | 9:05 AM     |
| <b>% Cloud Cover:</b>                 | 10          | 50          |
| <b>Air Temp., Unit:</b>               | 86 F        | 84 F        |
| <b>% Relative Humidity:</b>           | 45          | 47          |
| <b>Wind Speed/Unit/Dir:</b>           | 9 mph W     | 7 mph SW    |
| <b>Soil Temp, Unit:</b>               | 74 F        | 89 F        |
| <b>Leaf Moist/Dew Presence (Y/N):</b> | 5           | 5           |
| <b>Soil Moist:</b>                    | 5           | 5           |

**Crop Stage at Each Application**

|                     | A     | B     |
|---------------------|-------|-------|
| <b>Crop 1 Name:</b> | GLXMA | GLXMA |
| <b>Height:</b>      |       | 8 "   |
| <b>Stage:</b>       |       | V4    |

**Weed Stage at Each Application**

|                     | A     | B            |
|---------------------|-------|--------------|
| <b>Weed 1 Name:</b> | ANGR  | ANGR         |
| <b>Height:</b>      |       | 7-12 " (9.5) |
| <b>Stage:</b>       |       | 4L           |
| <b>Weed 2 Name:</b> | CHEAL | CHEAL        |
| <b>Height:</b>      |       | 2-4 " (3)    |
| <b>Stage:</b>       |       | 15-20L       |
| <b>Weed 3 Name:</b> | AMAPO | AMAPO        |
| <b>Height:</b>      |       | 2-4 " (3)    |
| <b>Stage:</b>       |       | 8-10L        |
| <b>Weed 4 Name:</b> | AMBEL | AMBEL        |
| <b>Height:</b>      |       | 4-6 " (5)    |
| <b>Stage:</b>       |       | 6-12L        |
| <b>Weed 5 Name:</b> | SINAR | SINAR        |
| <b>Height:</b>      |       | 6 "          |
| <b>Stage:</b>       |       | flower       |
| <b>Weed 6 Name:</b> | ABUTH | ABUTH        |
| <b>Height:</b>      |       | 4 "          |
| <b>Stage:</b>       |       | 3L           |

**Weed Density**

|                   | 1           | 2           | 3           | 4           | 5           | 6           |
|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Date:</b>      | Jun-22-2020 | Jun-22-2020 | Jun-22-2020 | Jun-22-2020 | Jun-22-2020 | Jun-22-2020 |
| <b>Weed Name:</b> | ANGR        | CHEAL       | AMAPO       | AMBEL       | SINAR       | ABUTH       |
| <b>Density:</b>   | 15 FT2      | 2 FT2       | 1 FT2       | 3 FT2       | 1 FT2       | 1 FT2       |

**Application Equipment**

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Conducted: Campus, T-10

Investigator: Christy Sprague

| <b>Appl</b> | <b>Sprayer<br/>Type</b> | <b>Ground<br/>Speed</b> | <b>Nozzle<br/>Type</b> | <b>Nozzle<br/>Size</b> | <b>Nozzle<br/>Height</b> | <b>Nozzle<br/>Spacing</b> | <b>Boom<br/>Width</b> | <b>Spray<br/>Volume</b> | <b>Carrier</b> | <b>Operation<br/>Pressure</b> |
|-------------|-------------------------|-------------------------|------------------------|------------------------|--------------------------|---------------------------|-----------------------|-------------------------|----------------|-------------------------------|
| <b>A</b>    | CUB                     | 3.8 mph                 | AIXR                   | 11003                  | 20 "                     | 20 "                      | 100 "                 | 19 GPA                  | WATER          | 30 psi                        |
| <b>B</b>    | CUB                     | 3.8 mph                 | AIXR                   | 11003                  | 27 "                     | 20 "                      | 100 "                 | 19 GPA                  | WATER          | 30 psi                        |

**Comments:** There was substantial seedling disease throughout this trial that was exacerbated with some of the treatments. The common ragweed population in this trial is resistant to the Group 2 (ALS-inhibiting) herbicides.

Economic comparisons of commercial weed control programs in soybean

Trial ID: SOY02-20

Location: Campus, T-10

Trial Year: 2020

Protocol ID: SOY02-20

Investigator (Creator): Christy Sprague

Project ID:

Study Director: Sprague, Powell, Stiles

Sponsor Contact:

| Pest Code          |             | ANGR        | CHEAL       | AMAPO       | AMBEL       | SINAR       |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Crop Type, Code    | C GLXMA     |             |             |             |             |             |
| Rating Date        | Jun-15-2020 | Jun-15-2020 | Jun-15-2020 | Jun-15-2020 | Jun-15-2020 | Jun-15-2020 |
| Rating Type        | injury      | control     | control     | control     | control     | control     |
| Rating Unit        | percent     | percent     | percent     | percent     | percent     | percent     |
| Trt-Eval Interval  | 22 DA-A     | 22 DA-A     | 22 DA-A     | 22 DA-A     | 22 DA-A     | 22 DA-A     |
| Number of Decimals | 0           | 0           | 0           | 0           | 0           | 0           |

| Trt No. | Treatment Name       | Form Conc | Form Type | Rate           | Rate Unit | Appl Timing | Appl Code |    |    |     |     |     |     |
|---------|----------------------|-----------|-----------|----------------|-----------|-------------|-----------|----|----|-----|-----|-----|-----|
| 1       | Roundup PowerMax AMS | 4.5       | SL        | 32 fl oz/a     | gal       | POST        | B         | 0  | 0  | 0   | 0   | 0   | 0   |
| 2       | Warrant              | 3         | L         | 2 pt/a         |           | PRE         | A         | 1  | 70 | 69  | 100 | 38  | 65  |
| 3       | Roundup PowerMax AMS | 4.5       | SL        | 32 fl oz/a     | gal       | POST        | B         |    |    |     |     |     |     |
| 3       | Sonic                | 70        | WG        | 4.5 oz/a       |           | PRE         | A         | 2  | 79 | 100 | 100 | 94  | 100 |
|         | Enlist One           | 3.8       | L         | 32 fl oz/a     |           | POST        | B         |    |    |     |     |     |     |
|         | Durango DMA          | 4         | SL        | 32 fl oz/a     |           | POST        | B         |    |    |     |     |     |     |
|         | AMS                  |           | WG        | 17 lb/100 gal  |           | POST        | B         |    |    |     |     |     |     |
| 4       | Zidua PRO            | 4.09      | L         | 4.5 fl oz/a    |           | PRE         | A         | 1  | 84 | 100 | 100 | 93  | 100 |
|         | Liberty              | 2.34      | L         | 32 fl oz/a     |           | POST        | B         |    |    |     |     |     |     |
|         | AMS                  |           | WG        | 3 lb/a         |           | POST        | B         |    |    |     |     |     |     |
| 5       | Valor EZ             | 4         | L         | 2 fl oz/a      |           | PRE         | A         | 18 | 66 | 99  | 100 | 91  | 100 |
|         | Perpetuo             | 2.3       | L         | 6 fl oz/a      |           | POST        | B         |    |    |     |     |     |     |
|         | Roundup PowerMax AMS | 4.5       | SL        | 32 fl oz/a     | gal       | POST        | B         |    |    |     |     |     |     |
|         | AMS                  |           | WG        | 17 lb/100 gal  |           | POST        | B         |    |    |     |     |     |     |
| 6       | Boundary             | 6.5       | L         | 2 pt/a         |           | PRE         | A         | 9  | 99 | 100 | 100 | 97  | 99  |
|         | Prefix               | 5.29      | L         | 2 pt/a         |           | POST        | B         |    |    |     |     |     |     |
|         | Liberty              | 2.34      | L         | 32 fl oz/a     |           | POST        | B         |    |    |     |     |     |     |
|         | AMS                  |           | WG        | 8.5 lb/100 gal |           | POST        | B         |    |    |     |     |     |     |
| 7       | Authority XL         | 70        | WG        | 4 oz/a         |           | PRE         | A         | 8  | 67 | 100 | 100 | 91  | 100 |
|         | Enlist One           | 3.8       | SL        | 32 fl oz/a     |           | POST        | B         |    |    |     |     |     |     |
|         | Roundup PowerMax AMS | 4.5       | SL        | 22 fl oz/a     | gal       | POST        | B         |    |    |     |     |     |     |
|         | AMS                  |           | WG        | 17 lb/100 gal  |           | POST        | B         |    |    |     |     |     |     |
| 8       | Untreated            |           |           |                |           |             |           | 0  | 0  | 0   | 0   | 0   | 0   |
| 9       | Sonic                | 70        | WG        | 4.5 oz/a       |           | PRE         | A         | 13 | 75 | 100 | 100 | 98  | 100 |
|         | EverpreX             | 7.62      | L         | 1 pt/a         |           | POST        | B         |    |    |     |     |     |     |
|         | Enlist One           | 3.8       | L         | 32 fl oz/a     |           | POST        | B         |    |    |     |     |     |     |
|         | Durango DMA          | 4         | SL        | 32 fl oz/a     |           | POST        | B         |    |    |     |     |     |     |
|         | AMS                  |           | WG        | 17 lb/100 gal  |           | POST        | B         |    |    |     |     |     |     |
| 10      | Zidua PRO            | 4.09      | L         | 4.5 fl oz/a    |           | PRE         | A         | 11 | 88 | 100 | 100 | 97  | 100 |
|         | Liberty              | 2.34      | L         | 32 fl oz/a     |           | POST        | B         |    |    |     |     |     |     |
|         | Roundup PowerMax AMS | 4.5       | SL        | 32 fl oz/a     | gal       | POST        | B         |    |    |     |     |     |     |
|         | AMS                  |           | WG        | 3 lb/a         |           | POST        | B         |    |    |     |     |     |     |
| 11      | Prefix               | 5.29      | L         | 2 pt/a         |           | PRE         | A         | 5  | 98 | 96  | 100 | 100 | 100 |
|         | Metribuzin           | 75        | WG        | 6 oz/a         |           | PRE         | A         |    |    |     |     |     |     |
|         | Sequence             | 5.25      | L         | 3.5 pt/a       |           | POST        | B         |    |    |     |     |     |     |
|         | Liberty              | 2.34      | L         | 32 fl oz/a     |           | POST        | B         |    |    |     |     |     |     |
|         | AMS                  |           | WG        | 8.5 lb/100 gal |           | POST        | B         |    |    |     |     |     |     |
| 12      | Fierce EZ            | 3.04      | L         | 6 fl oz/a      |           | PRE         | A         | 28 | 90 | 98  | 100 | 99  | 100 |
|         | Perpetuo             | 2.3       | L         | 6 fl oz/a      |           | POST        | B         |    |    |     |     |     |     |
|         | Roundup PowerMax AMS | 4.5       | SL        | 32 fl oz/a     | gal       | POST        | B         |    |    |     |     |     |     |
|         | AMS                  |           | WG        | 17 lb/100 gal  |           | POST        | B         |    |    |     |     |     |     |
| 13      | Warrant              | 3         | L         | 3 pt/a         |           | PRE         | A         | 6  | 88 | 100 | 100 | 81  | 95  |
|         | Metribuzin           | 75        | WG        | 5 oz/a         |           | PRE         | A         |    |    |     |     |     |     |
|         | Roundup PowerMax AMS | 4.5       | SL        | 32 fl oz/a     | gal       | POST        | B         |    |    |     |     |     |     |
|         | AMS                  |           | WG        | 17 lb/100 gal  |           | POST        | B         |    |    |     |     |     |     |
| 14      | Authority Edge       | 4.25      | L         | 8 fl oz/a      |           | PRE         | A         | 8  | 95 | 100 | 100 | 83  | 100 |
|         | Enlist One           | 3.8       | SL        | 32 fl oz/a     |           | POST        | B         |    |    |     |     |     |     |
|         | Roundup PowerMax AMS | 4.5       | SL        | 22 fl oz/a     | gal       | POST        | B         |    |    |     |     |     |     |
|         | AMS                  |           | WG        | 17 lb/100 gal  |           | POST        | B         |    |    |     |     |     |     |

Could not calculate LSD (% mean diff) for columns 4,17,18,24,31 because error mean square = 0.

