

The Ohio State University

Valent Pre vs Competitor

Trial ID: 13 PREYLD Location: Western Branch Trial Year: 2013
 Protocol ID: 13 PREYLD Investigator: Dr. Mark M. Loux
 Project ID: 4600.22445 Study Director: Bryan Reeb
 Sponsor Contact: Eric Ott, Valent

General Trial Information

Study Director: Bryan Reeb **Title:** Research Technician
Investigator: Dr. Mark M. Loux **Title:** Professor

Latitude of LL Corner °: 3951.612 N
Longitude of LL Corner °: 8340.237 W

Crop Description

Crop 1: GLXMA Glycine max Soybean
Variety: Asgrow 3533 **BBCH Scale:** BSOY
Description: Roundup Ready

Planting Rate, Unit: 140000 S/A **Planting Date:** May-15-2013
Depth, Unit: 0.75 IN **Planting Method:** PLANTD planted
Row Spacing, Unit: 15 IN **Planting Equipment:** PP Plot Planter
Emergence Date: May-23-2013
Harvested Width, Unit: 6.25 FT
Harvested Length, Unit: 30 FT

Seed Bed: FINE fine

Pest Description

- Pest 1 Type:** W **Code:** AMBTR Ambrosia trifida
Common Name: Giant ragweed
- Pest 2 Type:** W **Code:** SETFA Setaria faberi
Common Name: Giant foxtail
- Pest 3 Type:** W **Code:** APCCA Apocynum cannabinum
Common Name: Hemp dogbane
- Pest 4 Type:** W **Code:** CHEAL Chenopodium album
Common Name: Common lambsquarters
- Pest 5 Type:** W **Code:** ECHCG Echinochloa crus-galli
Common Name: Common barnyardgrass

Site and Design

Treated Plot Width: 6.67 FT **Site Type:** FIELD field
Treated Plot Length: 30 FT **Experimental Unit:** 1 PLOT plot
Treated Plot Area: 200.1 FT2 **Treatments:** 8 **Tillage Type:** CONTIL conventional-till
Replications: 6 **Study Design:** RACOB� Randomized Complete Block (RCB)

Soil Description

Description Name: F-7 East
% OM: 1.8 **Texture:** SIL silt loam
pH: 5.7 **Soil Name:** Crosby Silt Loam
CEC: 16.2 **Fert. Level:** G good
Soil Drainage: G good

Application Description

| | A | B | C |
|-----------------------------------|-------------|-------------|-------------|
| Application Date: | May-16-2013 | Jun-12-2013 | Jun-19-2013 |
| Appl. Start Time: | 8:30 | 8:30 AM | 8:30 AM |
| Appl. Stop Time: | 8:45 AM | | |
| Application Method: | SPRAY | SPRAY | SPRAY |
| Application Timing: | PRE | POST | POST |
| Application Placement: | BROSOI | BROFOL | BROFOL |
| Air Temperature, Unit: | 67.8 F | 75.1 F | 64 F |
| % Relative Humidity: | 78.4 | 82.2 | 68 |
| Wind Velocity, Unit: | 1.9 MPH | 2.3 MPH | 4 MPH |
| Wind Direction: | NNW | SSW | NE |
| Dew Presence (Y/N): | | N no | Y yes |
| Soil Temperature, Unit: | 62 F | 68 F | 60 F |
| Soil Moisture: | NORMAL | MOIST | MOIST |
| % Cloud Cover: | 100 | | 10 |
| Next Moisture Occurred On: | May-17-2013 | Jun-13-2013 | Jun-26-2013 |

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Crop Stage At Each Application

| | A | | B | | C | |
|--------------------------|-------|------|-------|------|-------|------|
| Crop 1 Code, BBCH Scale: | GLXMA | BSOY | GLXMA | BSOY | GLXMA | BSOY |
| Stage Scale Used: | | | BBCH | | BBCH | |
| Stage Majority, Percent: | | | 12 | 100 | 14 | 100 |
| Stage Minimum, Percent: | | | 12 | 100 | | |
| Stage Maximum, Percent: | | | 12 | 100 | | |
| Height, Unit: | | | 7 | in | 8 | IN |
| Height Minimum, Maximum: | | | 7 | 8 | 8 | 9 |

