

Sharpen with Experimental United Suppliers Adjuvants.

Trial ID: 13-FagerS-SharpenADJ      Location: Murphysboro, IL      Trial Year: 2013  
Investigator: Bryan Young

|                                                                                                              |  |                       |
|--------------------------------------------------------------------------------------------------------------|--|-----------------------|
| <b>Trial Status:</b> F one-year/final<br><b>Initiation Date:</b> 5-7-13<br><b>Completion Date:</b> 6-4-13    |  | <b>Trial Location</b> |
| <b>City:</b> Murphysboro <b>Country:</b> USA<br><b>State/Prov.:</b> Illinois IL<br><b>Postal Code:</b> 62966 |  |                       |

**Objectives:**  
Evaluate methylated seed oil adjuvants with Sharpen for burndown weed control.

|                                                                                                                                                                                                                                               |                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Contacts</b>                                                                                                                                                                                                                               |                                                                                                                                |
| <b>Study Director:</b> Bryan Young<br><b>Organization:</b> Southern Illinois University<br><b>Address:</b> 1205 Lincoln Drive - AG 176 - MC 4415<br><b>City+State/Prov:</b> Carbondale IL<br><b>Postal Code:</b> 62901<br><b>Country:</b> USA | <b>Title:</b> Professor<br><b>Phone No.:</b> 618-453-7679<br><b>Mobile No.:</b> 618-713-6471<br><b>E-mail:</b> bgyoung@siu.edu |

|                                                                                          |  |
|------------------------------------------------------------------------------------------|--|
| <b>Crop Description</b>                                                                  |  |
| <b>Crop 1:</b> NONE - Non-crop<br><b>Variety:</b> NON-CROP<br><b>Planting Method:</b> NA |  |

|                                                                                                                                                                      |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Pest Description</b>                                                                                                                                              |  |
| <b>Pest 1 Type:</b> W <b>Code:</b> ERICA <i>Conyza canadensis</i> (L.) Crong.<br><b>Common Name:</b> horseweed<br><b>Description:</b> glyphosate-resistant marestail |  |
| <b>Pest 2 Type:</b> W <b>Code:</b> VERAR <i>Veronica arvensis</i> L.<br><b>Common Name:</b> speedwell, corn                                                          |  |

|                                                                                                                                                                                                                                           |                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Site and Design</b>                                                                                                                                                                                                                    |                                                                                                                                                                    |
| <b>Treated Plot Width:</b> 6.67 FT <b>Total Plot Width:</b> 10 FT<br><b>Treated Plot Length:</b> 30 FT <b>Total Plot Length:</b> 30 FT<br><b>Replications:</b> 3<br><b>Untreated Arrangement:</b> NONE control is other than an untreated | <b>Site Type:</b> FIELD<br><b>Experimental Unit:</b> 1 PLOT<br><b>Tillage Type:</b> NOTILL no-till<br><b>Study Design:</b> RACOB L Randomized Complete Block (RCB) |

| No. | Previous Crop | Year |
|-----|---------------|------|
| 1.  | GLXMA         | 2012 |

|                    |                                   |
|--------------------|-----------------------------------|
| <b>Maintenance</b> |                                   |
| No.                | Maintenance Product Name          |
| 1.                 | N 0 LB/A, P2O5 0 LB/A, K2O 0 LB/A |

|                                                                                                               |          |      |
|---------------------------------------------------------------------------------------------------------------|----------|------|
| <b>Soil Description</b>                                                                                       |          |      |
| <b>% OM:</b> 1.87 <b>Texture:</b> SIL silt loam<br><b>pH:</b> 5.5 <b>Soil Name:</b> Alvin<br><b>CEC:</b> 7.06 |          |      |
| <b>Additional Measured Elements</b>                                                                           |          |      |
| Element                                                                                                       | Quantity | Unit |
| P1                                                                                                            | 172      | lb/A |
| K                                                                                                             | 446      | lb/A |

|                                                                                                           |                               |
|-----------------------------------------------------------------------------------------------------------|-------------------------------|
| <b>Moisture and Weather Conditions</b>                                                                    |                               |
| <b>Overall Moisture Conditions:</b> NORMAL<br><b>Closest Weather Station:</b> SOUTHERN IL AIRPORT (93810) | <b>Distance, Unit:</b> 3.5 MI |