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 Protocol ID: SOY02-20 Investigator (Creator): Christy Sprague  
 Project ID: Study Director: Sprague, Powell, Stiles  
 Sponsor Contact:

| Pest Code          |                    |             |             |                |             | ANGR        | CHEAL       | AMAPO       | AMBEL       | SINAR       |      |      |
|--------------------|--------------------|-------------|-------------|----------------|-------------|-------------|-------------|-------------|-------------|-------------|------|------|
| Crop Type, Code    | C                  | GLXMA       |             |                |             |             |             |             |             |             |      |      |
| Rating Date        | Jun-15-2020        | Jun-15-2020 | Jun-15-2020 | Jun-15-2020    | Jun-15-2020 | Jun-15-2020 | Jun-15-2020 | Jun-15-2020 | Jun-15-2020 | Jun-15-2020 |      |      |
| Rating Type        | injury             | control     | control     | control        | control     | control     | control     | control     | control     | control     |      |      |
| Rating Unit        | percent            | percent     | percent     | percent        | percent     | percent     | percent     | percent     | percent     | percent     |      |      |
| Trt-Eval Interval  | 22 DA-A            | 22 DA-A     | 22 DA-A     | 22 DA-A        | 22 DA-A     | 22 DA-A     | 22 DA-A     | 22 DA-A     | 22 DA-A     | 22 DA-A     |      |      |
| Number of Decimals | 0                  | 0           | 0           | 0              | 0           | 0           | 0           | 0           | 0           | 0           |      |      |
| Trt No.            | Treatment Name     | Form Conc   | Form Type   | Rate Unit      | Appl Timing | Appl Code   |             |             |             |             |      |      |
| 15                 | Verdict            | 5.57        | L           | 5 fl oz/a      | PRE         | A           | 11          | 95          | 100         | 100         | 100  |      |
|                    | Metribuzin         | 75          | WG          | 5 oz/a         | PRE         | A           |             |             |             |             |      |      |
|                    | Liberty            | 2.34        | L           | 32 fl oz/a     | POST        | B           |             |             |             |             |      |      |
|                    | Roundup PowerMax   | 4.5         | SL          | 32 fl oz/a     | POST        | B           |             |             |             |             |      |      |
|                    | AMS                |             | WG          | 3 lb/a         | POST        | B           |             |             |             |             |      |      |
| 16                 | Trivence           | 61.3        | WG          | 6 oz/a         | PRE         | A           | 19          | 87          | 100         | 100         | 100  |      |
|                    | Enlist One         | 3.8         | L           | 32 fl oz/a     | POST        | B           |             |             |             |             |      |      |
|                    | Liberty            | 2.34        | L           | 36 fl oz/a     | POST        | B           |             |             |             |             |      |      |
|                    | Durango DMA        | 4           | SL          | 32 fl oz/a     | POST        | B           |             |             |             |             |      |      |
|                    | AMS                |             | WG          | 17 lb/100 gal  | POST        | B           |             |             |             |             |      |      |
| 17                 | Prefix             | 5.29        | L           | 2 pt/a         | PRE         | A           | 11          | 95          | 100         | 100         | 100  |      |
|                    | FirstRate          | 84          | WG          | 0.5 oz/a       | PRE         | A           |             |             |             |             |      |      |
|                    | Sequence           | 5.25        | L           | 3.5 pt/a       | POST        | B           |             |             |             |             |      |      |
|                    | Liberty            | 2.34        | L           | 32 fl oz/a     | POST        | B           |             |             |             |             |      |      |
|                    | AMS                |             | WG          | 8.5 lb/100 gal | POST        | B           |             |             |             |             |      |      |
| 18                 | Fierce MTZ         | 2.64        | L           | 1 pt/a         | PRE         | A           | 38          | 95          | 100         | 100         | 100  |      |
|                    | Perpetuo           | 2.3         | L           | 6 fl oz/a      | POST        | B           |             |             |             |             |      |      |
|                    | Roundup PowerMax   | 4.5         | SL          | 32 fl oz/a     | POST        | B           |             |             |             |             |      |      |
|                    | AMS                |             | WG          | 17 lb/100 gal  | POST        | B           |             |             |             |             |      |      |
| 19                 | Warrant Ultra      | 3.45        | L           | 50 fl oz/a     | PRE         | A           | 5           | 93          | 100         | 100         | 100  |      |
|                    | Roundup PowerMax   | 4.5         | SL          | 32 fl oz/a     | POST        | B           |             |             |             |             |      |      |
|                    | AMS                |             | WG          | 17 lb/100 gal  | POST        | B           |             |             |             |             |      |      |
| 20                 | Authority Elite    | 7           | L           | 26 fl oz/a     | PRE         | A           | 13          | 99          | 100         | 100         | 98   |      |
|                    | Metribuzin         | 75          | WG          | 6 oz/a         | PRE         | A           |             |             |             |             |      |      |
|                    | Enlist One         | 3.8         | SL          | 32 fl oz/a     | POST        | B           |             |             |             |             |      |      |
|                    | Roundup PowerMax   | 4.5         | SL          | 22 fl oz/a     | POST        | B           |             |             |             |             |      |      |
|                    | AMS                |             | WG          | 17 lb/100 gal  | POST        | B           |             |             |             |             |      |      |
|                    | LSD P=.05          |             |             |                |             |             | 11.0        | 13.3        | 5.1         | .           | 11.0 | 4.7  |
|                    | Standard Deviation |             |             |                |             |             | 7.8         | 9.4         | 3.6         | 0.0         | 7.8  | 3.3  |
|                    | CV                 |             |             |                |             |             | 75.09       | 12.11       | 4.12        | 0.0         | 9.43 | 3.75 |

Could not calculate LSD (% mean diff) for columns 4,17,18,24,31 because error mean square = 0.

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Location: Campus, T-10

Trial Year: 2020

Protocol ID: SOY02-20

Investigator (Creator): Christy Sprague

Project ID:

Study Director: Sprague, Powell, Stiles

Sponsor Contact:

| Pest Code          | ABUTH       | C GLXMA     | ANGR        | CHEAL       | AMAPO       | AMBEL       |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Crop Type, Code    | Jun-15-2020 | Jun-22-2020 | Jun-22-2020 | Jun-22-2020 | Jun-22-2020 | Jun-22-2020 |
| Rating Date        | control     | injury      | control     | control     | control     | control     |
| Rating Type        | percent     | percent     | percent     | percent     | percent     | percent     |
| Rating Unit        | 22 DA-A     | 0 DA-B      | 0 DA-B      | 0 DA-B      | 0 DA-B      | 0 DA-B      |
| Trt-Eval Interval  | 0           | 0           | 0           | 0           | 0           | 0           |
| Number of Decimals | 0           | 0           | 0           | 0           | 0           | 0           |

| Trt No. | Treatment Name       | Form Conc | Form Type | Rate Rate Unit | Appl Timing | Appl Code |     |    |    |     |     |
|---------|----------------------|-----------|-----------|----------------|-------------|-----------|-----|----|----|-----|-----|
| 1       | Roundup PowerMax AMS | 4.5 SL    | WG        | 32 fl oz/a     | POST        | B         | 0   | 0  | 0  | 0   | 0   |
| 2       | Warrant              | 3 L       |           | 2 pt/a         | PRE         | A         | 47  | 2  | 80 | 63  | 98  |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 32 fl oz/a     | POST        | B         |     |    |    |     |     |
| 3       | Sonic                | 70 WG     |           | 4.5 oz/a       | PRE         | A         | 100 | 4  | 83 | 100 | 100 |
|         | Enlist One           | 3.8 L     |           | 32 fl oz/a     | POST        | B         |     |    |    |     |     |
|         | Durango DMA          | 4 SL      |           | 32 fl oz/a     | POST        | B         |     |    |    |     |     |
|         | AMS                  |           | WG        | 17 lb/100 gal  | POST        | B         |     |    |    |     |     |
| 4       | Zidua PRO            | 4.09 L    |           | 4.5 fl oz/a    | PRE         | A         | 100 | 2  | 84 | 100 | 100 |
|         | Liberty              | 2.34 L    |           | 32 fl oz/a     | POST        | B         |     |    |    |     |     |
|         | AMS                  |           | WG        | 3 lb/a         | POST        | B         |     |    |    |     |     |
| 5       | Valor EZ             | 4 L       |           | 2 fl oz/a      | PRE         | A         | 100 | 10 | 76 | 98  | 100 |
|         | Perpetuo             | 2.3 L     |           | 6 fl oz/a      | POST        | B         |     |    |    |     |     |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 32 fl oz/a     | POST        | B         |     |    |    |     |     |
| 6       | Boundary             | 6.5 L     |           | 2 pt/a         | PRE         | A         | 100 | 6  | 98 | 100 | 100 |
|         | Prefix               | 5.29 L    |           | 2 pt/a         | POST        | B         |     |    |    |     |     |
|         | Liberty              | 2.34 L    |           | 32 fl oz/a     | POST        | B         |     |    |    |     |     |
|         | AMS                  |           | WG        | 8.5 lb/100 gal | POST        | B         |     |    |    |     |     |
| 7       | Authority XL         | 70 WG     |           | 4 oz/a         | PRE         | A         | 100 | 4  | 82 | 100 | 100 |
|         | Enlist One           | 3.8 SL    |           | 32 fl oz/a     | POST        | B         |     |    |    |     |     |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 22 fl oz/a     | POST        | B         |     |    |    |     |     |
| 8       | Untreated            |           |           |                |             |           | 0   | 0  | 0  | 0   | 0   |
| 9       | Sonic                | 70 WG     |           | 4.5 oz/a       | PRE         | A         | 100 | 4  | 82 | 100 | 100 |
|         | EverpreX             | 7.62 L    |           | 1 pt/a         | POST        | B         |     |    |    |     |     |
|         | Enlist One           | 3.8 L     |           | 32 fl oz/a     | POST        | B         |     |    |    |     |     |
|         | Durango DMA          | 4 SL      |           | 32 fl oz/a     | POST        | B         |     |    |    |     |     |
|         | AMS                  |           | WG        | 17 lb/100 gal  | POST        | B         |     |    |    |     |     |
| 10      | Zidua PRO            | 4.09 L    |           | 4.5 fl oz/a    | PRE         | A         | 100 | 5  | 88 | 100 | 100 |
|         | Liberty              | 2.34 L    |           | 32 fl oz/a     | POST        | B         |     |    |    |     |     |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 32 fl oz/a     | POST        | B         |     |    |    |     |     |
|         | AMS                  |           | WG        | 3 lb/a         | POST        | B         |     |    |    |     |     |
| 11      | Prefix               | 5.29 L    |           | 2 pt/a         | PRE         | A         | 95  | 5  | 94 | 99  | 100 |
|         | Metribuzin           | 75 WG     |           | 6 oz/a         | PRE         | A         |     |    |    |     |     |
|         | Sequence             | 5.25 L    |           | 3.5 pt/a       | POST        | B         |     |    |    |     |     |
|         | Liberty              | 2.34 L    |           | 32 fl oz/a     | POST        | B         |     |    |    |     |     |
|         | AMS                  |           | WG        | 8.5 lb/100 gal | POST        | B         |     |    |    |     |     |
| 12      | Fierce EZ            | 3.04 L    |           | 6 fl oz/a      | PRE         | A         | 100 | 17 | 88 | 96  | 100 |
|         | Perpetuo             | 2.3 L     |           | 6 fl oz/a      | POST        | B         |     |    |    |     |     |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 32 fl oz/a     | POST        | B         |     |    |    |     |     |
|         | AMS                  |           | WG        | 17 lb/100 gal  | POST        | B         |     |    |    |     |     |
| 13      | Warrant              | 3 L       |           | 3 pt/a         | PRE         | A         | 95  | 2  | 88 | 100 | 100 |
|         | Metribuzin           | 75 WG     |           | 5 oz/a         | PRE         | A         |     |    |    |     |     |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 32 fl oz/a     | POST        | B         |     |    |    |     |     |
|         | AMS                  |           | WG        | 17 lb/100 gal  | POST        | B         |     |    |    |     |     |
| 14      | Authority Edge       | 4.25 L    |           | 8 fl oz/a      | PRE         | A         | 100 | 3  | 93 | 100 | 100 |
|         | Enlist One           | 3.8 SL    |           | 32 fl oz/a     | POST        | B         |     |    |    |     |     |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 22 fl oz/a     | POST        | B         |     |    |    |     |     |
|         | AMS                  |           | WG        | 17 lb/100 gal  | POST        | B         |     |    |    |     |     |

Could not calculate LSD (% mean diff) for columns 4,17,18,24,31 because error mean square = 0.

