

Influence of Winter Annual Weeds on Giant Ragweed Emergence.

Project Code: 05-8A Location: Belleville Research Center
 Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country: Belleville IL 62221 USA
Trial Status: Final **Updated:** 12-05-05

Objective:

Determine the influence of winter annual weed management on giant ragweed emergence.

| Weed Code | Common Name | Scientific Name |
|-----------|------------------------------|----------------------------|
| 1. | HORPU barley, little | Hordeum pusillum Nutt. |
| 2. | STEME chickweed, common | Stellaria media (L.) Vill. |
| 3. | LAMAM henbit | Lamium amplexicaule L. |
| 4. | RANAB buttercup, smallflower | Ranunculus abortivus L. |
| 5. | AMBTR ragweed, giant | Ambrosia trifida L. |
| 6. | AMATA waterhemp, common | Amaranthus rudis Sauer |
| 7. | SETFA foxtail, giant | Setaria faberi Herrm. |
| 8. | IPOSS morningglory, species | Ipomoea sp. |
| 9. | CYPES nutsedge, yellow | Cyperus esculentus L. |

Crop 1: GLXMA soybean **Variety:** Asgrow 4403 RR
Planting Method: Seeded **Planting Date:** 5-24-05
Rate: 75 lb/A **Depth:** 1.0 IN
Row Spacing: 30 IN

Plot Width, Unit: 20 FT **Plot Length, Unit:** 30 FT **Reps:** 6
Tillage Type: No-Till **Study Design:** Randomized complete block
Previous Crop, Year: ZEAMX, 2004

Field Prep./Maintenance: N 0 LB/A, P205 50 LB/A, K20 100 LB/A

Soil Name: Weir **% OM:** 1.8 **pH:** 5.8 **CEC:** 12
Texture: Silt loam **Fert. Level:** P1: 73 LB/A, K: 436 LB/A

APPLICATION DESCRIPTION

| | A | B |
|-----------------------------|----------|----------|
| Application Date: | 11-15-04 | 04-01-05 |
| Time of Day: | 10:00 | 9:00 |
| Application Method: | Spray | Spray |
| Application Timing: | NOV15 | APRIL1 |
| Applic. Placement: | BROFOL | BROFOL |
| Air Temp., Unit: | 60 F | 54 F |
| % Relative Humidity: | 50 | 58 |
| Wind Velocity, Unit: | 0 MPH | 5 MPH |
| Soil Moisture: | ABONOR | NORMAL |

CROP STAGE AT EACH APPLICATION

| | A | B |
|----------------------------|----------|----------|
| Crop 1 Code, Stage: | GLXMA NA | GLXMA NA |
| Height, Unit: | NA NA | NA NA |

WEED STAGE AT EACH APPLICATION

| | A | B |
|-------------------------|--------|--------|
| Weed 1 Code: | HORPU | HORPU |
| Stage (leaves): | 5-6 | 10+ |
| Height (inches): | 1-3 | 4-6 |
| Density: | Low | Medium |
| Weed 2 Code: | STEME | STEME |
| Stage (leaves): | 10+ | 10+ |
| Height (inches): | 1-2 | 2-3 |
| Density: | Medium | Low |
| Weed 3 Code: | LAMAM | LAMAM |
| Stage (leaves): | 10+ | 10+ |
| Height (inches): | 1-2 | 3-5 |
| Density: | Medium | Low |
| Weed 4 Code: | RANAB | RANAB |
| Stage (leaves): | 5-10 | 10+ |
| Height (inches): | 1-3 | 2-6 |
| Density: | Medium | Medium |

APPLICATION EQUIPMENT

| | A | B |
|----------------------------|-------------|-------------|
| Appl. Equipment: | CO2 sprayer | CO2 sprayer |
| Operating Pressure: | 40 PSI | 40 PSI |
| Nozzle Type: | Flat fan | Flat fan |
| Nozzle Size: | 8002 | 8002 |
| Boom Length, Unit: | 10 FT | 10 FT |
| Spray Volume, Unit: | 20 GPA | 20 GPA |