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| No. | Date    | Amount | Unit | Type | Type Description | Interval | Unit | Min Temp | Max Temp | Temp Unit |
|-----|---------|--------|------|------|------------------|----------|------|----------|----------|-----------|
| 1.  | 4-1-13  |        |      |      |                  | 7        | DAY  | 26       | 75       | F         |
| 2.  | 4-8-13  |        |      |      |                  | 7        | DAY  | 32       | 81       | F         |
| 3.  | 4-10-13 | 0.85   | IN   | RAIN | rain             | 2        | DAY  |          |          |           |
| 4.  | 4-15-13 |        |      |      |                  | 7        | DAY  | 32       | 83       | F         |
| 5.  | 4-18-13 | 2.16   | IN   | RAIN | rain             | 1        | DAY  |          |          |           |
| 6.  | 4-22-13 |        |      |      |                  | 7        | DAY  | 32       | 72       | F         |
| 7.  | 4-24-13 | 0.55   | IN   | RAIN | rain             | 2        | DAY  |          |          |           |
| 8.  | 4-27-13 | 0.37   | IN   | RAIN | rain             | 2        | DAY  |          |          |           |
| 9.  | 4-29-13 |        |      |      |                  | 7        | DAY  | 41       | 81       | F         |
| 10. | 5-3-13  | 1.33   | IN   | RAIN | rain             | 3        | DAY  |          |          |           |
| 11. | 5-5-13  | 0.75   | IN   | RAIN | rain             | 2        | DAY  |          |          |           |
| 12. | 5-6-13  |        |      |      |                  | 7        | DAY  | 41       | 80       | F         |
| 13. | 5-10-13 | 0.17   | IN   | RAIN | rain             | 3        | DAY  |          |          |           |
| 14. | 5-13-13 |        |      |      |                  | 7        | DAY  | 37       | 87       | F         |
| 15. | 5-16-13 | 0.23   | IN   | RAIN | rain             | 2        | DAY  |          |          |           |
| 16. | 5-20-13 |        |      |      |                  | 7        | DAY  | 43       | 85       | F         |
| 17. | 5-21-13 | 0.91   | IN   | RAIN | rain             | 1        | DAY  |          |          |           |
| 18. | 5-27-13 |        |      |      |                  | 7        | DAY  | 59       | 86       | F         |
| 19. | 5-31-13 | 0.7    | IN   | RAIN | rain             | 3        | DAY  |          |          |           |
| 20. | 6-1-13  | 1.67   | IN   | RAIN | rain             | 2        | DAY  |          |          |           |
| 21. | 6-3-13  |        |      |      |                  | 7        | DAY  | 50       | 82       | F         |
| 22. | 6-10-13 | 0.13   | IN   | RAIN | rain             | 5        | DAY  |          |          |           |
| 23. | 6-10-13 |        |      |      |                  | 7        | DAY  | 57       | 93       | F         |
| 24. | 6-17-13 | 0.36   | IN   | RAIN | rain             | 2        | DAY  |          |          |           |
| 25. | 6-17-13 |        |      |      |                  | 7        | DAY  | 61       | 92       | F         |
| 26. | 6-22-13 | 0.34   | IN   | RAIN | rain             | 2        | DAY  |          |          |           |
| 27. | 6-24-13 |        |      |      |                  | 7        | DAY  | 64       | 93       | F         |
| 28. | 6-26-13 | 1.25   | IN   | RAIN | rain             | 2        | DAY  |          |          |           |
| 29. | 6-30-13 | 0.3    | IN   | RAIN | rain             | 2        | DAY  |          |          |           |

