

Ohio State University Horticulture and Crop Science

PRE fb POST WEED CONTROL IN CORN I

Title No. 2:
 Trial ID: 10PRPOC1 Protocol ID: 10PRPOC1
 Location: WESTERN BRANCH F-7 Study Director: Anthony F. Dobbels
 Project ID: Investigator: Dr. Mark M. Loux
 Sponsor Contact:

General Trial Information

Study Director: Anthony F. Dobbels **Title:** Research Specialist
Investigator: Dr. Mark M. Loux

Trial Location

City: South Charleston **Latitude of LL Corner °:** 39.86024 N
State/Prov.: Ohio **Longitude of LL Corner °:** 83.67149 W
Postal Code: 45368 **Altitude of LL Corner, Unit:** 1109.00 FT
Country: USA

Personnel

Study Director: Anthony F. Dobbels **Title:** Research Specialist
Affiliation: The Ohio State University
Address: 7721 South Charleston Pike
Location: South Charleston OH
Postal Code: 45368 **E-mail:** dobbels.1@osu.edu
Investigator: Dr. Mark M. Loux

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: SEED CONSULTANTS 11HQ38 **Description:** RR/LL
BBCH Scale: BCOR **Planting Date:** 4/20/10
Planting Method: SEEDED seeded **Rate, Unit:** 32097 S/A
Depth, Unit: 1.5 IN
Row Spacing, Unit: 30 IN
Seed Bed: SMOOTH smooth
Soil Moisture: DRY dry **Soil Temperature, Unit:** 55 F
Harvest Date: 9/14/10 **Emergence Date:** 5/3/10
Harvested Width, Unit: 5 FT **Harvest Equipment:** MASSEY 8 XP
% Standard Moisture: 15.5 **Harvested Length, Unit:** 30 FT
Weighing Equipment: HARVEST MASTER 401 **Moisture Meter:** HARVEST MASTER

Pest Description

Pest 1 Type: W **Code:** SETFA *Setaria faberi*
Common Name: Giant foxtail

Pest 2 Type: W **Code:** AMBTR *Ambrosia trifida*
Common Name: Giant ragweed

Pest 3 Type: W **Code:** POLPY *Polygonum pensylvanicum*
Common Name: Pennsylvania smartweed

Pest 4 Type: W **Code:** CHEAL *Chenopodium album*
Common Name: Common lambsquarters

Pest 5 Type: W **Code:** ABUTH *Abutilon theophrasti*
Common Name: Velvetleaf

Site and Design

Plot Width, Unit: 6.67 FT **Site Type:** FIELD field
Plot Length, Unit: 30 FT **Experimental Unit:** 1 PLOT plot
Plot Area, Unit: 200.1 FT² **Tillage Type:** CONTIL conventional-till
Replications: 3 **Study Design:** RACOB Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Soil Description

Description Name: F-7 East
% OM: 1.8 **Texture:** SIL silt loam
pH: 6.1 **Soil Name:** Crosby
CEC: 16 **Fert. Level:** G good
Soil Drainage: G good

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Application Description

| | A | B |
|-------------------------|-----------|-----------|
| Application Date: | 4/20/10 | 5/31/10 |
| Time of Day: | 3:00 P.M. | 10:00 A.M |
| Application Method: | SPRAY | SPRAY |
| Application Timing: | PRE | POST |
| Application Placement: | BROSOI | BROFO |
| Applied By: | Loux | Ackley |
| Air Temperature, Unit: | 64 F | 78 F |
| % Relative Humidity: | 32 | 72 |
| Wind Velocity, Unit: | 3 MPH | 6 MPH |
| Wind Direction: | N | ESE |
| Dew Presence (Y/N): | N no | N no |
| Soil Temperature, Unit: | 58 F | 74 F |
| Soil Moisture: | DRY | DRY |
| % Cloud Cover: | 15 | 15 |
| Next Rain Occurred On: | 4/24/10 | 6/2/10 |

Crop Stage At Each Application

| | A | B |
|--------------------------|------------|------------|
| Crop 1 Code, BBCH Scale: | ZEAMX BCOR | ZEAMX BCOR |
| Stage Scale Used: | | BBCH |
| Stage Majority, Percent: | | 16 100 |
| Height, Unit: | | 15 IN |
| Height Minimum, Maximum: | | 14 17 |