NOTES:

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| | | | | | | | | | | HORPU | HORPU | STEME | STEME | LAMAM | LAMAM | RANAB | RANAB |
|-------------------|-------------------------|------|------|------|---------|---------------|--------|------|--------|----------|---------|---------|---------|---------|---------|---------|---------|
| | | | | | | | | | | GLXMA | Control | Control | Control | Control | Control | Control | Control |
| | | | | | | | | | | Yield | Percent | Percent | Percent | Percent | Percent | Percent | Percent |
| | | | | | | | | | | bu/A | Percent | Percent | Percent | Percent | Percent | Percent | Percent |
| | | | | | | | | | | 10-07-05 | 14 DAT | 28 DAT | 14 DAT | 28 DAT | 14 DAT | 28 DAT | 14 DAT |
| Trt | Treatment | Form | Form | Rate | Prod | Prod | Grow | Appl | | | | | | | | | |
| No. | Name | Conc | Type | Unit | Rate | Unit | Stg | Code | | | | | | | | | |
| 1 | NONTREATED | | | | | | | | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | Fall and Spring Control | | | | | | | | 60 | 99 | 99 | 80 | 98 | 80 | 98 | 80 | 98 |
| 2 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 fl oz/a | NOV15 | A | | | | | | | | | |
| 2 | AMS | 100 | DRY | 2.0 | % w/w | 17 lb/100 gal | NOV15 | A | | | | | | | | | |
| 2 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 fl oz/a | APRIL1 | B | | | | | | | | | |
| 2 | AMS | 100 | DRY | 2.0 | % w/w | 17 lb/100 gal | APRIL1 | B | | | | | | | | | |
| 3 | Fall Control | | | | | | | | 59 | 99 | 99 | 80 | 98 | 80 | 98 | 80 | 98 |
| 3 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 fl oz/a | NOV15 | A | | | | | | | | | |
| 3 | AMS | 100 | DRY | 2.0 | % w/w | 17 lb/100 gal | NOV15 | A | | | | | | | | | |
| 4 | Spring Control | | | | | | | | 63 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 4 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 fl oz/a | APRIL1 | B | | | | | | | | | |
| 4 | AMS | 100 | DRY | 2.0 | % w/w | 17 lb/100 gal | APRIL1 | B | | | | | | | | | |
| LSD (P=.05) | | | | | | | | | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Replicate F | | | | | | | | | 0.618 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | |
| Replicate Prob(F) | | | | | | | | | 0.6880 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | |
| Treatment F | | | | | | | | | 2.838 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | |
| Treatment Prob(F) | | | | | | | | | 0.0734 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | |

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| | | | | | | | | | | WNTR ANN | AMATA | AMATA | AMATA |
|-------------------|-------------------------|------|------|------|---------|---------------|--------|------|--------|----------|----------|----------|----------|
| | | | | | | | | | | GLXMA | Control | Control | Control |
| | | | | | | | | | | Injury | Percent | Percent | Percent |
| | | | | | | | | | | 06-07-05 | 06-07-05 | 06-07-05 | 06-17-05 |
| | | | | | | | | | | 18 DAP | 18 DAP | 18 DAP | 32 DAP |
| Trt | Treatment | Form | Form | Rate | Prod | Prod | Grow | Appl | | | | | |
| No. | Name | Conc | Type | Unit | Rate | Unit | Stg | Code | | | | | |
| 1 | NONTREATED | | | | | | | | 0 | 99 | 99 | 98 | 98 |
| 2 | Fall and Spring Control | | | | | | | | 0 | 99 | 99 | 95 | 97 |
| 2 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 fl oz/a | NOV15 | A | | | | | |
| 2 | AMS | 100 | DRY | 2.0 | % w/w | 17 lb/100 gal | NOV15 | A | | | | | |
| 2 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 fl oz/a | APRIL1 | B | | | | | |
| 2 | AMS | 100 | DRY | 2.0 | % w/w | 17 lb/100 gal | APRIL1 | B | | | | | |
| 3 | Fall Control | | | | | | | | 0 | 99 | 99 | 97 | 96 |
| 3 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 fl oz/a | NOV15 | A | | | | | |
| 3 | AMS | 100 | DRY | 2.0 | % w/w | 17 lb/100 gal | NOV15 | A | | | | | |
| 4 | Spring Control | | | | | | | | 0 | 99 | 99 | 91 | 97 |
| 4 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 fl oz/a | APRIL1 | B | | | | | |
| 4 | AMS | 100 | DRY | 2.0 | % w/w | 17 lb/100 gal | APRIL1 | B | | | | | |
| LSD (P=.05) | | | | | | | | | 0.0 | 0.5 | 0.6 | 1.9 | 1.5 |
| Replicate F | | | | | | | | | 0.000 | 1.000 | 0.797 | 4.835 | 2.953 |
| Replicate Prob(F) | | | | | | | | | 1.0000 | 0.4509 | 0.5683 | 0.0078 | 0.0473 |
| Treatment F | | | | | | | | | 0.000 | 1.000 | 0.696 | 27.985 | 2.323 |
| Treatment Prob(F) | | | | | | | | | 1.0000 | 0.4199 | 0.5686 | 0.0001 | 0.1164 |

