

Fierce followed by Pyroxasulfone in Soybean.

Trial ID: 11-T4-MS30 Location: Belleville Res. Center

Investigator: Bryan Young, Professor, Southern Illinois University, bgyoung@siu.edu
 City State Zip Country: Belleville IL 62221 USA
 Trial Status: FINAL Initiation Date: 5-24-11

Objectives: Determine the rate of pyroxasulfone that is necessary to provide 2-3 weeks of residual control of waterhemp when applied early postemergence with glyphosate.

Crop 1: GLXMA Soybean Variety: AG 4005 Description: RR
 Planting Method: SEEDDED Planting Date: 5-24-11
 Rate, Unit: 75 LB/A Depth, Unit: 1.0 IN
 Row Spacing, Unit: 30 IN

Pest 1 Type: W Code: PANDI Panicum dichotomiflorum Michx. panicum, fall
 Pest 2 Type: W Code: AMATA Amaranthus rudis Sauer waterhemp, common
 Pest 3 Type: W Code: IPOHE Ipomoea hederacea (L.) Jacq. morningglory, ivyleaf

Plot Width, Unit: 10 FT Site Type: FIELD
 Plot Length, Unit: 27 FT Tillage Type: REDUCED-TILL
 Replications: 3 Study Design: Randomized Complete Block

Prior Crops, Year
 1. ZEAMD 2010

Field Prep./Maintenance: N 0 LB/A, P2O5 50 LB/A, K2O 100 LB/A

% OM: 1.9 Texture: SILT LOAM
 pH: 6.3 Soil Name: BETHALTO
 CEC: 12 Fert. Level: P1: 50 LB/A, K: 374 LB/A

Application Description

| | A | B |
|-------------------------|---------|---------|
| Application Date: | 5-24-11 | 6-10-11 |
| Time of Day: | 19:00 | 9:00 |
| Application Method: | Spray | Spray |
| Application Timing: | PRE | 2"W |
| Application Placement: | BROSOI | BROFOL |
| Applied By: | RFK | BA |
| Air Temperature, Unit: | 76 F | 86 F |
| % Relative Humidity: | 76 | 57 |
| Wind Velocity, Unit: | 0 MPH | 5 MPH |
| Wind Direction: | | SW |
| Dew Presence (Y/N): | N | N |
| Soil Temperature, Unit: | 69 F | 77 F |
| Soil Moisture: | NORMAL | NORMAL |
| % Cloud Cover: | 100 | 0 |

| | 24-5-11 | 10-6-11 |
|----------------------------|---------|---------|
| Crop stage at application: | NA | V1 |
| Height Min, Max (inch): | 2 | 3 |

Pest Stage At Each Application

| | 5-24-11 | 6-10-11 |
|--------------------------|---------|----------|
| Application Date: | 5-24-11 | 6-10-11 |
| Weed Code: | PANDI | PANDI |
| Stage Majority (leaves): | NA | 3 |
| Stage Min, Max: | | 2 3 |
| Height Majority: | | 2 IN |
| Height Min, Max: | | 1 2 |
| Density, Unit: | | 0.01 FT2 |
| Weed Code: | AMATA | AMATA |
| Stage Majority (leaves): | NA | 4 |
| Stage Min, Max: | | 4 6 |
| Height Majority: | | 2 IN |
| Height Min, Max: | | 0.5 2 |
| Density, Unit: | | 0.01 FT2 |
| Weed Code: | IPOHE | IPOHE |
| Stage Majority (leaves): | NA | 6 |
| Stage Min, Max: | | 5 6 |
| Height Majority: | | 2 IN |
| Height Min, Max: | | 0.05 2 |
| Density, Unit: | | 0.01 FT2 |

Application Equipment

| | | |
|---------------------|-------------|-------------|
| Appl. Equipment: | CO2 sprayer | CO2 sprayer |
| Operating Pressure: | 30 PSI | 30 PSI |
| Nozzle Type: | Flat fan | Flat fan |
| Nozzle Size: | XR 8002 | XR 8002 |
| Boom Length, Unit: | 7.5 FT | 7.5 FT |
| Spray Volume, Unit: | 15 GPA | 15 GPA |