## Application Description

|                              | A      |
|------------------------------|--------|
| Application Date:            | 5-7-13 |
| Appl. Start Time:            | 13:30  |
| Appl. Stop Time:             | 14:15  |
| Application Method:          | Spray  |
| Application Timing:          | 6-8"MT |
| Application Placement:       | BROFOL |
| Applied By:                  | EJM    |
| Air Temperature, Unit:       | 83 F   |
| % Relative Humidity:         | 45     |
| Wind Velocity, Unit:         | 2 MPH  |
| Wind Direction:              | N      |
| Dew Presence (Y/N):          | N      |
| Soil Temperature, Unit:      | 75 F   |
| Soil Moisture:               | ABONOR |
| % Cloud Cover:               | 40     |
| Next Moisture Occurred On:   | 5-8-13 |
| Time to Next Moisture, Unit: | 31 HR  |

## Crop Stage At Each Application

|                          | A    |
|--------------------------|------|
| Crop 1 Code, BBCH Scale: | NONE |
| Stage Scale Used:        | DESC |
| Stage Majority, Percent: | NA   |

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|                                  | <b>A</b> |
|----------------------------------|----------|
| <b>Pest 1 Code, Type, Scale:</b> | ERICA W  |
| <b>Stage Majority, Percent:</b>  | 16       |
| <b>Stage Minimum, Percent:</b>   | 12       |
| <b>Stage Maximum, Percent:</b>   | 25       |
| <b>Height, Unit:</b>             | 7.5 IN   |
| <b>Height Minimum, Maximum:</b>  | 4.5 10   |
| <b>Density, Unit:</b>            | 9 FT2    |
| <b>Pest 2 Code, Type, Scale:</b> | VERAR W  |
| <b>Stage Majority, Percent:</b>  | 20       |
| <b>Stage Minimum, Percent:</b>   | 18       |
| <b>Stage Maximum, Percent:</b>   | 16       |
| <b>Height, Unit:</b>             | 9 IN     |
| <b>Height Minimum, Maximum:</b>  | 7 10     |
| <b>Density, Unit:</b>            | 0.01 FT2 |

**Application Equipment**

|                                  | <b>A</b>    |
|----------------------------------|-------------|
| <b>Appl. Equipment:</b>          | CO2 sprayer |
| <b>Equipment Type:</b>           | BACSPR      |
| <b>Operation Pressure, Unit:</b> | 30 PSI      |
| <b>Nozzle Type:</b>              | TT          |
| <b>Nozzle Size:</b>              | 110015      |
| <b>Boom Length, Unit:</b>        | 6.67 FT     |
| <b>Spray Volume, Unit:</b>       | 10 GPA      |