Economic comparisons of commercial weed control programs in soybean

Trial ID: SOY02-20 Location: Campus, T-10 Trial Year: 2020  
 Protocol ID: SOY02-20 Investigator (Creator): Christy Sprague  
 Project ID: Study Director: Sprague, Powell, Stiles  
 Sponsor Contact:

| Pest Code          |                    | ABUTH       |             | ANGR           | CHEAL       | AMAPO       | AMBEL       |       |      |     |     |      |
|--------------------|--------------------|-------------|-------------|----------------|-------------|-------------|-------------|-------|------|-----|-----|------|
| Crop Type, Code    |                    | C GLXMA     |             |                |             |             |             |       |      |     |     |      |
| Rating Date        |                    | Jun-15-2020 | Jun-22-2020 | Jun-22-2020    | Jun-22-2020 | Jun-22-2020 | Jun-22-2020 |       |      |     |     |      |
| Rating Type        |                    | control     | injury      | control        | control     | control     | control     |       |      |     |     |      |
| Rating Unit        |                    | percent     | percent     | percent        | percent     | percent     | percent     |       |      |     |     |      |
| Trt-Eval Interval  |                    | 22 DA-A     | 0 DA-B      | 0 DA-B         | 0 DA-B      | 0 DA-B      | 0 DA-B      |       |      |     |     |      |
| Number of Decimals |                    | 0           | 0           | 0              | 0           | 0           | 0           |       |      |     |     |      |
| Trt No.            | Treatment Name     | Form Conc   | Form Type   | Rate Unit      | Appl Timing | Appl Code   |             |       |      |     |     |      |
| 15                 | Verdict            | 5.57        | L           | 5 fl oz/a      | PRE         | A           | 100         | 4     | 92   | 100 | 100 | 100  |
|                    | Metribuzin         | 75          | WG          | 5 oz/a         | PRE         | A           |             |       |      |     |     |      |
|                    | Liberty            | 2.34        | L           | 32 fl oz/a     | POST        | B           |             |       |      |     |     |      |
|                    | Roundup PowerMax   | 4.5         | SL          | 32 fl oz/a     | POST        | B           |             |       |      |     |     |      |
|                    | AMS                |             | WG          | 3 lb/a         | POST        | B           |             |       |      |     |     |      |
| 16                 | Trivence           | 61.3        | WG          | 6 oz/a         | PRE         | A           | 100         | 7     | 85   | 100 | 100 | 100  |
|                    | Enlist One         | 3.8         | L           | 32 fl oz/a     | POST        | B           |             |       |      |     |     |      |
|                    | Liberty            | 2.34        | L           | 36 fl oz/a     | POST        | B           |             |       |      |     |     |      |
|                    | Durango DMA        | 4           | SL          | 32 fl oz/a     | POST        | B           |             |       |      |     |     |      |
|                    | AMS                |             | WG          | 17 lb/100 gal  | POST        | B           |             |       |      |     |     |      |
| 17                 | Prefix             | 5.29        | L           | 2 pt/a         | PRE         | A           | 100         | 7     | 90   | 100 | 100 | 100  |
|                    | FirstRate          | 84          | WG          | 0.5 oz/a       | PRE         | A           |             |       |      |     |     |      |
|                    | Sequence           | 5.25        | L           | 3.5 pt/a       | POST        | B           |             |       |      |     |     |      |
|                    | Liberty            | 2.34        | L           | 32 fl oz/a     | POST        | B           |             |       |      |     |     |      |
|                    | AMS                |             | WG          | 8.5 lb/100 gal | POST        | B           |             |       |      |     |     |      |
| 18                 | Fierce MTZ         | 2.64        | L           | 1 pt/a         | PRE         | A           | 100         | 20    | 92   | 100 | 100 | 99   |
|                    | Perpetuo           | 2.3         | L           | 6 fl oz/a      | POST        | B           |             |       |      |     |     |      |
|                    | Roundup PowerMax   | 4.5         | SL          | 32 fl oz/a     | POST        | B           |             |       |      |     |     |      |
|                    | AMS                |             | WG          | 17 lb/100 gal  | POST        | B           |             |       |      |     |     |      |
| 19                 | Warrant Ultra      | 3.45        | L           | 50 fl oz/a     | PRE         | A           | 90          | 3     | 88   | 94  | 100 | 100  |
|                    | Roundup PowerMax   | 4.5         | SL          | 32 fl oz/a     | POST        | B           |             |       |      |     |     |      |
|                    | AMS                |             | WG          | 17 lb/100 gal  | POST        | B           |             |       |      |     |     |      |
| 20                 | Authority Elite    | 7           | L           | 26 fl oz/a     | PRE         | A           | 100         | 7     | 99   | 100 | 100 | 96   |
|                    | Metribuzin         | 75          | WG          | 6 oz/a         | PRE         | A           |             |       |      |     |     |      |
|                    | Enlist One         | 3.8         | SL          | 32 fl oz/a     | POST        | B           |             |       |      |     |     |      |
|                    | Roundup PowerMax   | 4.5         | SL          | 22 fl oz/a     | POST        | B           |             |       |      |     |     |      |
|                    | AMS                |             | WG          | 17 lb/100 gal  | POST        | B           |             |       |      |     |     |      |
|                    | LSD P=.05          |             |             |                |             |             | 8.3         | 5.6   | 5.9  | 4.2 | 0.8 | 10.7 |
|                    | Standard Deviation |             |             |                |             |             | 5.8         | 3.9   | 4.2  | 3.0 | 0.5 | 7.6  |
|                    | CV                 |             |             |                |             |             | 6.73        | 70.52 | 5.29 | 3.4 | 0.6 | 9.21 |

Could not calculate LSD (% mean diff) for columns 4,17,18,24,31 because error mean square = 0.

Economic comparisons of commercial weed control programs in soybean

Trial ID: SOY02-20

Location: Campus, T-10

Trial Year: 2020

Protocol ID: SOY02-20

Investigator (Creator): Christy Sprague

Project ID:

Study Director: Sprague, Powell, Stiles

Sponsor Contact:

| Pest Code          | SINAR       | ABUTH       | C GLXMA     | ANGR        | CHEAL       | AMAPO       |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Crop Type, Code    |             |             |             |             |             |             |
| Rating Date        | Jun-22-2020 | Jun-22-2020 | Jun-29-2020 | Jun-29-2020 | Jun-29-2020 | Jun-29-2020 |
| Rating Type        | control     | control     | injury      | control     | control     | control     |
| Rating Unit        | percent     | percent     | percent     | percent     | percent     | percent     |
| Trt-Eval Interval  | 0 DA-B      | 0 DA-B      | 7 DA-B      | 7 DA-B      | 7 DA-B      | 7 DA-B      |
| Number of Decimals | 0           | 0           | 0           | 0           | 0           | 0           |

| Trt No. | Treatment Name       | Form Conc | Form Type | Rate Rate Unit | Appl Timing | Appl Code |     |     |    |     |     |     |
|---------|----------------------|-----------|-----------|----------------|-------------|-----------|-----|-----|----|-----|-----|-----|
| 1       | Roundup PowerMax AMS | 4.5 SL    | WG        | 32 fl oz/a     | POST        | B         | 0   | 0   | 2  | 92  | 100 | 100 |
| 2       | Warrant              | 3 L       |           | 2 pt/a         | PRE         | A         | 68  | 97  | 3  | 96  | 100 | 100 |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 32 fl oz/a     | POST        | B         |     |     |    |     |     |     |
| 3       | Sonic                | 70 WG     |           | 4.5 oz/a       | PRE         | A         | 100 | 100 | 2  | 100 | 100 | 100 |
|         | Enlist One           | 3.8 L     |           | 32 fl oz/a     | POST        | B         |     |     |    |     |     |     |
|         | Durango DMA AMS      | 4 SL      | WG        | 32 fl oz/a     | POST        | B         |     |     |    |     |     |     |
| 4       | Zidua PRO            | 4.09 L    |           | 4.5 fl oz/a    | PRE         | A         | 100 | 100 | 0  | 97  | 100 | 100 |
|         | Liberty AMS          | 2.34 L    | WG        | 32 fl oz/a     | POST        | B         |     |     |    |     |     |     |
| 5       | Valor EZ             | 4 L       |           | 2 fl oz/a      | PRE         | A         | 98  | 100 | 12 | 100 | 100 | 100 |
|         | Perpetuo             | 2.3 L     |           | 6 fl oz/a      | POST        | B         |     |     |    |     |     |     |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 32 fl oz/a     | POST        | B         |     |     |    |     |     |     |
| 6       | Boundary             | 6.5 L     |           | 2 pt/a         | PRE         | A         | 100 | 100 | 23 | 100 | 100 | 100 |
|         | Prefix               | 5.29 L    |           | 2 pt/a         | POST        | B         |     |     |    |     |     |     |
|         | Liberty AMS          | 2.34 L    | WG        | 32 fl oz/a     | POST        | B         |     |     |    |     |     |     |
| 7       | Authority XL         | 70 WG     |           | 4 oz/a         | PRE         | A         | 100 | 100 | 2  | 98  | 100 | 100 |
|         | Enlist One           | 3.8 SL    |           | 32 fl oz/a     | POST        | B         |     |     |    |     |     |     |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 22 fl oz/a     | POST        | B         |     |     |    |     |     |     |
| 8       | Untreated            |           |           |                |             |           | 0   | 0   | 0  | 0   | 0   | 0   |
| 9       | Sonic                | 70 WG     |           | 4.5 oz/a       | PRE         | A         | 100 | 100 | 5  | 99  | 100 | 100 |
|         | EverpreX             | 7.62 L    |           | 1 pt/a         | POST        | B         |     |     |    |     |     |     |
|         | Enlist One           | 3.8 L     |           | 32 fl oz/a     | POST        | B         |     |     |    |     |     |     |
|         | Durango DMA AMS      | 4 SL      | WG        | 32 fl oz/a     | POST        | B         |     |     |    |     |     |     |
| 10      | Zidua PRO            | 4.09 L    |           | 4.5 fl oz/a    | PRE         | A         | 100 | 100 | 2  | 97  | 100 | 100 |
|         | Liberty              | 2.34 L    |           | 32 fl oz/a     | POST        | B         |     |     |    |     |     |     |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 32 fl oz/a     | POST        | B         |     |     |    |     |     |     |
| 11      | Prefix               | 5.29 L    |           | 2 pt/a         | PRE         | A         | 100 | 93  | 2  | 99  | 100 | 100 |
|         | Metribuzin           | 75 WG     |           | 6 oz/a         | PRE         | A         |     |     |    |     |     |     |
|         | Sequence             | 5.25 L    |           | 3.5 pt/a       | POST        | B         |     |     |    |     |     |     |
|         | Liberty AMS          | 2.34 L    | WG        | 32 fl oz/a     | POST        | B         |     |     |    |     |     |     |
| 12      | Fierce EZ            | 3.04 L    |           | 6 fl oz/a      | PRE         | A         | 100 | 100 | 19 | 100 | 100 | 100 |
|         | Perpetuo             | 2.3 L     |           | 6 fl oz/a      | POST        | B         |     |     |    |     |     |     |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 32 fl oz/a     | POST        | B         |     |     |    |     |     |     |
| 13      | Warrant              | 3 L       |           | 3 pt/a         | PRE         | A         | 98  | 95  | 1  | 100 | 100 | 100 |
|         | Metribuzin           | 75 WG     |           | 5 oz/a         | PRE         | A         |     |     |    |     |     |     |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 32 fl oz/a     | POST        | B         |     |     |    |     |     |     |
| 14      | Authority Edge       | 4.25 L    |           | 8 fl oz/a      | PRE         | A         | 100 | 100 | 3  | 100 | 100 | 100 |
|         | Enlist One           | 3.8 SL    |           | 32 fl oz/a     | POST        | B         |     |     |    |     |     |     |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 22 fl oz/a     | POST        | B         |     |     |    |     |     |     |

Could not calculate LSD (% mean diff) for columns 4,17,18,24,31 because error mean square = 0.