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| Weed Code | | AMBTR | AMBTR | AMBTR | SETFA | SETFA | IPOSS | IPOSS | CYPES |
|-------------------|-------------------------|-----------|-----------|----------|----------|-----------|------------|----------|-----------|
| Crop Code | | | | | | | | | |
| Rating Data Type | | Control | Control | Control | Control | Control | Control | Control | Control |
| Rating Unit | | Percent | Percent | Percent | Percent | Percent | Percent | Percent | Percent |
| Rating Date | | 06-07-05 | 06-17-05 | 07-19-05 | 06-17-05 | 07-19-05 | 06-17-05 | 07-19-05 | 07-19-05 |
| Trt-Eval Interval | | 18 DAP | 32 DAP | 60 DAP | 32 DAP | 60 DAP | 32 DAP | 60 DAP | 60 DAP |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Unit | Prod Rate | Prod Unit | Grow Stg | Appl Code |
| 1 | NONTREATED | | | | | | | | |
| | | | | | | | | 96 | 96 |
| 2 | Fall and Spring Control | | | | | | | | |
| 2 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | NOV15 | A |
| 2 | AMS | 100 | DRY | 2.0 | % w/w | 17 | lb/100 gal | NOV15 | A |
| 2 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | APRIL1 | B |
| 2 | AMS | 100 | DRY | 2.0 | % w/w | 17 | lb/100 gal | APRIL1 | B |
| | | | | | | | | 95 | 96 |
| 3 | Fall Control | | | | | | | | |
| 3 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | NOV15 | A |
| 3 | AMS | 100 | DRY | 2.0 | % w/w | 17 | lb/100 gal | NOV15 | A |
| | | | | | | | | 88 | 93 |
| 4 | Spring Control | | | | | | | | |
| 4 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | APRIL1 | B |
| 4 | AMS | 100 | DRY | 2.0 | % w/w | 17 | lb/100 gal | APRIL1 | B |
| | | | | | | | | 98 | 94 |
| | LSD (P=.05) | | | | | | | 3.7 | 3.3 |
| | Replicate F | | | | | | | 2.986 | 1.513 |
| | Replicate Prob(F) | | | | | | | 0.0457 | 0.2442 |
| | Treatment F | | | | | | | 11.520 | 2.248 |
| | Treatment Prob(F) | | | | | | | 0.0004 | 0.1248 |