Southern Illinois University

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| Pest Code<br>Crop Code<br>Rating Date<br>Rating Type<br>Rating Unit<br>Rating Timing<br>Trt-Eval Interval |                                          |                             |           |                                               |                                               |                 | ERICA-HR<br>5-10-13<br>Control<br>Percent<br>3 DA-A | ERICA-HR<br>5-14-13<br>Control<br>Percent<br>7 DA-A | ERICA-HR<br>5-21-13<br>Control<br>Percent<br>14 DA-A | ERICA-HR<br>6-4-13<br>Control<br>Percent<br>28 DA-A |
|-----------------------------------------------------------------------------------------------------------|------------------------------------------|-----------------------------|-----------|-----------------------------------------------|-----------------------------------------------|-----------------|-----------------------------------------------------|-----------------------------------------------------|------------------------------------------------------|-----------------------------------------------------|
| Trt No.                                                                                                   | Treatment Name                           | Form Conc                   | Form Type | Rate Rate Unit                                | Other Rate                                    | Other Rate Unit | Growth Stage                                        | Appl Code                                           |                                                      |                                                     |
| 1                                                                                                         | SHARPEN<br>ROUNDUP POWERMAX              | 2.85 SC<br>4.5 SL           |           | 0.0111 lb ai/a<br>0.385 lb ae/a               | 0.5 fl oz/a<br>11 fl oz/a                     |                 | 6-8"MT A<br>6-8"MT A                                |                                                     | 58 e                                                 | 87 f                                                |
| 2                                                                                                         | SHARPEN<br>ROUNDUP POWERMAX<br>SUCCEED   | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>1 % v/v    | 0.5 fl oz/a<br>11 fl oz/a<br>1 gal/100 gal    |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A                    |                                                     | 63 bcd                                               | 93 abc                                              |
| 3                                                                                                         | SHARPEN<br>ROUNDUP POWERMAX<br>TRANSLATE | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>0.75 % v/v | 0.5 fl oz/a<br>11 fl oz/a<br>3 qt/100 gal     |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A                    |                                                     | 68 a                                                 | 95 a                                                |
| 4                                                                                                         | SHARPEN<br>ROUNDUP POWERMAX<br>AIRFORCE  | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>0.75 % v/v | 0.5 fl oz/a<br>11 fl oz/a<br>3 qt/100 gal     |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A                    |                                                     | 62 cde                                               | 91 b-e                                              |
| 5                                                                                                         | SHARPEN<br>ROUNDUP POWERMAX<br>DOWNDRAFT | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>6 fl oz/a  | 0.5 fl oz/a<br>11 fl oz/a<br>6 fl oz/a        |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A                    |                                                     | 64 a-d                                               | 93 abc                                              |
| 6                                                                                                         | SHARPEN<br>ROUNDUP POWERMAX<br>WETCIT    | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>0.39 % v/v | 0.5 fl oz/a<br>11 fl oz/a<br>50 fl oz/100 gal |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A                    |                                                     | 60 de                                                | 88 ef                                               |
| 7                                                                                                         | SHARPEN<br>ROUNDUP POWERMAX<br>UAD-1331  | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>0.75 % v/v | 0.5 fl oz/a<br>11 fl oz/a<br>3 qt/100 gal     |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A                    |                                                     | 66 abc                                               | 92 a-d                                              |
| 8                                                                                                         | SHARPEN<br>ROUNDUP POWERMAX<br>UAD-1306  | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>1 % v/v    | 0.5 fl oz/a<br>11 fl oz/a<br>4 qt/100 gal     |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A                    |                                                     | 61 de                                                | 89 def                                              |
| 9                                                                                                         | SHARPEN<br>ROUNDUP POWERMAX<br>UAD-1316  | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>0.5 % v/v  | 0.5 fl oz/a<br>11 fl oz/a<br>2 qt/100 gal     |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A                    |                                                     | 61 de                                                | 91 b-e                                              |
| 10                                                                                                        | SHARPEN<br>ROUNDUP POWERMAX<br>UAD-1317  | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>0.5 % v/v  | 0.5 fl oz/a<br>11 fl oz/a<br>2 qt/100 gal     |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A                    |                                                     | 63 bcd                                               | 92 a-d                                              |
| 11                                                                                                        | SHARPEN<br>ROUNDUP POWERMAX<br>UAD-1316  | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>0.75 % v/v | 0.5 fl oz/a<br>11 fl oz/a<br>3 qt/100 gal     |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A                    |                                                     | 63 bcd                                               | 90 c-f                                              |
| 12                                                                                                        | SHARPEN<br>ROUNDUP POWERMAX<br>UAD-1317  | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>0.75 % v/v | 0.5 fl oz/a<br>11 fl oz/a<br>3 qt/100 gal     |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A                    |                                                     | 67 ab                                                | 94 ab                                               |
| 13                                                                                                        | SHARPEN<br>ROUNDUP POWERMAX<br>UAD-1344  | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>0.25 % v/v | 0.5 fl oz/a<br>11 fl oz/a<br>1 qt/100 gal     |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A                    |                                                     | 63 bcd                                               | 90 c-f                                              |
| 14                                                                                                        | SHARPEN<br>ROUNDUP POWERMAX<br>UAD-1344  | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>0.5 % v/v  | 0.5 fl oz/a<br>11 fl oz/a<br>2 qt/100 gal     |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A                    |                                                     | 63 bcd                                               | 89 def                                              |