Pest Stage At Each Application

| | A | | B | | C | |
|---------------------------|-------|---|-------|-----|-------|-----|
| Pest 1 Code, Type, Scale: | AMBTR | W | AMBTR | W | AMBTR | W |
| Stage Majority, Percent: | | | 19 | 100 | 19 | 100 |
| Stage Minimum, Percent: | | | 19 | 100 | | |
| Stage Maximum, Percent: | | | 19 | 100 | | |
| Height, Unit: | | | 10 | in | 18 | IN |
| Height Minimum, Maximum: | | | 8 | 12 | 11 | 18 |
| Density, Unit: | | | 12 | M2 | | |
| Pest 2 Code, Type, Scale: | SETFA | W | SETFA | W | SETFA | W |
| Stage Majority, Percent: | | | 12 | 100 | | |
| Stage Minimum, Percent: | | | 12 | 100 | | |
| Stage Maximum, Percent: | | | 12 | 100 | | |
| Height, Unit: | | | 10 | in | 10 | IN |
| Height Minimum, Maximum: | | | 9 | 11 | 10 | 10 |
| Density, Unit: | | | 504 | M2 | | |
| Pest 3 Code, Type, Scale: | APCCA | W | APCCA | W | APCCA | W |
| Stage Majority, Percent: | | | 19 | 100 | | |
| Stage Minimum, Percent: | | | 19 | 100 | | |
| Stage Maximum, Percent: | | | 19 | 100 | | |
| Height, Unit: | | | 20 | in | | |
| Height Minimum, Maximum: | | | 7 | 29 | | |
| Pest 4 Code, Type, Scale: | CHEAL | W | CHEAL | W | CHEAL | W |
| Stage Majority, Percent: | | | 19 | 100 | 19 | 100 |
| Stage Minimum, Percent: | | | 19 | 100 | | |
| Stage Maximum, Percent: | | | 19 | 100 | | |
| Height, Unit: | | | 6 | in | 4 | IN |
| Height Minimum, Maximum: | | | 5 | 7 | 4 | 10 |
| Density, Unit: | | | 24 | M2 | | |
| Pest 5 Code, Type, Scale: | ECHCG | W | ECHCG | W | ECHCG | W |
| Height, Unit: | | | | | 10 | IN |
| Height Minimum, Maximum: | | | | | 10 | 11 |

Application Equipment

| | A | | B | | C | |
|---------------------------|----------|--------|----------|--------|----------|--------|
| Appl. Equipment: | Backpack | | Backpack | | Backpack | |
| Equipment Type: | SPRBAC | | SPRBAC | | SPRBAC | |
| Operation Pressure, Unit: | 48 | PSI | 48 | PSI | 48 | PSI |
| Nozzle Type: | AIXR | | AIXR | | AIXR | |
| Nozzle Size: | 110015 | | 110015 | | 110015 | |
| Nozzle Spacing, Unit: | 18 | IN | 18 | IN | 18 | IN |
| Boom Length, Unit: | 6 | FT | 6 | FT | 6 | FT |
| Boom Height, Unit: | 18 | IN | 18 | IN | 18 | IN |
| Ground Speed, Unit: | 3 | MPH | 3 | MPH | 3 | MPH |
| Carrier: | WATER | | WATER | | WATER | |
| Spray Volume, Unit: | 15 | gal/ac | 15 | gal/ac | 15 | gal/ac |
| Mix Size, Unit: | 1 | Liters | 1 | Liters | 1 | Liters |
| Propellant: | COMCO2 | | COMCO2 | | COMCO2 | |

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| GLXMA | GLXMA | GLXMA | | | | | | |
|-------------------------------|---------------------|-------------|-----------------|--------------|-----------|--------|--------|--------|
| BSOY | BSOY | BSOY | | | | | | |
| Glycine max | Glycine max | Glycine max | | | | | | |
| Soybean | Soybean | Soybean | | | | | | |
| Oct-10-201 | Oct-10-201 | Oct-10-201 | | | | | | |
| 3 | 3 | 3 | | | | | | |
| MOICON | WEIGHT | YIELD | | | | | | |
| % | LBS | BU | | | | | | |
| 1 | 1 | 1 | | | | | | |
| 13 | 14 | 15 | | | | | | |
| 147 113 | 147 113 | 147 113 | | | | | | |
| 148 DP-1 | 148 DP-1 | 148 DP-1 | | | | | | |
| 140 DE-1 | 140 DE-1 | 140 DE-1 | | | | | | |
| AA TY1 | | | | | | | | |
| 1 | 1 | 1 | | | | | | |
| Pest Type | | | | | | | | |
| Pest Code | | | | | | | | |
| Pest Scientific Name | | | | | | | | |
| Pest Name | | | | | | | | |
| Crop Code | | | | | | | | |
| BBCH Scale | | | | | | | | |
| Crop Scientific Name | | | | | | | | |
| Crop Name | | | | | | | | |
| Rating Date | | | | | | | | |
| Rating Type | | | | | | | | |
| Rating Unit | | | | | | | | |
| Number of Subsamples | | | | | | | | |
| SE Group No. | | | | | | | | |
| Days After First/Last Applic. | | | | | | | | |
| Plant-Eval Interval | | | | | | | | |
| Days After Emergence | | | | | | | | |
| ARM Action Codes | | | | | | | | |
| Number of Decimals | | | | | | | | |
| Trt No. | Treatment Name | Other Rate | Other Rate Unit | Growth Stage | Appl Code | 13 | 14 | 15 |
| 1 | UTC | | | | | 14.7 a | 21.1 a | 80.9 a |
| 2 | Roundup Power Max | 32 fl oz/a | | 28 DAPL B | | 16.8 a | 17.3 a | 64.9 a |
| | 2 N-pak ams | 2.25 qt/a | | 28 DAPL B | | | | |
| | 2 Roundup Power Max | 32 fl oz/a | | 42 DAPL C | | | | |
| | 2 N-pak ams | 2.25 qt/a | | 42 DAPL C | | | | |
| 3 | Valor SX | 2 oz/a | | | A | 15.6 a | 19.1 a | 72.4 a |
| | 3 Roundup Power Max | 32 fl oz/a | | 42 DAPL C | | | | |
| | 3 N-pak ams | 2.25 qt/a | | 42 DAPL C | | | | |
| 4 | Valor XLT @ 3oz | | | | | 16.0 a | 20.4 a | 76.8 a |
| | 4 Valor SX | 1.76 oz/a | | | A | | | |
| | 4 Classic | 1.24 oz/a | | | A | | | |
| | 4 Roundup Power Max | 32 fl oz/a | | 42 DAPL C | | | | |
| | 4 N-pak ams | 2.25 qt/a | | 42 DAPL C | | | | |
| 5 | Fierce | 3 oz/a | | | A | 18.3 a | 19.8 a | 71.9 a |
| | 5 Roundup Power Max | 32 fl oz/a | | 42 DAPL C | | | | |
| | 5 N-pak ams | 2.25 qt/a | | 42 DAPL C | | | | |
| 6 | Fierce | 3.75 oz/a | | | A | 19.6 a | 21.4 a | 76.8 a |
| | 6 Roundup Power Max | 32 fl oz/a | | 42 DAPL C | | | | |
| | 6 N-pak ams | 2.25 qt/a | | 42 DAPL C | | | | |
| 7 | Authority Assist | 5 oz/a | | | A | 16.6 a | 19.1 a | 71.3 a |
| | 7 Roundup Power Max | 32 fl oz/a | | 42 DAPL C | | | | |
| | 7 N-pak ams | 2.25 qt/a | | 42 DAPL C | | | | |