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| Weed Code | | AMATA | AMATA | AMATA | AMATA | AMATA | AMATA | AMATA | |
|-------------------|-------------------------|-----------|-----------|----------|----------|-----------|------------|----------|-----------|
| Crop Code | | | | | | | | | |
| Rating Data Type | | Plants | Plants | Plants | Plants | Plants | Plants | Dry Wt. | |
| Rating Unit | | 1.0m2 | 1.0m2 | 1.0m2 | 1.0m2 | 1.0m2 | 1.0m2 | g/1.0m2 | |
| Rating Date | | 03-31-05 | 04-07-05 | 04-14-05 | 04-21-05 | 04-28-05 | 05-05-05 | 05-17-05 | |
| Trt-Eval Interval | | | | | | | | | |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Unit | Prod Rate | Prod Unit | Grow Stg | Appl Code |
| 1 | NONTREATED | | | | | | | | |
| | | | | | | | | 0.0 | 0.01 |
| 2 | Fall and Spring Control | | | | | | | | |
| 2 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | NOV15 | A |
| 2 | AMS | 100 | DRY | 2.0 | % w/w | 17 | lb/100 gal | NOV15 | A |
| 2 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | APRIL1 | B |
| 2 | AMS | 100 | DRY | 2.0 | % w/w | 17 | lb/100 gal | APRIL1 | B |
| | | | | | | | | 0.0 | 0.37 |
| 3 | Fall Control | | | | | | | | |
| 3 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | NOV15 | A |
| 3 | AMS | 100 | DRY | 2.0 | % w/w | 17 | lb/100 gal | NOV15 | A |
| | | | | | | | | 0.0 | 0.17 |
| 4 | Spring Control | | | | | | | | |
| 4 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | APRIL1 | B |
| 4 | AMS | 100 | DRY | 2.0 | % w/w | 17 | lb/100 gal | APRIL1 | B |
| | | | | | | | | 0.0 | 0.10 |
| | LSD (P=.05) | | | | | | | 0.00 | 0.365 |
| | Replicate F | | | | | | | 0.000 | 0.558 |
| | Replicate Prob(F) | | | | | | | 1.0000 | 0.7302 |
| | Treatment F | | | | | | | 0.000 | 1.573 |
| | Treatment Prob(F) | | | | | | | 1.0000 | 0.2375 |

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| | | | | | | | | |
|-------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| Weed Code | AMBTR | AMBTR | AMBTR | AMBTR | AMBTR | AMBTR | AMBTR | AMBTR |
| Crop Code | | | | | | | | |
| Rating Data Type | Plants | Plants | Plants | Plants | Plants | Plants | Plants | Dry Wt. |
| Rating Unit | 1.0m2 | 1.0m2 | 1.0m2 | 1.0m2 | 1.0m2 | 1.0m2 | 1.0m2 | g/1.0m2 |
| Rating Date | 03-31-05 | 04-07-05 | 04-14-05 | 04-21-05 | 04-28-05 | 05-05-05 | 05-17-05 | 05-17-05 |
| Trt-Eval Interval | | | | | | | | |

| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Prod Rate | Prod Unit | Grow Stg | Appl Code | | | | | | | | |
|-------------------|-------------------------|-----------|-----------|------|-----------|-----------|------------|----------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | NONTREATED | | | | | | | | | 1.2 | 3.3 | 3.0 | 4.7 | 4.2 | 3.7 | 7.0 | 1.84 |
| 2 | Fall and Spring Control | | | | | | | | | 0.8 | 2.0 | 0.7 | 0.2 | 0.7 | 0.5 | 0.8 | 1.87 |
| 2 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | NOV15 | A | | | | | | | | |
| 2 | AMS | 100 | DRY | 2.0 | % w/w | 17 | lb/100 gal | NOV15 | A | | | | | | | | |
| 2 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | APRIL1 | B | | | | | | | | |
| 2 | AMS | 100 | DRY | 2.0 | % w/w | 17 | lb/100 gal | APRIL1 | B | | | | | | | | |
| 3 | Fall Control | | | | | | | | | 1.8 | 4.5 | 1.7 | 1.8 | 2.5 | 1.3 | 3.8 | 5.03 |
| 3 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | NOV15 | A | | | | | | | | |
| 3 | AMS | 100 | DRY | 2.0 | % w/w | 17 | lb/100 gal | NOV15 | A | | | | | | | | |
| 4 | Spring Control | | | | | | | | | 0.3 | 0.2 | 0.2 | 1.0 | 0.3 | 0.8 | 1.2 | 0.90 |
| 4 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | APRIL1 | B | | | | | | | | |
| 4 | AMS | 100 | DRY | 2.0 | % w/w | 17 | lb/100 gal | APRIL1 | B | | | | | | | | |
| LSD (P=.05) | | | | | | | | | | 2.59 | 4.00 | 3.12 | 4.25 | 3.81 | 3.27 | 7.70 | 4.076 |
| Replicate F | | | | | | | | | | 0.775 | 1.622 | 0.959 | 0.734 | 0.766 | 0.532 | 0.827 | 1.438 |
| Replicate Prob(F) | | | | | | | | | | 0.5827 | 0.2144 | 0.4731 | 0.6093 | 0.5881 | 0.7488 | 0.5500 | 0.2672 |
| Treatment F | | | | | | | | | | 0.535 | 1.970 | 1.455 | 1.921 | 1.971 | 1.735 | 1.256 | 1.782 |
| Treatment Prob(F) | | | | | | | | | | 0.6655 | 0.1618 | 0.2665 | 0.1696 | 0.1617 | 0.2028 | 0.3247 | 0.1937 |