Means followed by same letter do not significantly differ (P=.05, LSD)  
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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|                    |                  |           |           |           |           |            |                 |              |           |          |          |
|--------------------|------------------|-----------|-----------|-----------|-----------|------------|-----------------|--------------|-----------|----------|----------|
| Pest Code          |                  |           |           |           |           |            |                 | ERICA-HR     | ERICA-HR  | ERICA-HR | ERICA-HR |
| Crop Code          |                  |           |           |           |           |            |                 | 5-10-13      | 5-14-13   | 5-21-13  | 6-4-13   |
| Rating Date        |                  |           |           |           |           |            |                 | Control      | Control   | Control  | Control  |
| Rating Type        |                  |           |           |           |           |            |                 | Percent      | Percent   | Percent  | Percent  |
| Rating Unit        |                  |           |           |           |           |            |                 | 3 DA-A       | 7 DA-A    | 14 DA-A  | 28 DA-A  |
| Rating Timing      |                  |           |           |           |           |            |                 |              |           |          |          |
| Trt-Eval Interval  |                  |           |           |           |           |            |                 |              |           |          |          |
| Trt No.            | Treatment Name   | Form Conc | Form Type | Rate Rate | Rate Unit | Other Rate | Other Rate Unit | Growth Stage | Appl Code |          |          |
| 15                 | SHARPEN          | 2.85      | SC        | 0.0111    | lb ai/a   | 0.5        | fl oz/a         | 6-8"MT A     |           | 66 ab    | 93 abc   |
|                    | ROUNDUP POWERMAX | 4.5       | SL        | 0.385     | lb ae/a   | 11         | fl oz/a         | 6-8"MT A     |           |          | 91 ab    |
|                    | UAD-1348         | 100       | SL        | 0.75      | % v/v     | 3          | qt/100 gal      | 6-8"MT A     |           |          | 79 a     |
| LSD (P=.05)        |                  |           |           |           |           |            |                 | 4.2          | 3.6       | 3.8      | 9.0      |
| Standard Deviation |                  |           |           |           |           |            |                 | 2.5          | 2.1       | 2.3      | 5.4      |
| CV                 |                  |           |           |           |           |            |                 | 3.94         | 2.33      | 2.56     | 6.84     |
| Replicate F        |                  |           |           |           |           |            |                 | 1.249        | 1.876     | 9.762    | 19.285   |
| Replicate Prob(F)  |                  |           |           |           |           |            |                 | 0.3022       | 0.1720    | 0.0006   | 0.0001   |
| Treatment F        |                  |           |           |           |           |            |                 | 3.282        | 3.188     | 2.117    | 0.913    |
| Treatment Prob(F)  |                  |           |           |           |           |            |                 | 0.0036       | 0.0044    | 0.0444   | 0.5563   |