Pest Stage At Each Application

| | A | B |
|---------------------------|---------|---------|
| Pest 1 Code, Type, Scale: | SETFA W | SETFA W |
| Stage Majority, Percent: | | 14 100 |
| Height, Unit: | | 5 IN |
| Height Minimum, Maximum: | | 4 6 |
| Density, Unit: | | 62.4 M2 |
| Pest 2 Code, Type, Scale: | AMBTR W | AMBTR W |
| Stage Majority, Percent: | | 18 100 |
| Height, Unit: | | 5 IN |
| Height Minimum, Maximum: | | 4 6 |
| Density, Unit: | | 5.2 M2 |
| Pest 3 Code, Type, Scale: | POLPY W | POLPY W |
| Stage Majority, Percent: | | 15 100 |
| Height, Unit: | | 4 IN |
| Height Minimum, Maximum: | | 4 5 |
| Density, Unit: | | 13.2 M2 |
| Pest 4 Code, Type, Scale: | CHEAL W | CHEAL W |
| Stage Majority, Percent: | | 16 100 |
| Height, Unit: | | 4 IN |
| Height Minimum, Maximum: | | 2 4 |
| Density, Unit: | | 32 M2 |
| Pest 5 Code, Type, Scale: | ABUTH W | ABUTH W |
| Stage Majority, Percent: | | 15 100 |
| Height, Unit: | | 4 IN |
| Height Minimum, Maximum: | | 3 4 |

Application Equipment

| | A | B |
|---------------------------|--------------|--------------|
| Appl. Equipment: | 6 foot boom | 6 foot boom |
| Equipment Type: | SPRBAC | SPRBAC |
| Operating Pressure, Unit: | 53 PSI | 53 PSI |
| Nozzle Type: | TEEJET DG | TEEJET DG |
| Nozzle Size: | 8002 | 8002 |
| Nozzle Spacing, Unit: | 18 IN | 18 IN |
| Boom Length, Unit: | 6 FT | 6 FT |
| Boom Height, Unit: | 20 IN | 20 IN |
| Ground Speed, Unit: | 3 MPH | 3 MPH |
| Carrier: | WATER | WATER |
| Spray Volume, Unit: | 20 GPA | 20 GPA |
| Mix Size, Unit: | 0.33 Gallons | 0.33 Gallons |
| Propellant: | CO2 | CO2 |

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| Pest Code | SETFA | AMBTR | AMBEL | CHEAL | AMARE | ABUTH | POLPY | SIDSP | | | | | |
|----------------------|-------------------|-----------|------------|-----------------|-----------|---------|---------|---------|---------|---------|----------|-----------|--------|
| Crop Code | | | | | | | | | | | | | |
| Rating Date | 7/20/10 | 7/20/10 | 7/20/10 | 7/20/10 | 7/20/10 | 7/20/10 | 7/20/10 | 7/20/10 | | | | | |
| Rating Type | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL | CONTROL | | | | | |
| Rating Unit | % | % | % | % | % | % | % | % | | | | | |
| Trt-Eval Interval | 50 DA-B | 50 DA-B | 50 DA-B | 50 DA-B | 50 DA-B | 50 DA-B | 50 DA-B | 50 DA-B | | | | | |
| Plant-Eval Interval | 91 DP-1 | 91 DP-1 | 91 DP-1 | 91 DP-1 | 91 DP-1 | 91 DP-1 | 91 DP-1 | 91 DP-1 | | | | | |
| Days After Emergence | 78 DE- | 78 DE- | 78 DE- | 78 DE- | 78 DE- | 78 DE- | 78 DE- | 78 DE- | | | | | |
| Trt No. | Treatment Name | Form Conc | Other Rate | Other Rate Unit | Appl Code | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| 13 | Lumax | 3.94 | 1.5 qt/a | | A | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 13 | Halex GT | 4.38 | 3.6 pt/a | | B | | | | | | | | |
| 13 | NIS | 100 | 6.4 oz/a | | | | | | | | | | |
| 13 | N-PAK AMS | 100 | 4 qt/a | | | | | | | | | | |
| 14 | Harness Extra 5.6 | 5.6 | 1.5 qt/a | | A | 88 | 97 | 100 | 100 | 100 | 100 | 100 | 87 |
| 14 | Yukon | 67.5 | 4 oz/a | | B | | | | | | | | |
| 14 | Roundup PowerMax | 4.5 | 22 oz/a | | | | | | | | | | |
| 14 | NIS | 100 | 3.2 oz/a | | | | | | | | | | |
| 14 | N-PAK AMS | 100 | 2 qt/a | | | | | | | | | | |
| 15 | Prequel | 100 | | | A | 84 | 94 | 100 | 95 | 100 | 100 | 100 | 85 |
| 15 | rimsulfuron | 25 | 1 oz/a | | A | | | | | | | | |
| 15 | isoxaflutole | 75 | 0.67 oz/a | | | | | | | | | | |
| 15 | Abundit | 3 | 32 oz/a | | B | | | | | | | | |
| 15 | N-PAK AMS | 100 | 4 qt/a | | | | | | | | | | |
| 16 | UTC | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LSD (P=.05) | | 8.7 | | | | 8.7 | 9.2 | 0.0 | 4.6 | 2.4 | 1.3 | 0.2 | 7.4 |
| Standard Deviation | | 5.2 | | | | 5.2 | 5.5 | 0.0 | 2.8 | 1.4 | 0.8 | 0.1 | 4.5 |
| CV | | 6.08 | | | | 6.08 | 6.25 | 0.0 | 3.01 | 1.54 | 0.81 | 0.15 | 5.23 |
| Bartlett's X2 | | 19.775 | | | | 19.775 | 16.999 | 0.0 | 1.989 | 0.0 | 1.463 | 0.0 | 14.691 |
| P(Bartlett's X2) | | 0.031* | | | | 0.031* | 0.15 | . | 0.37 | . | 0.226 | . | 0.144 |
| Replicate F | | 9.892 | | | | 9.892 | 1.288 | 0.000 | 0.943 | 1.000 | 1.771 | 1.000 | 5.175 |
| Replicate Prob(F) | | 0.0005 | | | | 0.0005 | 0.2907 | 1.0000 | 0.4008 | 0.3798 | 0.1875 | 0.3798 | 0.0117 |
| Treatment F | | 65.459 | | | | 65.459 | 56.478 | 0.000 | 239.652 | 897.000 | 3243.892 | 89961.009 | 82.536 |
| Treatment Prob(F) | | 0.0001 | | | | 0.0001 | 0.0001 | 1.0000 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |

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| Trt No. | Treatment Name | Form Conc | Other Rate | Other Rate | Appl Unit Code | |
|---------|----------------------|-----------|------------|------------|----------------|---------|
| | Pest Code | | | | | IPOHE |
| | Crop Code | | | | | |
| | Rating Date | | | | | 7/20/10 |
| | Rating Type | | | | | CONTROL |
| | Rating Unit | | | | | % |
| | Trt-Eval Interval | | | | | 50 DA-B |
| | Plant-Eval Interval | | | | | 91 DP-1 |
| | Days After Emergence | | | | | 78 DE- |
| Trt No. | Treatment Name | Form Conc | Other Rate | Other Rate | Appl Unit Code | |
| | | | | | | 33 |
| 1 | Integrity | 5.57 | 16 oz/a | | A | 94 |
| 1 | Guardsman Max | 5 | 1.5 pt/a | | | |
| 2 | Integrity | 5.57 | 16 oz/a | | A | 93 |
| 2 | Roundup PowerMax | 4.5 | 22 oz/a | | B | |
| 2 | NIS | 100 | 6.4 oz/a | | | |
| 2 | N-PAK AMS | 100 | 4 qt/a | | | |
| 3 | Lexar | 3.7 | 2.25 qt/a | | A | 95 |
| 3 | Roundup PowerMax | 4.5 | 22 oz/a | | B | |
| 3 | NIS | 100 | 6.4 oz/a | | | |
| 3 | N-PAK AMS | 100 | 4 qt/a | | | |
| 4 | Corvus | 2.63 | 3.33 oz/a | | A | 93 |
| 4 | Atrazine | 4 | 1 qt/a | | | |
| 4 | Roundup PowerMax | 4.5 | 22 oz/a | | B | |
| 4 | NIS | 100 | 6.4 oz/a | | | |
| 4 | N-PAK AMS | 100 | 4 qt/a | | | |
| 5 | Harness Extra 5.6 | 5.6 | 1.5 qt/a | | A | 100 |
| 5 | Roundup PowerMax | 4.5 | 22 oz/a | | B | |
| 5 | NIS | 100 | 6.4 oz/a | | | |
| 5 | N-PAK AMS | 100 | 4 qt/a | | | |
| 6 | Surestart | 4.25 | 1.75 pt/a | | A | 90 |
| 6 | Roundup PowerMax | 4.5 | 22 oz/a | | B | |
| 6 | NIS | 100 | 6.4 oz/a | | | |
| 6 | N-PAK AMS | 100 | 4 qt/a | | | |
| 7 | Integrity | 5.57 | 16 oz/a | | A | 98 |
| 7 | Roundup PowerMax | 4.5 | 22 oz/a | | B | |
| 7 | Status | 56 | 2.5 oz/a | | | |
| 7 | NIS | 100 | 6.4 oz/a | | | |
| 7 | N-PAK AMS | 100 | 4 qt/a | | | |
| 8 | Lumax | 3.94 | 2 qt/a | | A | 87 |
| 8 | Touchdown Total | 4.17 | 24 oz/a | | B | |
| 8 | N-PAK AMS | 100 | 4 qt/a | | | |
| 9 | Lexar | 3.7 | 2.25 qt/a | | A | 95 |
| 9 | Touchdown Total | 4.17 | 24 oz/a | | B | |
| 9 | N-PAK AMS | 100 | 4 qt/a | | | |
| 10 | Bicep II Magnum | 5.5 | 1.3 qt/a | | A | 95 |
| 10 | Touchdown Total | 4.17 | 24 oz/a | | B | |
| 10 | N-PAK AMS | 100 | 4 qt/a | | | |
| 11 | Bicep II Magnum | 5.5 | 1.3 qt/a | | A | 95 |
| 11 | Halex GT | 4.38 | 3.6 pt/a | | B | |
| 11 | NIS | 100 | 6.4 oz/a | | | |
| 11 | N-PAK AMS | 100 | 4 qt/a | | | |
| 12 | Lexar | 3.7 | 1.75 qt/a | | A | 100 |
| 12 | Halex GT | 4.38 | 3.6 pt/a | | B | |
| 12 | NIS | 100 | 6.4 oz/a | | | |
| 12 | N-PAK AMS | 100 | 4 qt/a | | | |