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| | | | | | | |
|-------------------|----------|----------|----------|----------|----------|----------|
| Weed Code | Bare | Bare | Bare | Bare | Bare | Bare |
| Crop Code | | | | | | |
| Rating Data Type | Ground | Ground | Ground | Ground | Ground | Ground |
| Rating Unit | Percent | Percent | Percent | Percent | Percent | Percent |
| Rating Date | 03-31-05 | 04-07-05 | 04-14-05 | 04-21-05 | 05-05-05 | 05-17-05 |
| Trt-Eval Interval | | | | | | |

| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Prod Rate | Prod Unit | Grow Stg | Appl Code | | | | | | | | |
|-------------------|-------------------------|-----------|-----------|------|-----------|-----------|------------|----------|-----------|--------|--------|--------|--------|--------|--------|--|--|
| 1 | NONTREATED | | | | | | | | | 9 | 6 | 3 | 5 | 3 | 8 | | |
| 2 | Fall and Spring Control | | | | | | | | | 22 | 18 | 17 | 20 | 19 | 15 | | |
| 2 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | NOV15 | A | | | | | | | | |
| 2 | AMS | 100 | DRY | 2.0 | % w/w | 17 | lb/100 gal | NOV15 | A | | | | | | | | |
| 2 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | APRIL1 | B | | | | | | | | |
| 2 | AMS | 100 | DRY | 2.0 | % w/w | 17 | lb/100 gal | APRIL1 | B | | | | | | | | |
| 3 | Fall Control | | | | | | | | | 9 | 9 | 10 | 10 | 8 | 9 | | |
| 3 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | NOV15 | A | | | | | | | | |
| 3 | AMS | 100 | DRY | 2.0 | % w/w | 17 | lb/100 gal | NOV15 | A | | | | | | | | |
| 4 | Spring Control | | | | | | | | | 7 | 7 | 5 | 9 | 9 | 13 | | |
| 4 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | APRIL1 | B | | | | | | | | |
| 4 | AMS | 100 | DRY | 2.0 | % w/w | 17 | lb/100 gal | APRIL1 | B | | | | | | | | |
| LSD (P=.05) | | | | | | | | | | 13.4 | 11.2 | 10.2 | 10.2 | 9.8 | 10.5 | | |
| Replicate F | | | | | | | | | | 0.361 | 0.915 | 0.376 | 0.108 | 0.406 | 0.215 | | |
| Replicate Prob(F) | | | | | | | | | | 0.8670 | 0.4974 | 0.8573 | 0.9889 | 0.8374 | 0.9506 | | |
| Treatment F | | | | | | | | | | 2.362 | 2.052 | 3.345 | 3.429 | 4.174 | 0.983 | | |
| Treatment Prob(F) | | | | | | | | | | 0.1123 | 0.1498 | 0.0477 | 0.0445 | 0.0246 | 0.4272 | | |