Means followed by same letter do not significantly differ (P=.05, LSD)
 t=Mean descriptions are reported in transformed data units, and are not de-transformed.
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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| | | | | | | | | |
|-------------------------------|---------------------|-------------|-----------------|--------------|-----------|---------|----------|---------|
| Pest Type | | | | | | | | |
| Pest Code | | | | | | | | |
| Pest Scientific Name | | | | | | | | |
| Pest Name | | | | | | | | |
| Crop Code | | GLXMA | GLXMA | GLXMA | | | | |
| BBCH Scale | | BSOY | BSOY | BSOY | | | | |
| Crop Scientific Name | | Glycine max | Glycine max | Glycine max | | | | |
| Crop Name | | Soybean | Soybean | Soybean | | | | |
| Rating Date | | Oct-10-201 | Oct-10-201 | Oct-10-201 | | | | |
| | | 3 | 3 | 3 | | | | |
| Rating Type | | MOICON | WEIGHT | YIELD | | | | |
| Rating Unit | | % | LBS | BU | | | | |
| Number of Subsamples | | 1 | 1 | 1 | | | | |
| SE Group No. | | 13 | 14 | 15 | | | | |
| Days After First/Last Applic. | | 147 113 | 147 113 | 147 113 | | | | |
| Plant-Eval Interval | | 148 DP-1 | 148 DP-1 | 148 DP-1 | | | | |
| Days After Emergence | | 140 DE-1 | 140 DE-1 | 140 DE-1 | | | | |
| ARM Action Codes | | | | AA TY1 | | | | |
| Number of Decimals | | 1 | 1 | 1 | | | | |
| Trt No. | Treatment Name | Other Rate | Other Rate Unit | Growth Stage | Appl Code | 13 | 14 | 15 |
| | 8 Prefix | 1 qt/a | | | A | 17.6 a | 20.6 a | 76.4 a |
| | 8 Roundup Power Max | 32 fl oz/a | | 42 DAPL C | | | | |
| | 8 N-pak ams | 2.25 qt/a | | 42 DAPL C | | | | |
| LSD (P=.05) | | | | | | 4.20 | 3.09 | 8.03t |
| Standard Deviation | | | | | | 3.56 | 2.62 | 6.81t |
| CV | | | | | | 21.1 | 13.21 | 11.47 |
| Bartlett's X2 | | | | | | 22.278 | 6.798 | 7.606 |
| P(Bartlett's X2) | | | | | | 0.002* | 0.45 | 0.369 |
| Skewness | | | | | | 2.2107* | -0.8549* | -0.4983 |
| Kurtosis | | | | | | 5.8183* | 0.6627 | 0.3917 |
| Replicate F | | | | | | 1.077 | 0.478 | 0.312 |
| Replicate Prob(F) | | | | | | 0.3898 | 0.7902 | 0.9025 |
| Treatment F | | | | | | 1.168 | 1.574 | 1.290 |
| Treatment Prob(F) | | | | | | 0.3459 | 0.1757 | 0.2838 |

Crop Code
 GLXMA, BSOY, Glycine max, = US
Rating Type
 MOICON = moisture content
 WEIGHT = weight
 YIELD = yield
Rating Unit
 % = percent
 BU = bushel
Plant-Eval Interval
 148 DP-1 = 1 GLXMA May-15-2013
ARM Action Codes
 TY1 = Arcsine square root percent([15])