Economic comparisons of commercial weed control programs in soybean

Trial ID: SOY02-20 Location: Campus, T-10 Trial Year: 2020  
 Protocol ID: SOY02-20 Investigator (Creator): Christy Sprague  
 Project ID: Study Director: Sprague, Powell, Stiles  
 Sponsor Contact:

| Pest Code          | SINAR              | ABUTH       | C GLXMA     | ANGR           | CHEAL       | AMAPO       |      |     |       |      |     |     |
|--------------------|--------------------|-------------|-------------|----------------|-------------|-------------|------|-----|-------|------|-----|-----|
| Crop Type, Code    | Jun-22-2020        | Jun-22-2020 | Jun-29-2020 | Jun-29-2020    | Jun-29-2020 | Jun-29-2020 |      |     |       |      |     |     |
| Rating Date        | control            | control     | injury      | control        | control     | control     |      |     |       |      |     |     |
| Rating Type        | percent            | percent     | percent     | percent        | percent     | percent     |      |     |       |      |     |     |
| Rating Unit        | 0 DA-B             | 0 DA-B      | 7 DA-B      | 7 DA-B         | 7 DA-B      | 7 DA-B      |      |     |       |      |     |     |
| Trt-Eval Interval  | 0                  | 0           | 0           | 0              | 0           | 0           |      |     |       |      |     |     |
| Number of Decimals | 0                  | 0           | 0           | 0              | 0           | 0           |      |     |       |      |     |     |
| Trt No.            | Treatment Name     | Form Conc   | Form Type   | Rate Rate Unit | Appl Timing | Appl Code   |      |     |       |      |     |     |
| 15                 | Verdict            | 5.57        | L           | 5 fl oz/a      | PRE         | A           | 100  | 100 | 5     | 100  | 100 | 100 |
|                    | Metribuzin         | 75          | WG          | 5 oz/a         | PRE         | A           |      |     |       |      |     |     |
|                    | Liberty            | 2.34        | L           | 32 fl oz/a     | POST        | B           |      |     |       |      |     |     |
|                    | Roundup PowerMax   | 4.5         | SL          | 32 fl oz/a     | POST        | B           |      |     |       |      |     |     |
|                    | AMS                |             | WG          | 3 lb/a         | POST        | B           |      |     |       |      |     |     |
| 16                 | Trivence           | 61.3        | WG          | 6 oz/a         | PRE         | A           | 100  | 100 | 8     | 97   | 100 | 100 |
|                    | Enlist One         | 3.8         | L           | 32 fl oz/a     | POST        | B           |      |     |       |      |     |     |
|                    | Liberty            | 2.34        | L           | 36 fl oz/a     | POST        | B           |      |     |       |      |     |     |
|                    | Durango DMA        | 4           | SL          | 32 fl oz/a     | POST        | B           |      |     |       |      |     |     |
|                    | AMS                |             | WG          | 17 lb/100 gal  | POST        | B           |      |     |       |      |     |     |
| 17                 | Prefix             | 5.29        | L           | 2 pt/a         | PRE         | A           | 100  | 100 | 9     | 99   | 100 | 100 |
|                    | FirstRate          | 84          | WG          | 0.5 oz/a       | PRE         | A           |      |     |       |      |     |     |
|                    | Sequence           | 5.25        | L           | 3.5 pt/a       | POST        | B           |      |     |       |      |     |     |
|                    | Liberty            | 2.34        | L           | 32 fl oz/a     | POST        | B           |      |     |       |      |     |     |
|                    | AMS                |             | WG          | 8.5 lb/100 gal | POST        | B           |      |     |       |      |     |     |
| 18                 | Fierce MTZ         | 2.64        | L           | 1 pt/a         | PRE         | A           | 100  | 100 | 24    | 100  | 100 | 100 |
|                    | Perpetuo           | 2.3         | L           | 6 fl oz/a      | POST        | B           |      |     |       |      |     |     |
|                    | Roundup PowerMax   | 4.5         | SL          | 32 fl oz/a     | POST        | B           |      |     |       |      |     |     |
|                    | AMS                |             | WG          | 17 lb/100 gal  | POST        | B           |      |     |       |      |     |     |
| 19                 | Warrant Ultra      | 3.45        | L           | 50 fl oz/a     | PRE         | A           | 100  | 76  | 0     | 100  | 100 | 100 |
|                    | Roundup PowerMax   | 4.5         | SL          | 32 fl oz/a     | POST        | B           |      |     |       |      |     |     |
|                    | AMS                |             | WG          | 17 lb/100 gal  | POST        | B           |      |     |       |      |     |     |
| 20                 | Authority Elite    | 7           | L           | 26 fl oz/a     | PRE         | A           | 100  | 100 | 1     | 100  | 100 | 100 |
|                    | Metribuzin         | 75          | WG          | 6 oz/a         | PRE         | A           |      |     |       |      |     |     |
|                    | Enlist One         | 3.8         | SL          | 32 fl oz/a     | POST        | B           |      |     |       |      |     |     |
|                    | Roundup PowerMax   | 4.5         | SL          | 22 fl oz/a     | POST        | B           |      |     |       |      |     |     |
|                    | AMS                |             | WG          | 17 lb/100 gal  | POST        | B           |      |     |       |      |     |     |
|                    | LSD P=.05          |             |             |                |             |             | 3.1  | 7.1 | 5.5   | 3.0  | .   | .   |
|                    | Standard Deviation |             |             |                |             |             | 2.2  | 5.0 | 3.9   | 2.1  | 0.0 | 0.0 |
|                    | CV                 |             |             |                |             |             | 2.48 | 5.7 | 65.38 | 2.23 | 0.0 | 0.0 |

Could not calculate LSD (% mean diff) for columns 4,17,18,24,31 because error mean square = 0.



Economic comparisons of commercial weed control programs in soybean

Trial ID: SOY02-20 Location: Campus, T-10 Trial Year: 2020  
 Protocol ID: SOY02-20 Investigator (Creator): Christy Sprague  
 Project ID: Study Director: Sprague, Powell, Stiles  
 Sponsor Contact:

| Pest Code          | AMBEL       | ABUTH       | C GLXMA    | ANGR       | CHEAL      | AMAPO      |
|--------------------|-------------|-------------|------------|------------|------------|------------|
| Crop Type, Code    |             |             |            |            |            |            |
| Rating Date        | Jun-29-2020 | Jun-29-2020 | Jul-6-2020 | Jul-6-2020 | Jul-6-2020 | Jul-6-2020 |
| Rating Type        | control     | control     | injury     | control    | control    | control    |
| Rating Unit        | percent     | percent     | percent    | percent    | percent    | percent    |
| Trt-Eval Interval  | 7 DA-B      | 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       | Form Conc | Form Type | Rate        | Rate Unit      | Appl Timing | Appl Code |     |     |    |     |     |     |
|---------|----------------------|-----------|-----------|-------------|----------------|-------------|-----------|-----|-----|----|-----|-----|-----|
| 1       | Roundup PowerMax AMS | 4.5 SL    | WG        | 32 fl oz/a  | 17 lb/100 gal  | POST        | B         | 84  | 95  | 0  | 97  | 99  | 100 |
| 2       | Warrant              | 3 L       |           | 2 pt/a      |                | PRE         | A         | 83  | 96  | 1  | 99  | 100 | 100 |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 32 fl oz/a  | 17 lb/100 gal  | POST        | B         |     |     |    |     |     |     |
| 3       | Sonic                | 70 WG     |           | 4.5 oz/a    |                | PRE         | A         | 100 | 100 | 1  | 100 | 100 | 100 |
|         | Enlist One           | 3.8 L     |           | 32 fl oz/a  |                | POST        | B         |     |     |    |     |     |     |
|         | Durango DMA AMS      | 4 SL      | WG        | 32 fl oz/a  | 17 lb/100 gal  | POST        | B         |     |     |    |     |     |     |
| 4       | Zidua PRO            | 4.09 L    |           | 4.5 fl oz/a |                | PRE         | A         | 99  | 100 | 0  | 97  | 100 | 100 |
|         | Liberty AMS          | 2.34 L    | WG        | 32 fl oz/a  | 3 lb/a         | POST        | B         |     |     |    |     |     |     |
| 5       | Valor EZ             | 4 L       |           | 2 fl oz/a   |                | PRE         | A         | 95  | 100 | 9  | 99  | 100 | 100 |
|         | Perpetuo             | 2.3 L     |           | 6 fl oz/a   |                | POST        | B         |     |     |    |     |     |     |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 32 fl oz/a  | 17 lb/100 gal  | POST        | B         |     |     |    |     |     |     |
| 6       | Boundary             | 6.5 L     |           | 2 pt/a      |                | PRE         | A         | 100 | 100 | 12 | 100 | 100 | 100 |
|         | Prefix               | 5.29 L    |           | 2 pt/a      |                | POST        | B         |     |     |    |     |     |     |
|         | Liberty AMS          | 2.34 L    | WG        | 32 fl oz/a  | 8.5 lb/100 gal | POST        | B         |     |     |    |     |     |     |
| 7       | Authority XL         | 70 WG     |           | 4 oz/a      |                | PRE         | A         | 98  | 100 | 1  | 100 | 100 | 100 |
|         | Enlist One           | 3.8 L     |           | 32 fl oz/a  |                | POST        | B         |     |     |    |     |     |     |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 22 fl oz/a  | 17 lb/100 gal  | POST        | B         |     |     |    |     |     |     |
| 8       | Untreated            |           |           |             |                |             |           | 0   | 0   | 0  | 0   | 0   | 0   |
| 9       | Sonic                | 70 WG     |           | 4.5 oz/a    |                | PRE         | A         | 100 | 100 | 9  | 100 | 100 | 100 |
|         | EverpreX             | 7.62 L    |           | 1 pt/a      |                | POST        | B         |     |     |    |     |     |     |
|         | Enlist One           | 3.8 L     |           | 32 fl oz/a  |                | POST        | B         |     |     |    |     |     |     |
|         | Durango DMA AMS      | 4 SL      | WG        | 32 fl oz/a  | 17 lb/100 gal  | POST        | B         |     |     |    |     |     |     |
| 10      | Zidua PRO            | 4.09 L    |           | 4.5 fl oz/a |                | PRE         | A         | 98  | 100 | 3  | 99  | 100 | 100 |
|         | Liberty              | 2.34 L    |           | 32 fl oz/a  |                | POST        | B         |     |     |    |     |     |     |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 32 fl oz/a  | 3 lb/a         | POST        | B         |     |     |    |     |     |     |
| 11      | Prefix               | 5.29 L    |           | 2 pt/a      |                | PRE         | A         | 100 | 100 | 4  | 100 | 100 | 100 |
|         | Metribuzin           | 75 WG     |           | 6 oz/a      |                | PRE         | A         |     |     |    |     |     |     |
|         | Sequence             | 5.25 L    |           | 3.5 pt/a    |                | POST        | B         |     |     |    |     |     |     |
|         | Liberty AMS          | 2.34 L    | WG        | 32 fl oz/a  | 8.5 lb/100 gal | POST        | B         |     |     |    |     |     |     |
| 12      | Fierce EZ            | 3.04 L    |           | 6 fl oz/a   |                | PRE         | A         | 100 | 100 | 10 | 100 | 100 | 100 |
|         | Perpetuo             | 2.3 L     |           | 6 fl oz/a   |                | POST        | B         |     |     |    |     |     |     |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 32 fl oz/a  | 17 lb/100 gal  | POST        | B         |     |     |    |     |     |     |
| 13      | Warrant              | 3 L       |           | 3 pt/a      |                | PRE         | A         | 97  | 100 | 0  | 100 | 100 | 100 |
|         | Metribuzin           | 75 WG     |           | 5 oz/a      |                | PRE         | A         |     |     |    |     |     |     |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 32 fl oz/a  | 17 lb/100 gal  | POST        | B         |     |     |    |     |     |     |
| 14      | Authority Edge       | 4.25 L    |           | 8 fl oz/a   |                | PRE         | A         | 96  | 100 | 1  | 100 | 100 | 100 |
|         | Enlist One           | 3.8 L     |           | 32 fl oz/a  |                | POST        | B         |     |     |    |     |     |     |
|         | Roundup PowerMax AMS | 4.5 SL    | WG        | 22 fl oz/a  | 17 lb/100 gal  | POST        | B         |     |     |    |     |     |     |

Could not calculate LSD (% mean diff) for columns 4,17,18,24,31 because error mean square = 0.