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| Pest Code | | | | | GLXMA | GLXMA | GLXMA | PANDI | PANDI | AMATA | AMATA | | | | | |
|-------------------|------------------|-----------|-----------|-------|-----------|------------|-----------------|--------------|-----------|---------|---------|--------|----------|----------|----------|----------|
| Crop Code | | | | | 6-17-11 | 6-24-11 | 7-1-11 | 6-24-11 | 7-1-11 | 6-24-11 | 7-1-11 | | | | | |
| Rating Date | | | | | Injury | Injury | Injury | Control | Control | Control | Control | | | | | |
| Rating Data Type | | | | | Percent | Percent | Percent | Percent | Percent | Percent | Percent | | | | | |
| Rating Unit | | | | | | | | | | | | | | | | |
| Rating Timing | | | | | | | | | | | | | | | | |
| Trt-Eval Interval | | | | | 7 DA-B | 14 DA-B | 21 DA-B | 14 DA-B | 21 DA-B | 14 DA-B | 21 DA-B | | | | | |
| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Other Rate | Other Rate Unit | Growth Stage | Appl Code | | | | | | | |
| 1 | NONTREATED | | | | | | | | | 0 b | 0 c | 0 b | 0 c | 0 c | 0 c | 0 c |
| 2 | FIERCE | 76 | WG | 0.143 | lb ai/a | 3 | oz/a | PRE | A | 0 b | 0 c | 0 b | 91 b | 88 b | 93 b | 92 b |
| 3 | FIERCE | 76 | WG | 0.143 | lb ai/a | 3 | oz/a | PRE | A | 0 b | 0 c | 0 b | 97 a | 97 a | 98 a | 98 a |
| 3 | ROUNDUP POWERMAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | 2"W | B | | | | | | | |
| 3 | AMS | 100 | SG | 2 | % w/w | 2.5 | lb/a | 2"W | B | | | | | | | |
| 4 | FIERCE | 76 | WG | 0.143 | lb ai/a | 3 | oz/a | PRE | A | 18 a | 7 b | 5 a | 99 a | 99 a | 99 a | 99 a |
| 4 | ROUNDUP POWERMAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | 2"W | B | | | | | | | |
| 4 | V-10206 | 85 | WG | 0.053 | lb ai/a | 1 | oz/a | 2"W | B | | | | | | | |
| 4 | AMS | 100 | SG | 2 | % w/w | 2.5 | lb/a | 2"W | B | | | | | | | |
| 5 | FIERCE | 76 | WG | 0.143 | lb ai/a | 3 | oz/a | PRE | A | 18 a | 7 b | 5 a | 98 a | 98 a | 99 a | 99 a |
| 5 | ROUNDUP POWERMAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | 2"W | B | | | | | | | |
| 5 | V-10206 | 85 | WG | 0.08 | lb ai/a | 1.5 | oz/a | 2"W | B | | | | | | | |
| 5 | AMS | 100 | SG | 2 | % w/w | 2.5 | lb/a | 2"W | B | | | | | | | |
| 6 | FIERCE | 76 | WG | 0.143 | lb ai/a | 3 | oz/a | PRE | A | 20 a | 9 a | 5 a | 99 a | 99 a | 99 a | 99 a |
| 6 | ROUNDUP POWERMAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | 2"W | B | | | | | | | |
| 6 | V-10206 | 85 | WG | 0.106 | lb ai/a | 2 | oz/a | 2"W | B | | | | | | | |
| 6 | AMS | 100 | SG | 2 | % w/w | 2.5 | lb/a | 2"W | B | | | | | | | |
| LSD (P=.05) | | | | | | | | | | 2.9 | 1.1 | 0.0 | 2.7 | 2.4 | 2.4 | 2.4 |
| Replicate F | | | | | | | | | | 0.867 | 1.000 | 0.000 | 0.882 | 0.404 | 0.419 | 0.419 |
| Replicate Prob(F) | | | | | | | | | | 0.4497 | 0.4019 | 1.0000 | 0.4437 | 0.6782 | 0.6685 | 0.6685 |
| Treatment F | | | | | | | | | | 126.133 | 134.971 | 0.000 | 2078.412 | 2617.019 | 2777.762 | 2764.697 |
| Treatment Prob(F) | | | | | | | | | | 0.0001 | 0.0001 | 1.0000 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |

Means followed by same letter do not significantly differ (P=.05, LSD)

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| | | |
|-------------------|---------|---------|
| Pest Code | IPOHE | IPOHE |
| Crop Code | | |
| Rating Date | 6-24-11 | 7-1-11 |
| Rating Data Type | Control | Control |
| Rating Unit | Percent | Percent |
| Rating Timing | | |
| Trt-Eval Interval | 14 DA-B | 21 DA-B |

| Trt No. | Treatment Name | Form Conc | Form Type | Form Rate | Rate Unit | Other Rate | Other Rate Unit | Growth Stage | Appl Code | | |
|-------------------|------------------|-----------|-----------|-----------|-----------|------------|-----------------|--------------|-----------|----------|----------|
| 1 | NONTREATED | | | | | | | | | 0 c | 0 d |
| 2 | FIERCE | 76 | WG | 0.143 | lb ai/a | 3 | oz/a | PRE | A | 60 b | 60 c |
| 3 | FIERCE | 76 | WG | 0.143 | lb ai/a | 3 | oz/a | PRE | A | 93 a | 92 b |
| 3 | ROUNDUP POWERMAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | 2"W | B | | |
| 3 | AMS | 100 | SG | 2 | % w/w | 2.5 | lb/a | 2"W | B | | |
| 4 | FIERCE | 76 | WG | 0.143 | lb ai/a | 3 | oz/a | PRE | A | 96 a | 94 ab |
| 4 | ROUNDUP POWERMAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | 2"W | B | | |
| 4 | V-10206 | 85 | WG | 0.053 | lb ai/a | 1 | oz/a | 2"W | B | | |
| 4 | AMS | 100 | SG | 2 | % w/w | 2.5 | lb/a | 2"W | B | | |
| 5 | FIERCE | 76 | WG | 0.143 | lb ai/a | 3 | oz/a | PRE | A | 96 a | 96 a |
| 5 | ROUNDUP POWERMAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | 2"W | B | | |
| 5 | V-10206 | 85 | WG | 0.08 | lb ai/a | 1.5 | oz/a | 2"W | B | | |
| 5 | AMS | 100 | SG | 2 | % w/w | 2.5 | lb/a | 2"W | B | | |
| 6 | FIERCE | 76 | WG | 0.143 | lb ai/a | 3 | oz/a | PRE | A | 94 a | 95 a |
| 6 | ROUNDUP POWERMAX | 4.5 | SL | 0.77 | lb ae/a | 22 | fl oz/a | 2"W | B | | |
| 6 | V-10206 | 85 | WG | 0.106 | lb ai/a | 2 | oz/a | 2"W | B | | |
| 6 | AMS | 100 | SG | 2 | % w/w | 2.5 | lb/a | 2"W | B | | |
| LSD (P=.05) | | | | | | | | | | 3.8 | 3.2 |
| Replicate F | | | | | | | | | | 0.802 | 1.129 |
| Replicate Prob(F) | | | | | | | | | | 0.4755 | 0.3613 |
| Treatment F | | | | | | | | | | 1016.328 | 1407.226 |
| Treatment Prob(F) | | | | | | | | | | 0.0001 | 0.0001 |

Means followed by same letter do not significantly differ (P=.05, LSD)

Trial Comments

1. Protocol: Valent (V10206 MD 64.02).
2. Ratings: CI 7 and 14 DA-B; WC 14 and 21 DA-B.