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| Pest Code<br>Crop Code<br>Rating Date<br>Rating Type<br>Rating Unit<br>Rating Timing<br>Trt-Eval Interval |                                          |                             |           |                                               |                                               |                 | VERAR                            | VERAR                         | VERAR                         |
|-----------------------------------------------------------------------------------------------------------|------------------------------------------|-----------------------------|-----------|-----------------------------------------------|-----------------------------------------------|-----------------|----------------------------------|-------------------------------|-------------------------------|
|                                                                                                           |                                          |                             |           |                                               |                                               |                 | 5-10-13<br>Control<br>Percent    | 5-14-13<br>Control<br>Percent | 5-21-13<br>Control<br>Percent |
|                                                                                                           |                                          |                             |           |                                               |                                               |                 | 3 DA-A                           | 7 DA-A                        | 14 DA-A                       |
| Trt No.                                                                                                   | Treatment Name                           | Form Conc                   | Form Type | Rate Rate Unit                                | Other Rate                                    | Other Rate Unit | Growth Stage                     | Appl Code                     |                               |
| 1                                                                                                         | SHARPEN<br>ROUNDUP POWERMAX              | 2.85 SC<br>4.5 SL           |           | 0.0111 lb ai/a<br>0.385 lb ae/a               | 0.5 fl oz/a<br>11 fl oz/a                     |                 | 6-8"MT A<br>6-8"MT A             |                               | 53 a                          |
| 2                                                                                                         | SHARPEN<br>ROUNDUP POWERMAX<br>SUCCEED   | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>1 % v/v    | 0.5 fl oz/a<br>11 fl oz/a<br>1 gal/100 gal    |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A |                               | 58 a                          |
| 3                                                                                                         | SHARPEN<br>ROUNDUP POWERMAX<br>TRANSLATE | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>0.75 % v/v | 0.5 fl oz/a<br>11 fl oz/a<br>3 qt/100 gal     |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A |                               | 60 a                          |
| 4                                                                                                         | SHARPEN<br>ROUNDUP POWERMAX<br>AIRFORCE  | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>0.75 % v/v | 0.5 fl oz/a<br>11 fl oz/a<br>3 qt/100 gal     |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A |                               | 55 a                          |
| 5                                                                                                         | SHARPEN<br>ROUNDUP POWERMAX<br>DOWNDRAFT | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>6 fl oz/a  | 0.5 fl oz/a<br>11 fl oz/a<br>6 fl oz/a        |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A |                               | 58 a                          |
| 6                                                                                                         | SHARPEN<br>ROUNDUP POWERMAX<br>WETCIT    | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>0.39 % v/v | 0.5 fl oz/a<br>11 fl oz/a<br>50 fl oz/100 gal |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A |                               | 55 a                          |
| 7                                                                                                         | SHARPEN<br>ROUNDUP POWERMAX<br>UAD-1331  | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>0.75 % v/v | 0.5 fl oz/a<br>11 fl oz/a<br>3 qt/100 gal     |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A |                               | 57 a                          |
| 8                                                                                                         | SHARPEN<br>ROUNDUP POWERMAX<br>UAD-1306  | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>1 % v/v    | 0.5 fl oz/a<br>11 fl oz/a<br>4 qt/100 gal     |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A |                               | 58 a                          |
| 9                                                                                                         | SHARPEN<br>ROUNDUP POWERMAX<br>UAD-1316  | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>0.5 % v/v  | 0.5 fl oz/a<br>11 fl oz/a<br>2 qt/100 gal     |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A |                               | 57 a                          |
| 10                                                                                                        | SHARPEN<br>ROUNDUP POWERMAX<br>UAD-1317  | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>0.5 % v/v  | 0.5 fl oz/a<br>11 fl oz/a<br>2 qt/100 gal     |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A |                               | 57 a                          |
| 11                                                                                                        | SHARPEN<br>ROUNDUP POWERMAX<br>UAD-1316  | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>0.75 % v/v | 0.5 fl oz/a<br>11 fl oz/a<br>3 qt/100 gal     |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A |                               | 58 a                          |
| 12                                                                                                        | SHARPEN<br>ROUNDUP POWERMAX<br>UAD-1317  | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>0.75 % v/v | 0.5 fl oz/a<br>11 fl oz/a<br>3 qt/100 gal     |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A |                               | 57 a                          |
| 13                                                                                                        | SHARPEN<br>ROUNDUP POWERMAX<br>UAD-1344  | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>0.25 % v/v | 0.5 fl oz/a<br>11 fl oz/a<br>1 qt/100 gal     |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A |                               | 57 a                          |
| 14                                                                                                        | SHARPEN<br>ROUNDUP POWERMAX<br>UAD-1344  | 2.85 SC<br>4.5 SL<br>100 SL |           | 0.0111 lb ai/a<br>0.385 lb ae/a<br>0.5 % v/v  | 0.5 fl oz/a<br>11 fl oz/a<br>2 qt/100 gal     |                 | 6-8"MT A<br>6-8"MT A<br>6-8"MT A |                               | 53 a                          |