Economic comparisons of commercial weed control programs in soybean

Trial ID: SOY02-20 Location: Campus, T-10 Trial Year: 2020  
 Protocol ID: SOY02-20 Investigator (Creator): Christy Sprague  
 Project ID: Study Director: Sprague, Powell, Stiles  
 Sponsor Contact:

| Pest Code          | AMBEL       | ABUTH       | C GLXMA    | ANGR       | CHEAL      | AMAPO      |
|--------------------|-------------|-------------|------------|------------|------------|------------|
| Crop Type, Code    |             |             |            |            |            |            |
| Rating Date        | Jun-29-2020 | Jun-29-2020 | Jul-6-2020 | Jul-6-2020 | Jul-6-2020 | Jul-6-2020 |
| Rating Type        | control     | control     | injury     | control    | control    | control    |
| Rating Unit        | percent     | percent     | percent    | percent    | percent    | percent    |
| Trt-Eval Interval  | 7 DA-B      | 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     | Form Conc | Form Type | Rate Rate Unit | Appl Timing | Appl Code |      |      |       |      |      |     |
|---------|--------------------|-----------|-----------|----------------|-------------|-----------|------|------|-------|------|------|-----|
| 15      | Verdict            | 5.57      | L         | 5 fl oz/a      | PRE         | A         | 100  | 100  | 4     | 100  | 100  | 100 |
|         | Metribuzin         | 75        | WG        | 5 oz/a         | PRE         | A         |      |      |       |      |      |     |
|         | Liberty            | 2.34      | L         | 32 fl oz/a     | POST        | B         |      |      |       |      |      |     |
|         | Roundup PowerMax   | 4.5       | SL        | 32 fl oz/a     | POST        | B         |      |      |       |      |      |     |
|         | AMS                |           | WG        | 3 lb/a         | POST        | B         |      |      |       |      |      |     |
| 16      | Trivence           | 61.3      | WG        | 6 oz/a         | PRE         | A         | 100  | 100  | 4     | 100  | 100  | 100 |
|         | Enlist One         | 3.8       | L         | 32 fl oz/a     | POST        | B         |      |      |       |      |      |     |
|         | Liberty            | 2.34      | L         | 36 fl oz/a     | POST        | B         |      |      |       |      |      |     |
|         | Durango DMA        | 4         | SL        | 32 fl oz/a     | POST        | B         |      |      |       |      |      |     |
|         | AMS                |           | WG        | 17 lb/100 gal  | POST        | B         |      |      |       |      |      |     |
| 17      | Prefix             | 5.29      | L         | 2 pt/a         | PRE         | A         | 100  | 100  | 10    | 100  | 100  | 100 |
|         | FirstRate          | 84        | WG        | 0.5 oz/a       | PRE         | A         |      |      |       |      |      |     |
|         | Sequence           | 5.25      | L         | 3.5 pt/a       | POST        | B         |      |      |       |      |      |     |
|         | Liberty            | 2.34      | L         | 32 fl oz/a     | POST        | B         |      |      |       |      |      |     |
|         | AMS                |           | WG        | 8.5 lb/100 gal | POST        | B         |      |      |       |      |      |     |
| 18      | Fierce MTZ         | 2.64      | L         | 1 pt/a         | PRE         | A         | 100  | 100  | 16    | 100  | 100  | 100 |
|         | Perpetuo           | 2.3       | L         | 6 fl oz/a      | POST        | B         |      |      |       |      |      |     |
|         | Roundup PowerMax   | 4.5       | SL        | 32 fl oz/a     | POST        | B         |      |      |       |      |      |     |
|         | AMS                |           | WG        | 17 lb/100 gal  | POST        | B         |      |      |       |      |      |     |
| 19      | Warrant Ultra      | 3.45      | L         | 50 fl oz/a     | PRE         | A         | 100  | 99   | 0     | 100  | 100  | 100 |
|         | Roundup PowerMax   | 4.5       | SL        | 32 fl oz/a     | POST        | B         |      |      |       |      |      |     |
|         | AMS                |           | WG        | 17 lb/100 gal  | POST        | B         |      |      |       |      |      |     |
| 20      | Authority Elite    | 7         | L         | 26 fl oz/a     | PRE         | A         | 100  | 100  | 0     | 100  | 100  | 100 |
|         | Metribuzin         | 75        | WG        | 6 oz/a         | PRE         | A         |      |      |       |      |      |     |
|         | Enlist One         | 3.8       | SL        | 32 fl oz/a     | POST        | B         |      |      |       |      |      |     |
|         | Roundup PowerMax   | 4.5       | SL        | 22 fl oz/a     | POST        | B         |      |      |       |      |      |     |
|         | AMS                |           | WG        | 17 lb/100 gal  | POST        | B         |      |      |       |      |      |     |
|         | LSD P=.05          |           |           |                |             |           | 4.3  | 4.4  | 3.9   | 2.0  | 0.8  | .   |
|         | Standard Deviation |           |           |                |             |           | 3.1  | 3.1  | 2.8   | 1.4  | 0.6  | 0.0 |
|         | CV                 |           |           |                |             |           | 3.31 | 3.28 | 65.81 | 1.49 | 0.59 | 0.0 |

Could not calculate LSD (% mean diff) for columns 4,17,18,24,31 because error mean square = 0.

Economic comparisons of commercial weed control programs in soybean

Trial ID: SOY02-20

Location: Campus, T-10

Trial Year: 2020

Protocol ID: SOY02-20

Investigator (Creator): Christy Sprague

Project ID:

Study Director: Sprague, Powell, Stiles

Sponsor Contact:

| Pest Code          | AMBEL      | SINAR      | ABUTH      | C GLXMA     | ANGR        | CHEAL       |
|--------------------|------------|------------|------------|-------------|-------------|-------------|
| Crop Type, Code    | Jul-6-2020 | Jul-6-2020 | Jul-6-2020 | Jul-20-2020 | Jul-20-2020 | Jul-20-2020 |
| Rating Date        | control    | control    | control    | injury      | control     | control     |
| Rating Type        | percent    | percent    | percent    | percent     | percent     | percent     |
| Rating Unit        | 14 DA-B    | 14 DA-B    | 14 DA-B    | 28 DA-B     | 28 DA-B     | 28 DA-B     |
| Trt-Eval Interval  | 0          | 0          | 0          | 0           | 0           | 0           |
| Number of Decimals |            |            |            |             |             |             |

| Trt No. | Treatment Name   | Form Conc | Form Type | Rate Rate Unit | Appl Timing | Appl Code |     |     |     |   |     |     |
|---------|------------------|-----------|-----------|----------------|-------------|-----------|-----|-----|-----|---|-----|-----|
| 1       | Roundup PowerMax | 4.5       | SL        | 32 fl oz/a     | POST        | B         | 93  | 100 | 95  | 0 | 84  | 91  |
|         | AMS              |           | WG        | 17 lb/100 gal  | POST        | B         |     |     |     |   |     |     |
| 2       | Warrant          | 3         | L         | 2 pt/a         | PRE         | A         | 82  | 99  | 100 | 0 | 97  | 99  |
|         | Roundup PowerMax | 4.5       | SL        | 32 fl oz/a     | POST        | B         |     |     |     |   |     |     |
|         | AMS              |           | WG        | 17 lb/100 gal  | POST        | B         |     |     |     |   |     |     |
| 3       | Sonic            | 70        | WG        | 4.5 oz/a       | PRE         | A         | 95  | 100 | 100 | 1 | 99  | 100 |
|         | Enlist One       | 3.8       | L         | 32 fl oz/a     | POST        | B         |     |     |     |   |     |     |
|         | Durango DMA      | 4         | SL        | 32 fl oz/a     | POST        | B         |     |     |     |   |     |     |
|         | AMS              |           | WG        | 17 lb/100 gal  | POST        | B         |     |     |     |   |     |     |
| 4       | Zidua PRO        | 4.09      | L         | 4.5 fl oz/a    | PRE         | A         | 96  | 100 | 100 | 0 | 99  | 100 |
|         | Liberty          | 2.34      | L         | 32 fl oz/a     | POST        | B         |     |     |     |   |     |     |
|         | AMS              |           | WG        | 3 lb/a         | POST        | B         |     |     |     |   |     |     |
| 5       | Valor EZ         | 4         | L         | 2 fl oz/a      | PRE         | A         | 96  | 100 | 100 | 0 | 99  | 100 |
|         | Perpetuo         | 2.3       | L         | 6 fl oz/a      | POST        | B         |     |     |     |   |     |     |
|         | Roundup PowerMax | 4.5       | SL        | 32 fl oz/a     | POST        | B         |     |     |     |   |     |     |
|         | AMS              |           | WG        | 17 lb/100 gal  | POST        | B         |     |     |     |   |     |     |
| 6       | Boundary         | 6.5       | L         | 2 pt/a         | PRE         | A         | 97  | 100 | 100 | 0 | 100 | 100 |
|         | Prefix           | 5.29      | L         | 2 pt/a         | POST        | B         |     |     |     |   |     |     |
|         | Liberty          | 2.34      | L         | 32 fl oz/a     | POST        | B         |     |     |     |   |     |     |
|         | AMS              |           | WG        | 8.5 lb/100 gal | POST        | B         |     |     |     |   |     |     |
| 7       | Authority XL     | 70        | WG        | 4 oz/a         | PRE         | A         | 100 | 100 | 100 | 1 | 100 | 100 |
|         | Enlist One       | 3.8       | SL        | 32 fl oz/a     | POST        | B         |     |     |     |   |     |     |
|         | Roundup PowerMax | 4.5       | SL        | 22 fl oz/a     | POST        | B         |     |     |     |   |     |     |
|         | AMS              |           | WG        | 17 lb/100 gal  | POST        | B         |     |     |     |   |     |     |
| 8       | Untreated        |           |           |                |             |           | 0   | 0   | 0   | 0 | 0   | 0   |
| 9       | Sonic            | 70        | WG        | 4.5 oz/a       | PRE         | A         | 100 | 100 | 100 | 0 | 100 | 100 |
|         | EverpreX         | 7.62      | L         | 1 pt/a         | POST        | B         |     |     |     |   |     |     |
|         | Enlist One       | 3.8       | L         | 32 fl oz/a     | POST        | B         |     |     |     |   |     |     |
|         | Durango DMA      | 4         | SL        | 32 fl oz/a     | POST        | B         |     |     |     |   |     |     |
|         | AMS              |           | WG        | 17 lb/100 gal  | POST        | B         |     |     |     |   |     |     |
| 10      | Zidua PRO        | 4.09      | L         | 4.5 fl oz/a    | PRE         | A         | 98  | 100 | 100 | 0 | 100 | 100 |
|         | Liberty          | 2.34      | L         | 32 fl oz/a     | POST        | B         |     |     |     |   |     |     |
|         | Roundup PowerMax | 4.5       | SL        | 32 fl oz/a     | POST        | B         |     |     |     |   |     |     |
|         | AMS              |           | WG        | 3 lb/a         | POST        | B         |     |     |     |   |     |     |
| 11      | Prefix           | 5.29      | L         | 2 pt/a         | PRE         | A         | 100 | 100 | 100 | 0 | 100 | 100 |
|         | Metribuzin       | 75        | WG        | 6 oz/a         | PRE         | A         |     |     |     |   |     |     |
|         | Sequence         | 5.25      | L         | 3.5 pt/a       | POST        | B         |     |     |     |   |     |     |
|         | Liberty          | 2.34      | L         | 32 fl oz/a     | POST        | B         |     |     |     |   |     |     |
|         | AMS              |           | WG        | 8.5 lb/100 gal | POST        | B         |     |     |     |   |     |     |
| 12      | Fierce EZ        | 3.04      | L         | 6 fl oz/a      | PRE         | A         | 96  | 100 | 100 | 2 | 100 | 100 |
|         | Perpetuo         | 2.3       | L         | 6 fl oz/a      | POST        | B         |     |     |     |   |     |     |
|         | Roundup PowerMax | 4.5       | SL        | 32 fl oz/a     | POST        | B         |     |     |     |   |     |     |
|         | AMS              |           | WG        | 17 lb/100 gal  | POST        | B         |     |     |     |   |     |     |
| 13      | Warrant          | 3         | L         | 3 pt/a         | PRE         | A         | 98  | 100 | 100 | 0 | 100 | 100 |
|         | Metribuzin       | 75        | WG        | 5 oz/a         | PRE         | A         |     |     |     |   |     |     |
|         | Roundup PowerMax | 4.5       | SL        | 32 fl oz/a     | POST        | B         |     |     |     |   |     |     |
|         | AMS              |           | WG        | 17 lb/100 gal  | POST        | B         |     |     |     |   |     |     |
| 14      | Authority Edge   | 4.25      | L         | 8 fl oz/a      | PRE         | A         | 100 | 100 | 100 | 0 | 100 | 100 |
|         | Enlist One       | 3.8       | SL        | 32 fl oz/a     | POST        | B         |     |     |     |   |     |     |
|         | Roundup PowerMax | 4.5       | SL        | 22 fl oz/a     | POST        | B         |     |     |     |   |     |     |
|         | AMS              |           | WG        | 17 lb/100 gal  | POST        | B         |     |     |     |   |     |     |