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| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Prod Rate | Prod Unit | Grow Stg | Appl Code | WNTR ANN | WNTR ANN | WNTR ANN | WNTR ANN | WNTR ANN | WNTR ANN | WNTR ANN |
|-------------------|-------------------------|-----------|-----------|------|-----------|-----------|------------|----------|-----------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | | | | | | | | | | GroundCv Percent | GroundCv Percent | GroundCv Percent | GroundCv Percent | GroundCv Percent | GroundCv Percent | GroundCv Percent |
| 1 | NONTREATED | | | | | | | | | 28 | 37 | 48 | 49 | 52 | 44 | 139.96 |
| 2 | Fall and Spring Control | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 3 | 3.22 |
| 2 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | NOV15 | A | | | | | | | |
| 2 | AMS | 100 | DRY | 2.0 | % w/w | 17 | lb/100 gal | NOV15 | A | | | | | | | |
| 2 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | APRIL1 | B | | | | | | | |
| 2 | AMS | 100 | DRY | 2.0 | % w/w | 17 | lb/100 gal | APRIL1 | B | | | | | | | |
| 3 | Fall Control | | | | | | | | | 0 | 1 | 1 | 2 | 0 | 7 | 13.08 |
| 3 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | NOV15 | A | | | | | | | |
| 3 | AMS | 100 | DRY | 2.0 | % w/w | 17 | lb/100 gal | NOV15 | A | | | | | | | |
| 4 | Spring Control | | | | | | | | | 32 | 0 | 0 | 0 | 0 | 1 | 0.57 |
| 4 | ROUNDUP W-MAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | APRIL1 | B | | | | | | | |
| 4 | AMS | 100 | DRY | 2.0 | % w/w | 17 | lb/100 gal | APRIL1 | B | | | | | | | |
| LSD (P=.05) | | | | | | | | | | 12.2 | 8.3 | 10.5 | 9.1 | 8.6 | 6.2 | 35.713 |
| Replicate F | | | | | | | | | | 0.935 | 0.985 | 0.998 | 0.885 | 1.026 | 1.201 | 0.861 |
| Replicate Prob(F) | | | | | | | | | | 0.4862 | 0.4587 | 0.4521 | 0.5150 | 0.4372 | 0.3555 | 0.5291 |
| Treatment F | | | | | | | | | | 18.121 | 43.167 | 47.426 | 62.657 | 80.754 | 98.092 | 32.331 |
| Treatment Prob(F) | | | | | | | | | | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |

Trial Comments

1. Protocol: USDA - IPM.
2. Ratings: Starting February 1;
 Air and soil temperature using dataloggers,
 Weekly - weed species diversity and density from 4 fixed subplots, along a diagonal, within each plot. Use 0.25 or 0.5 m2 quadrants.
 Every 2 weeks - gravimetric soil moisture content, vegetative cover estimates.
3. Keep all weeds until planting, then determine label recommended rate of Roundup WeatherMax (per treatment) and apply at planting, then after planting whenever weeds are 4-8 inches (per treatment).
 Roundup WeatherMax 1.5 lbae/A applied to all plots on 5-20-05.
4. Harvest weeds and biomass by species at planting in each fixed subplot.
5. Evaluate weed control by species at 14 and 28 DAT. Rate all plots for weed control at 0, 28 and 56 DAP.
 Make any crop injury notes if observed.
6. Harvest for grain yield.
7. DAT = Days after FALL or SPRING application. DAP = Days after planting. WNTR ANN = Winter annual weeds.
 GroundCv = Ground cover. Dry Wt = Oven dry weight. 1.0m2 = 1.0 square meter. g/1.0m2 = grams per 1.0 meter square.
 Rating dates:
 14 days after FALL and SPRING applications were on 11-29-05 and 4-15-05, respectively.
 28 days after FALL and SPRING applications were on 12-13-05 and 4-29-05, respectively.
 Ratings at 18, 32, and 60 DAP were also 14, 28, and 56 days after burndown application.
8. Treatment 2 rated following SPRING application with 100% control of all weeds on 4-15-05 and 4-29-05.
9. Harvested 10-7-05, 10 ft by 27 ft.