Southern Illinois University

Sharpen with Experimental United Suppliers Adjuvants.

Trial ID: 13-FagerS-SharpenADJ Location: Murphysboro, IL Trial Year: 2013  
Investigator: Bryan Young

|                    |                  |           |           |           |           |            |                 |              |           |
|--------------------|------------------|-----------|-----------|-----------|-----------|------------|-----------------|--------------|-----------|
| Pest Code          |                  |           |           |           |           |            | VERAR           | VERAR        | VERAR     |
| Crop Code          |                  |           |           |           |           |            | 5-10-13         | 5-14-13      | 5-21-13   |
| Rating Date        |                  |           |           |           |           |            | Control         | Control      | Control   |
| Rating Type        |                  |           |           |           |           |            | Percent         | Percent      | Percent   |
| Rating Unit        |                  |           |           |           |           |            | 3 DA-A          | 7 DA-A       | 14 DA-A   |
| Rating Timing      |                  |           |           |           |           |            |                 |              |           |
| Trt-Eval Interval  |                  |           |           |           |           |            |                 |              |           |
| Trt No.            | Treatment Name   | Form Conc | Form Type | Rate Rate | Rate Unit | Other Rate | Other Rate Unit | Growth Stage | Appl Code |
| 15                 | SHARPEN          | 2.85      | SC        | 0.0111    | lb ai/a   | 0.5        | fl oz/a         | 6-8"MT A     |           |
|                    | ROUNDUP POWERMAX | 4.5       | SL        | 0.385     | lb ae/a   | 11         | fl oz/a         | 6-8"MT A     |           |
|                    | UAD-1348         | 100       | SL        | 0.75      | % v/v     | 3          | qt/100 gal      | 6-8"MT A     |           |
| LSD (P=.05)        |                  |           |           |           |           |            | 55 a            | 77 a         | 99 a      |
| Standard Deviation |                  |           |           |           |           |            |                 |              |           |
| CV                 |                  |           |           |           |           |            |                 |              |           |
| Replicate F        |                  |           |           |           |           |            | 4.8             | 5.1          | 0.0       |
| Replicate Prob(F)  |                  |           |           |           |           |            | 2.9             | 3.0          | 0.0       |
| Treatment F        |                  |           |           |           |           |            | 5.06            | 3.87         | 0.0       |
| Treatment Prob(F)  |                  |           |           |           |           |            |                 |              |           |
|                    |                  |           |           |           |           |            | 3.330           | 1.256        | 0.000     |
|                    |                  |           |           |           |           |            | 0.0504          | 0.3002       | 1.0000    |
|                    |                  |           |           |           |           |            | 1.379           | 1.051        | 0.000     |
|                    |                  |           |           |           |           |            | 0.2273          | 0.4369       | 1.0000    |

Sharpen with Experimental United Suppliers Adjuvants.

Trial ID: 13-FagerS-SharpenADJ      Location: Murphysboro, IL      Trial Year: 2013  
Investigator: Bryan Young

Trial Comments

1. Protocol: United Suppliers (AD13001).
2. Ratings: CI/WC 3, 7, 14, and 28 DA-A. Target ERICA.
3. No yield (non-crop).
4. ERICA-HR = Herbicide-resistant marestail (glyphosate).
5. By 6-4-13, VERAR in the nontreated plots was senescing naturally and could no longer be evaluated.
6. Not harvested (non-crop).