Could not calculate LSD (% mean diff) for columns 4,17,18,24,31 because error mean square = 0.

Economic comparisons of commercial weed control programs in soybean

Trial ID: SOY02-20 Location: Campus, T-10 Trial Year: 2020  
 Protocol ID: SOY02-20 Investigator (Creator): Christy Sprague  
 Project ID: Study Director: Sprague, Powell, Stiles  
 Sponsor Contact:

| Pest Code          | AMBEL      | SINAR      | ABUTH      | C GLXMA     | ANGR        | CHEAL       |
|--------------------|------------|------------|------------|-------------|-------------|-------------|
| Crop Type, Code    |            |            |            |             |             |             |
| Rating Date        | Jul-6-2020 | Jul-6-2020 | Jul-6-2020 | Jul-20-2020 | Jul-20-2020 | Jul-20-2020 |
| Rating Type        | control    | control    | control    | injury      | control     | control     |
| Rating Unit        | percent    | percent    | percent    | percent     | percent     | percent     |
| Trt-Eval Interval  | 14 DA-B    | 14 DA-B    | 14 DA-B    | 28 DA-B     | 28 DA-B     | 28 DA-B     |
| Number of Decimals | 0          | 0          | 0          | 0           | 0           | 0           |

| Trt No. | Treatment Name     | Form Conc | Form Type | Rate Rate Unit | Appl Timing | Appl Code |      |      |      |        |      |      |
|---------|--------------------|-----------|-----------|----------------|-------------|-----------|------|------|------|--------|------|------|
| 15      | Verdict            | 5.57      | L         | 5 fl oz/a      | PRE         | A         | 100  | 100  | 100  | 1      | 97   | 100  |
|         | Metribuzin         | 75        | WG        | 5 oz/a         | PRE         | A         |      |      |      |        |      |      |
|         | Liberty            | 2.34      | L         | 32 fl oz/a     | POST        | B         |      |      |      |        |      |      |
|         | Roundup PowerMax   | 4.5       | SL        | 32 fl oz/a     | POST        | B         |      |      |      |        |      |      |
|         | AMS                |           | WG        | 3 lb/a         | POST        | B         |      |      |      |        |      |      |
| 16      | Trivence           | 61.3      | WG        | 6 oz/a         | PRE         | A         | 100  | 100  | 100  | 0      | 100  | 100  |
|         | Enlist One         | 3.8       | L         | 32 fl oz/a     | POST        | B         |      |      |      |        |      |      |
|         | Liberty            | 2.34      | L         | 36 fl oz/a     | POST        | B         |      |      |      |        |      |      |
|         | Durango DMA        | 4         | SL        | 32 fl oz/a     | POST        | B         |      |      |      |        |      |      |
|         | AMS                |           | WG        | 17 lb/100 gal  | POST        | B         |      |      |      |        |      |      |
| 17      | Prefix             | 5.29      | L         | 2 pt/a         | PRE         | A         | 100  | 100  | 100  | 0      | 99   | 100  |
|         | FirstRate          | 84        | WG        | 0.5 oz/a       | PRE         | A         |      |      |      |        |      |      |
|         | Sequence           | 5.25      | L         | 3.5 pt/a       | POST        | B         |      |      |      |        |      |      |
|         | Liberty            | 2.34      | L         | 32 fl oz/a     | POST        | B         |      |      |      |        |      |      |
|         | AMS                |           | WG        | 8.5 lb/100 gal | POST        | B         |      |      |      |        |      |      |
| 18      | Fierce MTZ         | 2.64      | L         | 1 pt/a         | PRE         | A         | 100  | 100  | 100  | 2      | 100  | 100  |
|         | Perpetuo           | 2.3       | L         | 6 fl oz/a      | POST        | B         |      |      |      |        |      |      |
|         | Roundup PowerMax   | 4.5       | SL        | 32 fl oz/a     | POST        | B         |      |      |      |        |      |      |
|         | AMS                |           | WG        | 17 lb/100 gal  | POST        | B         |      |      |      |        |      |      |
| 19      | Warrant Ultra      | 3.45      | L         | 50 fl oz/a     | PRE         | A         | 100  | 100  | 100  | 0      | 100  | 100  |
|         | Roundup PowerMax   | 4.5       | SL        | 32 fl oz/a     | POST        | B         |      |      |      |        |      |      |
|         | AMS                |           | WG        | 17 lb/100 gal  | POST        | B         |      |      |      |        |      |      |
| 20      | Authority Elite    | 7         | L         | 26 fl oz/a     | PRE         | A         | 94   | 100  | 100  | 0      | 100  | 100  |
|         | Metribuzin         | 75        | WG        | 6 oz/a         | PRE         | A         |      |      |      |        |      |      |
|         | Enlist One         | 3.8       | SL        | 32 fl oz/a     | POST        | B         |      |      |      |        |      |      |
|         | Roundup PowerMax   | 4.5       | SL        | 22 fl oz/a     | POST        | B         |      |      |      |        |      |      |
|         | AMS                |           | WG        | 17 lb/100 gal  | POST        | B         |      |      |      |        |      |      |
|         | LSD P=.05          |           |           |                |             |           | 7.2  | 0.8  | 3.2  | 1.3    | 2.6  | 3.4  |
|         | Standard Deviation |           |           |                |             |           | 5.1  | 0.6  | 2.3  | 0.9    | 1.8  | 2.4  |
|         | CV                 |           |           |                |             |           | 5.52 | 0.59 | 2.38 | 310.24 | 1.95 | 2.51 |

Could not calculate LSD (% mean diff) for columns 4,17,18,24,31 because error mean square = 0.

Economic comparisons of commercial weed control programs in soybean

Trial ID: SOY02-20

Location: Campus, T-10

Trial Year: 2020

Protocol ID: SOY02-20

Investigator (Creator): Christy Sprague

Project ID:

Study Director: Sprague, Powell, Stiles

Sponsor Contact:

| Pest Code          | AMAPO       | AMBEL       | SINAR       | ABUTH       | ANGR        | CHEAL       |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Crop Type, Code    |             |             |             |             |             |             |
| Rating Date        | Jul-20-2020 | Jul-20-2020 | Jul-20-2020 | Jul-20-2020 | Oct-14-2020 | Oct-14-2020 |
| Rating Type        | control     | control     | control     | control     | control     | control     |
| Rating Unit        | percent     | percent     | percent     | percent     | percent     | percent     |
| Trt-Eval Interval  | 28 DA-B     | 28 DA-B     | 28 DA-B     | 28 DA-B     | 114 DA-B    | 114 DA-B    |
| Number of Decimals | 0           | 0           | 0           | 0           | 0           | 0           |