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| Pest Code | IPOHE | | | | |
|---------------------------|--------------|---------------|--------------------|--------------|--------|
| Crop Code | | | | | |
| Rating Date | 7/20/10 | | | | |
| Rating Type | CONTROL | | | | |
| Rating Unit | % | | | | |
| Tri-Eval Interval | 50 DA-B | | | | |
| Plant-Eval Interval | 91 DP-1 | | | | |
| Days After Emergence | 78 DE- | | | | |
| Tri Treatment No. Name | Form Conc | Other Rate | Other Rate Unit | Appl Code | 33 |
| 13 Lumax | 3.94 | 1.5 qt/a | | A | 100 |
| 13 Halex GT | 4.38 | 3.6 pt/a | | B | |
| 13 NIS | 100 | 6.4 oz/a | | | |
| 13 N-PAK AMS | 100 | 4 qt/a | | | |
| 14 Harness Extra 5.6 | 5.6 | 1.5 qt/a | | A | 97 |
| 14 Yukon | 67.5 | 4 oz/a | | B | |
| 14 Roundup PowerMax | 4.5 | 22 oz/a | | | |
| 14 NIS | 100 | 3.2 oz/a | | | |
| 14 N-PAK AMS | 100 | 2 qt/a | | | |
| 15 Prequel | 100 | | | A | 83 |
| 15 rimsulfuron | 25 | 1 oz/a | | A | |
| 15 isoxaflutole | 75 | 0.67 oz/a | | | |
| 15 Abundit | 3 | 32 oz/a | | B | |
| 15 N-PAK AMS | 100 | 4 qt/a | | | |
| 16 UTC | | | | | 0 |
| LSD (P=.05) | | | | | 9.8 |
| Standard Deviation | | | | | 5.9 |
| CV | | | | | 6.62 |
| Bartlett's X2 | | | | | 6.696 |
| P(Bartlett's X2) | | | | | 0.823 |
| Replicate F | | | | | 3.065 |
| Replicate Prob(F) | | | | | 0.0615 |
| Treatment F | | | | | 50.652 |
| Treatment Prob(F) | | | | | 0.0001 |

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PRE fb POST WEED CONTROL IN CORN I

Title No. 2:

Trial ID: 10PRPOC1 Protocol ID: 10PRPOC1
Location: WESTERN BRANCH F-7 Study Director: Anthony F. Dobbels
Project ID: Investigator: Dr. Mark M. Loux
Sponsor Contact:

Pest Code

SETFA, *Setaria faberi*, = US
AMBTR, *Ambrosia trifida*, = US
CHEAL, *Chenopodium album*, = US
AMARE, *Amaranthus retroflexus*, = US
ABUTH, *Abutilon theophrasti*, = US
POLPY, *Polygonum pensylvanicum*, = US
AMBEL, *Ambrosia artemisiifolia*, = US
SIDSP, *Sida spinosa*, = US
IPOHE, *Ipomoea hederacea*, = US

Crop Code

ZEAMX, BCOR, *Zea mays*, = US

Rating Type

PHYGEN = phytotoxicity - general / injury

Rating Unit

% = percent

Plant-Eval Interval

41 DP-1 = 1 4/20/10
48 DP-1 = 1 4/20/10
55 DP-1 = 1 4/20/10
69 DP-1 = 1 4/20/10
91 DP-1 = 1 4/20/10