| Trt No. | Treatment Name   | Form Conc | Form Type | Rate Unit      | Rate | Appl Timing | Appl Code | AMAPO | AMBEL | SINAR | ABUTH | ANGR | CHEAL |
|---------|------------------|-----------|-----------|----------------|------|-------------|-----------|-------|-------|-------|-------|------|-------|
| 1       | Roundup PowerMax | 4.5       | SL        | 32 fl oz/a     |      | POST        | B         | 100   | 84    | 100   | 94    | 85   | 93    |
|         | AMS              |           | WG        | 17 lb/100 gal  |      | POST        | B         |       |       |       |       |      |       |
| 2       | Warrant          | 3         | L         | 2 pt/a         |      | PRE         | A         | 100   | 86    | 98    | 100   | 93   | 95    |
|         | Roundup PowerMax | 4.5       | SL        | 32 fl oz/a     |      | POST        | B         |       |       |       |       |      |       |
|         | AMS              |           | WG        | 17 lb/100 gal  |      | POST        | B         |       |       |       |       |      |       |
| 3       | Sonic            | 70        | WG        | 4.5 oz/a       |      | PRE         | A         | 100   | 100   | 100   | 100   | 100  | 100   |
|         | Enlist One       | 3.8       | L         | 32 fl oz/a     |      | POST        | B         |       |       |       |       |      |       |
|         | Durango DMA      | 4         | SL        | 32 fl oz/a     |      | POST        | B         |       |       |       |       |      |       |
|         | AMS              |           | WG        | 17 lb/100 gal  |      | POST        | B         |       |       |       |       |      |       |
| 4       | Zidua PRO        | 4.09      | L         | 4.5 fl oz/a    |      | PRE         | A         | 100   | 99    | 100   | 100   | 98   | 99    |
|         | Liberty          | 2.34      | L         | 32 fl oz/a     |      | POST        | B         |       |       |       |       |      |       |
|         | AMS              |           | WG        | 3 lb/a         |      | POST        | B         |       |       |       |       |      |       |
| 5       | Valor EZ         | 4         | L         | 2 fl oz/a      |      | PRE         | A         | 100   | 98    | 100   | 100   | 100  | 100   |
|         | Perpetuo         | 2.3       | L         | 6 fl oz/a      |      | POST        | B         |       |       |       |       |      |       |
|         | Roundup PowerMax | 4.5       | SL        | 32 fl oz/a     |      | POST        | B         |       |       |       |       |      |       |
|         | AMS              |           | WG        | 17 lb/100 gal  |      | POST        | B         |       |       |       |       |      |       |
| 6       | Boundary         | 6.5       | L         | 2 pt/a         |      | PRE         | A         | 100   | 99    | 100   | 100   | 98   | 97    |
|         | Prefix           | 5.29      | L         | 2 pt/a         |      | POST        | B         |       |       |       |       |      |       |
|         | Liberty          | 2.34      | L         | 32 fl oz/a     |      | POST        | B         |       |       |       |       |      |       |
|         | AMS              |           | WG        | 8.5 lb/100 gal |      | POST        | B         |       |       |       |       |      |       |
| 7       | Authority XL     | 70        | WG        | 4 oz/a         |      | PRE         | A         | 100   | 100   | 100   | 100   | 99   | 100   |
|         | Enlist One       | 3.8       | SL        | 32 fl oz/a     |      | POST        | B         |       |       |       |       |      |       |
|         | Roundup PowerMax | 4.5       | SL        | 22 fl oz/a     |      | POST        | B         |       |       |       |       |      |       |
|         | AMS              |           | WG        | 17 lb/100 gal  |      | POST        | B         |       |       |       |       |      |       |
| 8       | Untreated        |           |           |                |      |             |           | 0     | 0     | 0     | 0     | 0    | 0     |
| 9       | Sonic            | 70        | WG        | 4.5 oz/a       |      | PRE         | A         | 100   | 100   | 100   | 100   | 100  | 100   |
|         | EverpreX         | 7.62      | L         | 1 pt/a         |      | POST        | B         |       |       |       |       |      |       |
|         | Enlist One       | 3.8       | L         | 32 fl oz/a     |      | POST        | B         |       |       |       |       |      |       |
|         | Durango DMA      | 4         | SL        | 32 fl oz/a     |      | POST        | B         |       |       |       |       |      |       |
|         | AMS              |           | WG        | 17 lb/100 gal  |      | POST        | B         |       |       |       |       |      |       |
| 10      | Zidua PRO        | 4.09      | L         | 4.5 fl oz/a    |      | PRE         | A         | 100   | 99    | 100   | 100   | 98   | 100   |
|         | Liberty          | 2.34      | L         | 32 fl oz/a     |      | POST        | B         |       |       |       |       |      |       |
|         | Roundup PowerMax | 4.5       | SL        | 32 fl oz/a     |      | POST        | B         |       |       |       |       |      |       |
|         | AMS              |           | WG        | 3 lb/a         |      | POST        | B         |       |       |       |       |      |       |
| 11      | Prefix           | 5.29      | L         | 2 pt/a         |      | PRE         | A         | 100   | 100   | 100   | 100   | 93   | 95    |
|         | Metribuzin       | 75        | WG        | 6 oz/a         |      | PRE         | A         |       |       |       |       |      |       |
|         | Sequence         | 5.25      | L         | 3.5 pt/a       |      | POST        | B         |       |       |       |       |      |       |
|         | Liberty          | 2.34      | L         | 32 fl oz/a     |      | POST        | B         |       |       |       |       |      |       |
|         | AMS              |           | WG        | 8.5 lb/100 gal |      | POST        | B         |       |       |       |       |      |       |
| 12      | Fierce EZ        | 3.04      | L         | 6 fl oz/a      |      | PRE         | A         | 100   | 100   | 100   | 100   | 100  | 100   |
|         | Perpetuo         | 2.3       | L         | 6 fl oz/a      |      | POST        | B         |       |       |       |       |      |       |
|         | Roundup PowerMax | 4.5       | SL        | 32 fl oz/a     |      | POST        | B         |       |       |       |       |      |       |
|         | AMS              |           | WG        | 17 lb/100 gal  |      | POST        | B         |       |       |       |       |      |       |
| 13      | Warrant          | 3         | L         | 3 pt/a         |      | PRE         | A         | 100   | 100   | 100   | 100   | 99   | 96    |
|         | Metribuzin       | 75        | WG        | 5 oz/a         |      | PRE         | A         |       |       |       |       |      |       |
|         | Roundup PowerMax | 4.5       | SL        | 32 fl oz/a     |      | POST        | B         |       |       |       |       |      |       |
|         | AMS              |           | WG        | 17 lb/100 gal  |      | POST        | B         |       |       |       |       |      |       |
| 14      | Authority Edge   | 4.25      | L         | 8 fl oz/a      |      | PRE         | A         | 100   | 100   | 100   | 100   | 100  | 100   |
|         | Enlist One       | 3.8       | SL        | 32 fl oz/a     |      | POST        | B         |       |       |       |       |      |       |
|         | Roundup PowerMax | 4.5       | SL        | 22 fl oz/a     |      | POST        | B         |       |       |       |       |      |       |
|         | AMS              |           | WG        | 17 lb/100 gal  |      | POST        | B         |       |       |       |       |      |       |

Could not calculate LSD (% mean diff) for columns 4,17,18,24,31 because error mean square = 0.

Economic comparisons of commercial weed control programs in soybean

Trial ID: SOY02-20

Location: Campus, T-10

Trial Year: 2020

Protocol ID: SOY02-20

Investigator (Creator): Christy Sprague

Project ID:

Study Director: Sprague, Powell, Stiles

Sponsor Contact:

| Pest Code          |                    | AMAPO       | AMBEL       | SINAR          | ABUTH       | ANGR        | CHEAL       |      |      |      |     |      |
|--------------------|--------------------|-------------|-------------|----------------|-------------|-------------|-------------|------|------|------|-----|------|
| Crop Type, Code    |                    |             |             |                |             |             |             |      |      |      |     |      |
| Rating Date        |                    | Jul-20-2020 | Jul-20-2020 | Jul-20-2020    | Jul-20-2020 | Oct-14-2020 | Oct-14-2020 |      |      |      |     |      |
| Rating Type        |                    | control     | control     | control        | control     | control     | control     |      |      |      |     |      |
| Rating Unit        |                    | percent     | percent     | percent        | percent     | percent     | percent     |      |      |      |     |      |
| Trt-Eval Interval  |                    | 28 DA-B     | 28 DA-B     | 28 DA-B        | 28 DA-B     | 114 DA-B    | 114 DA-B    |      |      |      |     |      |
| Number of Decimals |                    | 0           | 0           | 0              | 0           | 0           | 0           |      |      |      |     |      |
| Trt No.            | Treatment Name     | Form Conc   | Form Type   | Rate Rate Unit | Appl Timing | Appl Code   |             |      |      |      |     |      |
| 15                 | Verdict            | 5.57        | L           | 5 fl oz/a      | PRE         | A           | 100         | 100  | 100  | 100  | 88  | 96   |
|                    | Metribuzin         | 75          | WG          | 5 oz/a         | PRE         | A           |             |      |      |      |     |      |
|                    | Liberty            | 2.34        | L           | 32 fl oz/a     | POST        | B           |             |      |      |      |     |      |
|                    | Roundup PowerMax   | 4.5         | SL          | 32 fl oz/a     | POST        | B           |             |      |      |      |     |      |
|                    | AMS                |             | WG          | 3 lb/a         | POST        | B           |             |      |      |      |     |      |
| 16                 | Trivence           | 61.3        | WG          | 6 oz/a         | PRE         | A           | 100         | 100  | 100  | 100  | 100 | 100  |
|                    | Enlist One         | 3.8         | L           | 32 fl oz/a     | POST        | B           |             |      |      |      |     |      |
|                    | Liberty            | 2.34        | L           | 36 fl oz/a     | POST        | B           |             |      |      |      |     |      |
|                    | Durango DMA        | 4           | SL          | 32 fl oz/a     | POST        | B           |             |      |      |      |     |      |
|                    | AMS                |             | WG          | 17 lb/100 gal  | POST        | B           |             |      |      |      |     |      |
| 17                 | Prefix             | 5.29        | L           | 2 pt/a         | PRE         | A           | 100         | 100  | 100  | 100  | 100 | 100  |
|                    | FirstRate          | 84          | WG          | 0.5 oz/a       | PRE         | A           |             |      |      |      |     |      |
|                    | Sequence           | 5.25        | L           | 3.5 pt/a       | POST        | B           |             |      |      |      |     |      |
|                    | Liberty            | 2.34        | L           | 32 fl oz/a     | POST        | B           |             |      |      |      |     |      |
|                    | AMS                |             | WG          | 8.5 lb/100 gal | POST        | B           |             |      |      |      |     |      |
| 18                 | Fierce MTZ         | 2.64        | L           | 1 pt/a         | PRE         | A           | 100         | 100  | 100  | 100  | 100 | 100  |
|                    | Perpetuo           | 2.3         | L           | 6 fl oz/a      | POST        | B           |             |      |      |      |     |      |
|                    | Roundup PowerMax   | 4.5         | SL          | 32 fl oz/a     | POST        | B           |             |      |      |      |     |      |
|                    | AMS                |             | WG          | 17 lb/100 gal  | POST        | B           |             |      |      |      |     |      |
| 19                 | Warrant Ultra      | 3.45        | L           | 50 fl oz/a     | PRE         | A           | 100         | 100  | 100  | 100  | 98  | 100  |
|                    | Roundup PowerMax   | 4.5         | SL          | 32 fl oz/a     | POST        | B           |             |      |      |      |     |      |
|                    | AMS                |             | WG          | 17 lb/100 gal  | POST        | B           |             |      |      |      |     |      |
| 20                 | Authority Elite    | 7           | L           | 26 fl oz/a     | PRE         | A           | 100         | 100  | 100  | 100  | 100 | 100  |
|                    | Metribuzin         | 75          | WG          | 6 oz/a         | PRE         | A           |             |      |      |      |     |      |
|                    | Enlist One         | 3.8         | SL          | 32 fl oz/a     | POST        | B           |             |      |      |      |     |      |
|                    | Roundup PowerMax   | 4.5         | SL          | 22 fl oz/a     | POST        | B           |             |      |      |      |     |      |
|                    | AMS                |             | WG          | 17 lb/100 gal  | POST        | B           |             |      |      |      |     |      |
|                    | LSD P=.05          |             |             |                |             |             |             | 3.5  | 1.6  | 2.4  | 5.9 | 6.0  |
|                    | Standard Deviation |             |             |                |             |             | 0.0         | 2.5  | 1.1  | 1.7  | 4.2 | 4.2  |
|                    | CV                 |             |             |                |             |             | 0.0         | 2.64 | 1.19 | 1.79 | 4.5 | 4.53 |

## Economic comparisons of commercial weed control programs in soybean

Trial ID: SOY02-20

Location: Campus, T-10

Trial Year: 2020

Protocol ID: SOY02-20

Investigator (Creator): Christy Sprague

Project ID:

Study Director: Sprague, Powell, Stiles

Sponsor Contact:

| Pest Code          | AMAPO       | AMBEL       | ABUTH       | SINAR       | C GLXMA     | C GLXMA     |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Crop Type, Code    |             |             |             |             | Oct-14-2020 | Oct-14-2020 |
| Rating Date        | Oct-14-2020 | Oct-14-2020 | Oct-14-2020 | Oct-14-2020 | Oct-14-2020 | Oct-14-2020 |
| Rating Type        | control     | control     | control     | control     | moisture    | yield       |
| Rating Unit        | percent     | percent     | percent     | percent     | percent     | bu/acre     |
| Trt-Eval Interval  | 114 DA-B    | 114 DA-B    | 114 DA-B    | 114 DA-B    | 114 DA-B    | at 13% M    |
| Number of Decimals | 0           | 0           | 0           | 0           | 1           | 1           |

| Trt No. | Treatment Name   | Form Conc | Form Type | Rate Rate Unit | Appl Timing | Appl Code |     |     |     |     |      |      |
|---------|------------------|-----------|-----------|----------------|-------------|-----------|-----|-----|-----|-----|------|------|
| 1       | Roundup PowerMax | 4.5       | SL        | 32 fl oz/a     | POST        | B         | 95  | 85  | 100 | 100 | 14.4 | 50.2 |
|         | AMS              |           | WG        | 17 lb/100 gal  | POST        | B         |     |     |     |     |      |      |
| 2       | Warrant          | 3         | L         | 2 pt/a         | PRE         | A         | 100 | 83  | 97  | 99  | 15.0 | 50.0 |
|         | Roundup PowerMax | 4.5       | SL        | 32 fl oz/a     | POST        | B         |     |     |     |     |      |      |
|         | AMS              |           | WG        | 17 lb/100 gal  | POST        | B         |     |     |     |     |      |      |
| 3       | Sonic            | 70        | WG        | 4.5 oz/a       | PRE         | A         | 100 | 100 | 100 | 100 | 14.8 | 51.6 |
|         | Enlist One       | 3.8       | L         | 32 fl oz/a     | POST        | B         |     |     |     |     |      |      |
|         | Durango DMA      | 4         | SL        | 32 fl oz/a     | POST        | B         |     |     |     |     |      |      |
|         | AMS              |           | WG        | 17 lb/100 gal  | POST        | B         |     |     |     |     |      |      |
| 4       | Zidua PRO        | 4.09      | L         | 4.5 fl oz/a    | PRE         | A         | 100 | 90  | 100 | 100 | 15.0 | 52.6 |
|         | Liberty          | 2.34      | L         | 32 fl oz/a     | POST        | B         |     |     |     |     |      |      |
|         | AMS              |           | WG        | 3 lb/a         | POST        | B         |     |     |     |     |      |      |
| 5       | Valor EZ         | 4         | L         | 2 fl oz/a      | PRE         | A         | 100 | 91  | 100 | 100 | 15.2 | 54.3 |
|         | Perpetuo         | 2.3       | L         | 6 fl oz/a      | POST        | B         |     |     |     |     |      |      |
|         | Roundup PowerMax | 4.5       | SL        | 32 fl oz/a     | POST        | B         |     |     |     |     |      |      |
|         | AMS              |           | WG        | 17 lb/100 gal  | POST        | B         |     |     |     |     |      |      |
| 6       | Boundary         | 6.5       | L         | 2 pt/a         | PRE         | A         | 100 | 99  | 100 | 100 | 15.0 | 54.1 |
|         | Prefix           | 5.29      | L         | 2 pt/a         | POST        | B         |     |     |     |     |      |      |
|         | Liberty          | 2.34      | L         | 32 fl oz/a     | POST        | B         |     |     |     |     |      |      |
|         | AMS              |           | WG        | 8.5 lb/100 gal | POST        | B         |     |     |     |     |      |      |
| 7       | Authority XL     | 70        | WG        | 4 oz/a         | PRE         | A         | 100 | 100 | 100 | 100 | 15.0 | 46.3 |
|         | Enlist One       | 3.8       | SL        | 32 fl oz/a     | POST        | B         |     |     |     |     |      |      |
|         | Roundup PowerMax | 4.5       | SL        | 22 fl oz/a     | POST        | B         |     |     |     |     |      |      |
|         | AMS              |           | WG        | 17 lb/100 gal  | POST        | B         |     |     |     |     |      |      |
| 8       | Untreated        |           |           |                |             |           | 0   | 0   | 0   | 0   | 18.0 | 20.6 |
| 9       | Sonic            | 70        | WG        | 4.5 oz/a       | PRE         | A         | 100 | 100 | 100 | 100 | 15.1 | 53.3 |
|         | EverpreX         | 7.62      | L         | 1 pt/a         | POST        | B         |     |     |     |     |      |      |
|         | Enlist One       | 3.8       | L         | 32 fl oz/a     | POST        | B         |     |     |     |     |      |      |
|         | Durango DMA      | 4         | SL        | 32 fl oz/a     | POST        | B         |     |     |     |     |      |      |
|         | AMS              |           | WG        | 17 lb/100 gal  | POST        | B         |     |     |     |     |      |      |
| 10      | Zidua PRO        | 4.09      | L         | 4.5 fl oz/a    | PRE         | A         | 100 | 90  | 100 | 100 | 15.2 | 50.0 |
|         | Liberty          | 2.34      | L         | 32 fl oz/a     | POST        | B         |     |     |     |     |      |      |
|         | Roundup PowerMax | 4.5       | SL        | 32 fl oz/a     | POST        | B         |     |     |     |     |      |      |
|         | AMS              |           | WG        | 3 lb/a         | POST        | B         |     |     |     |     |      |      |
| 11      | Prefix           | 5.29      | L         | 2 pt/a         | PRE         | A         | 100 | 91  | 100 | 95  | 15.2 | 46.1 |
|         | Metribuzin       | 75        | WG        | 6 oz/a         | PRE         | A         |     |     |     |     |      |      |
|         | Sequence         | 5.25      | L         | 3.5 pt/a       | POST        | B         |     |     |     |     |      |      |
|         | Liberty          | 2.34      | L         | 32 fl oz/a     | POST        | B         |     |     |     |     |      |      |
|         | AMS              |           | WG        | 8.5 lb/100 gal | POST        | B         |     |     |     |     |      |      |
| 12      | Fierce EZ        | 3.04      | L         | 6 fl oz/a      | PRE         | A         | 100 | 98  | 100 | 100 | 15.7 | 56.4 |
|         | Perpetuo         | 2.3       | L         | 6 fl oz/a      | POST        | B         |     |     |     |     |      |      |
|         | Roundup PowerMax | 4.5       | SL        | 32 fl oz/a     | POST        | B         |     |     |     |     |      |      |
|         | AMS              |           | WG        | 17 lb/100 gal  | POST        | B         |     |     |     |     |      |      |
| 13      | Warrant          | 3         | L         | 3 pt/a         | PRE         | A         | 100 | 94  | 100 | 100 | 15.5 | 52.6 |
|         | Metribuzin       | 75        | WG        | 5 oz/a         | PRE         | A         |     |     |     |     |      |      |
|         | Roundup PowerMax | 4.5       | SL        | 32 fl oz/a     | POST        | B         |     |     |     |     |      |      |
|         | AMS              |           | WG        | 17 lb/100 gal  | POST        | B         |     |     |     |     |      |      |
| 14      | Authority Edge   | 4.25      | L         | 8 fl oz/a      | PRE         | A         | 100 | 100 | 100 | 100 | 14.8 | 45.8 |
|         | Enlist One       | 3.8       | SL        | 32 fl oz/a     | POST        | B         |     |     |     |     |      |      |
|         | Roundup PowerMax | 4.5       | SL        | 22 fl oz/a     | POST        | B         |     |     |     |     |      |      |
|         | AMS              |           | WG        | 17 lb/100 gal  | POST        | B         |     |     |     |     |      |      |

Could not calculate LSD (% mean diff) for columns 4,17,18,24,31 because error mean square = 0.

Economic comparisons of commercial weed control programs in soybean

Trial ID: SOY02-20 Location: Campus, T-10 Trial Year: 2020  
 Protocol ID: SOY02-20 Investigator (Creator): Christy Sprague  
 Project ID: Study Director: Sprague, Powell, Stiles  
 Sponsor Contact:

| Pest Code          |                    | AMAPO       | AMBEL       | ABUTH          | SINAR       | C GLXMA     | C GLXMA     |      |      |     |      |       |
|--------------------|--------------------|-------------|-------------|----------------|-------------|-------------|-------------|------|------|-----|------|-------|
| Crop Type, Code    |                    | Oct-14-2020 | Oct-14-2020 | Oct-14-2020    | Oct-14-2020 | Oct-14-2020 | Oct-14-2020 |      |      |     |      |       |
| Rating Date        |                    | control     | control     | control        | control     | moisture    | yield       |      |      |     |      |       |
| Rating Type        |                    | percent     | percent     | percent        | percent     | percent     | bu/acre     |      |      |     |      |       |
| Rating Unit        |                    | 114 DA-B    | 114 DA-B    | 114 DA-B       | 114 DA-B    | 114 DA-B    | at 13% M    |      |      |     |      |       |
| Trt-Eval Interval  |                    | 0           | 0           | 0              | 0           | 1           | 1           |      |      |     |      |       |
| Number of Decimals |                    | 0           | 0           | 0              | 0           | 1           | 1           |      |      |     |      |       |
| Trt No.            | Treatment Name     | Form Conc   | Form Type   | Rate Rate Unit | Appl Timing | Appl Code   |             |      |      |     |      |       |
| 15                 | Verdict            | 5.57        | L           | 5 fl oz/a      | PRE         | A           | 99          | 94   | 100  | 100 | 14.9 | 49.3  |
|                    | Metribuzin         | 75          | WG          | 5 oz/a         | PRE         | A           |             |      |      |     |      |       |
|                    | Liberty            | 2.34        | L           | 32 fl oz/a     | POST        | B           |             |      |      |     |      |       |
|                    | Roundup PowerMax   | 4.5         | SL          | 32 fl oz/a     | POST        | B           |             |      |      |     |      |       |
|                    | AMS                |             | WG          | 3 lb/a         | POST        | B           |             |      |      |     |      |       |
| 16                 | Trivence           | 61.3        | WG          | 6 oz/a         | PRE         | A           | 100         | 100  | 100  | 100 | 14.6 | 52.1  |
|                    | Enlist One         | 3.8         | L           | 32 fl oz/a     | POST        | B           |             |      |      |     |      |       |
|                    | Liberty            | 2.34        | L           | 36 fl oz/a     | POST        | B           |             |      |      |     |      |       |
|                    | Durango DMA        | 4           | SL          | 32 fl oz/a     | POST        | B           |             |      |      |     |      |       |
|                    | AMS                |             | WG          | 17 lb/100 gal  | POST        | B           |             |      |      |     |      |       |
| 17                 | Prefix             | 5.29        | L           | 2 pt/a         | PRE         | A           | 100         | 100  | 100  | 100 | 14.3 | 53.3  |
|                    | FirstRate          | 84          | WG          | 0.5 oz/a       | PRE         | A           |             |      |      |     |      |       |
|                    | Sequence           | 5.25        | L           | 3.5 pt/a       | POST        | B           |             |      |      |     |      |       |
|                    | Liberty            | 2.34        | L           | 32 fl oz/a     | POST        | B           |             |      |      |     |      |       |
|                    | AMS                |             | WG          | 8.5 lb/100 gal | POST        | B           |             |      |      |     |      |       |
| 18                 | Fierce MTZ         | 2.64        | L           | 1 pt/a         | PRE         | A           | 100         | 98   | 100  | 100 | 14.9 | 47.3  |
|                    | Perpetuo           | 2.3         | L           | 6 fl oz/a      | POST        | B           |             |      |      |     |      |       |
|                    | Roundup PowerMax   | 4.5         | SL          | 32 fl oz/a     | POST        | B           |             |      |      |     |      |       |
|                    | AMS                |             | WG          | 17 lb/100 gal  | POST        | B           |             |      |      |     |      |       |
| 19                 | Warrant Ultra      | 3.45        | L           | 50 fl oz/a     | PRE         | A           | 100         | 100  | 100  | 100 | 15.0 | 51.4  |
|                    | Roundup PowerMax   | 4.5         | SL          | 32 fl oz/a     | POST        | B           |             |      |      |     |      |       |
|                    | AMS                |             | WG          | 17 lb/100 gal  | POST        | B           |             |      |      |     |      |       |
| 20                 | Authority Elite    | 7           | L           | 26 fl oz/a     | PRE         | A           | 100         | 100  | 100  | 100 | 15.0 | 48.9  |
|                    | Metribuzin         | 75          | WG          | 6 oz/a         | PRE         | A           |             |      |      |     |      |       |
|                    | Enlist One         | 3.8         | SL          | 32 fl oz/a     | POST        | B           |             |      |      |     |      |       |
|                    | Roundup PowerMax   | 4.5         | SL          | 22 fl oz/a     | POST        | B           |             |      |      |     |      |       |
|                    | AMS                |             | WG          | 17 lb/100 gal  | POST        | B           |             |      |      |     |      |       |
|                    | LSD P=.05          |             |             |                |             |             | 1.9         | 8.6  | 1.9  | 3.2 | 1.11 | 9.02  |
|                    | Standard Deviation |             |             |                |             |             | 1.3         | 6.0  | 1.4  | 2.3 | 0.78 | 6.35  |
|                    | CV                 |             |             |                |             |             | 1.42        | 6.66 | 1.44 | 2.4 | 5.16 | 12.92 |

Could not calculate LSD (% mean diff) for columns 4,17,18,24,31 because error mean square = 0.