

WEED CONTROL IN CORN WITH GLYPHOSATE TANK-MIXES, 2010

Trial ID: C0310 Protocol ID: C0310
Location: Campus Study Director: Andy Chomas
Project ID: Investigator: Wesley Everman

General Trial Information

Study Director: Andy Chomas
Investigator: Wesley Everman

Personnel

Study Director: Andy Chomas
Investigator: Wesley Everman

Crop Description

Crop 1: ZEAMX Zea mays Corn
Variety: P37Y14
BBCH Scale: BCOR **Planting Date:** May-4-10
Rate, Unit: 30000 S/A
Row Spacing, Unit: 30 IN

Pest Description

Pest 1 Type: W **Code:** ANGR
Common Name: annual grass

Pest 2 Type: W **Code:** CHEAL Chenopodium album
Common Name: Common lambsquarters

Pest 3 Type: W **Code:** AMARE Amaranthus retroflexus
Common Name: Redroot pigweed

Pest 4 Type: W **Code:** AMBEL Ambrosia artemisiifolia
Common Name: Common ragweed

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

Site and Design

Plot Width, Unit: 10 FT **Site Type:** FIELD field
Plot Length, Unit: 35 FT
Plot Area, Unit: 350 FT2 **Tillage Type:** CONTIL conventional-till
Replications: 3 **Study Design:** RACOB� Randomized Complete Block (RCB)

Trial Initiation Comments:
Fall Chisel, Spring Field Cultivate X2

Soil Description

% OM: 3.7 **Texture:** L loam
pH: 6.7
Analyzed By:
300 lbs/A 46-0-0, 125 lbs/A 19-19-19

Application Description

A
Application Date: Jun-1-10
Time of Day: 2:30 pm
Application Method: SPRAY
Application Timing: POST
Application Placement: BROADC
Air Temperature, Unit: 84 F
% Relative Humidity: 40
Wind Velocity, Unit: 3.5 MPH
Wind Direction: SW
Soil Temperature, Unit: 67 F
Soil Moisture: 3
% Cloud Cover: 0

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Crop Stage At Each Application**A**

Crop 1 Code, BBCH Scale: ZEAMX BCOR
Stage Scale Used: BBCH
Stage Majority, Percent: V4
Stage Minimum, Percent: V3
Stage Maximum, Percent: V4
Height, Unit: 9 IN
Height Minimum, Maximum: 9 10

Pest Stage At Each Application**A**

Pest 1 Code, Type, Scale: ANGR W
Stage Majority, Percent: L4
Stage Minimum, Percent: L4
Stage Maximum, Percent: L5
Height, Unit: 3 IN
Height Minimum, Maximum: 1 5
Density, Unit: 10 FT2
Pest 2 Code, Type, Scale: CHEAL W
Stage Majority, Percent: L6
Stage Minimum, Percent: L5
Stage Maximum, Percent: L9
Height, Unit: 2 IN
Height Minimum, Maximum: 1 4
Density, Unit: 40 FT2
Pest 3 Code, Type, Scale: AMARE W
Stage Majority, Percent: L6
Stage Minimum, Percent: L4
Stage Maximum, Percent: L8
Height, Unit: 2 IN
Height Minimum, Maximum: 0.5 3
Density, Unit: 3 FT2
Pest 4 Code, Type, Scale: AMBEL W
Stage Majority, Percent: L4
Stage Minimum, Percent: L2
Stage Maximum, Percent: L6
Height, Unit: 3 IN
Height Minimum, Maximum: 1 4
Density, Unit: 14 FT2
Pest 5 Code, Type, Scale: ABUTH W
Stage Majority, Percent: L3
Stage Minimum, Percent: L2
Stage Maximum, Percent: L4
Height, Unit: 1.5 IN
Height Minimum, Maximum: 0.5 3
Density, Unit: 1 FT2

Application Equipment

Equipment Type: CUB
Operating Pressure, Unit: 30 PSI
Nozzle Type: FF
Nozzle Size: 8003
Nozzle Spacing, Unit: 20 IN
Boom Length, Unit: 100 IN
Boom Height, Unit: 21 IN
Ground Speed, Unit: 3.5 MPH
Carrier: WATER
Spray Volume, Unit: 20 gal/ac
Mix Size, Unit: 1 gallons

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| Pest Type | W Weed W Weed W Weed W Weed W Weed | | | | | | | |
|-------------------|------------------------------------|----------|----------|----------|----------|----------|----------|-----------|
| Pest Code | ANGR CHEAL AMARE AMBEL ABUTH | | | | | | | |
| Crop Code | ZEAMX | ZEAMX | | | | | | ZEAMX |
| Rating Date | Jun-4-10 | Jun-9-10 | Jun-9-10 | Jun-9-10 | Jun-9-10 | Jun-9-10 | Jun-9-10 | Jun-22-10 |
| Rating Type | injury | injury | control | control | control | control | control | injury |
| Rating Unit | % | % | % | % | % | % | % | % |
| Trt-Eval Interval | 3 DAMP | 8 DAMP | 8 DAMP | 8 DAMP | 8 DAMP | 8 DAMP | 8 DAMP | 21 DAMP |

| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Growth Stage | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---------|--------------------|-----------|-----------|-------------|-----------|--------------|-------|-----|-----|------|-----|------|------|-----|
| 1 | Non-Treated | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | Touchdown Total | 4.17 L | | 24 fl oz/a | MP | | 0 | 0 | 90 | 100 | 100 | 100 | 100 | 0 |
| | 2 Callisto Xtra | 3.7 SC | | 20 fl oz/a | MP | | | | | | | | | |
| | 2 N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | | | | | |
| 3 | Touchdown Total | 4.17 L | | 24 fl oz/a | MP | | 0 | 0 | 93 | 99 | 100 | 100 | 100 | 0 |
| | 3 Callisto Xtra | 3.7 SC | | 24 fl oz/a | MP | | | | | | | | | |
| | 3 N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | | | | | |
| 4 | Touchdown Total | 4.17 L | | 24 fl oz/a | MP | | 0 | 0 | 95 | 98 | 100 | 99 | 100 | 0 |
| | 4 Laudis | 3.5 SC | | 2 fl oz/a | MP | | | | | | | | | |
| | 4 N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | | | | | |
| 5 | Touchdown Total | 4.17 L | | 24 fl oz/a | MP | | 2 | 0 | 99 | 99 | 100 | 99 | 100 | 0 |
| | 5 N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | | | | | |
| 6 | Halex GT | 4.39 L | | 3.6 pt/a | MP | | 0 | 0 | 95 | 97 | 100 | 98 | 100 | 0 |
| | 6 Atrazine | 4 L | | 1 pt/a | MP | | | | | | | | | |
| | 6 N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | | | | | |
| 7 | Touchdown Total | 4.17 L | | 24 fl oz/a | MP | | 0 | 0 | 98 | 99 | 100 | 100 | 100 | 0 |
| | 7 Laudis | 3.5 SC | | 2 fl oz/a | MP | | | | | | | | | |
| | 7 Atrazine | 4 L | | 1 pt/a | MP | | | | | | | | | |
| | 7 N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | | | | | |
| 8 | Touchdown Total | 4.17 L | | 24 fl oz/a | MP | | 0 | 0 | 98 | 99 | 100 | 99 | 99 | 0 |
| | 8 Impact | 2.8 SC | | 0.5 fl oz/a | MP | | | | | | | | | |
| | 8 Atrazine | 4 L | | 1 pt/a | MP | | | | | | | | | |
| | 8 N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | | | | | |
| | LSD (P=.05) | | | | | | 1.8 | 0.0 | 5.9 | 2.0 | 0.0 | 1.5 | 0.7 | 0.0 |
| | Standard Deviation | | | | | | 1.0 | 0.0 | 3.3 | 1.1 | 0.0 | 0.8 | 0.4 | 0.0 |
| | CV | | | | | | 489.9 | 0.0 | 4.0 | 1.33 | 0.0 | 0.96 | 0.47 | 0.0 |

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| Pest Type | W Weed | W Weed | W Weed | W Weed | W Weed | W Weed | W Weed | W Weed | W Weed |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|----------|
| Pest Code | ANGR | CHEAL | AMARE | AMBEL | ABUTH | ANGR | CHEAL | AMARE | |
| Crop Code | | | | | | | | | |
| Rating Date | Jun-22-10 | Jun-22-10 | Jun-22-10 | Jun-22-10 | Jun-22-10 | Jun-22-10 | Jul-6-10 | Jul-6-10 | Jul-6-10 |
| Rating Type | control | control | control | control | control | control | control | control | control |
| Rating Unit | % | % | % | % | % | % | % | % | % |
| Trt-Eval Interval | 21 DAMP | 21 DAMP | 21 DAMP | 21 DAMP | 21 DAMP | 21 DAMP | 35 DAMP | 35 DAMP | 35 DAMP |

| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Growth Stage | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---------|--------------------|-----------|-----------|-------------|-----------|--------------|------|-----|------|------|------|------|------|------|
| 1 | Non-Treated | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | Touchdown Total | 4.17 L | | 24 fl oz/a | MP | | 95 | 100 | 100 | 99 | 100 | 87 | 100 | 100 |
| | 2 Callisto Xtra | 3.7 SC | | 20 fl oz/a | MP | | | | | | | | | |
| | 2 N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | | | | | |
| 3 | Touchdown Total | 4.17 L | | 24 fl oz/a | MP | | 95 | 100 | 100 | 96 | 100 | 87 | 100 | 98 |
| | 3 Callisto Xtra | 3.7 SC | | 24 fl oz/a | MP | | | | | | | | | |
| | 3 N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | | | | | |
| 4 | Touchdown Total | 4.17 L | | 24 fl oz/a | MP | | 92 | 98 | 95 | 94 | 98 | 85 | 96 | 94 |
| | 4 Laudis | 3.5 SC | | 2 fl oz/a | MP | | | | | | | | | |
| | 4 N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | | | | | |
| 5 | Touchdown Total | 4.17 L | | 24 fl oz/a | MP | | 93 | 88 | 90 | 89 | 97 | 82 | 82 | 82 |
| | 5 N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | | | | | |
| 6 | Halex GT | 4.39 L | | 3.6 pt/a | MP | | 97 | 100 | 100 | 99 | 100 | 99 | 100 | 100 |
| | 6 Atrazine | 4 L | | 1 pt/a | MP | | | | | | | | | |
| | 6 N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | | | | | |
| 7 | Touchdown Total | 4.17 L | | 24 fl oz/a | MP | | 96 | 100 | 100 | 96 | 100 | 89 | 100 | 100 |
| | 7 Laudis | 3.5 SC | | 2 fl oz/a | MP | | | | | | | | | |
| | 7 Atrazine | 4 L | | 1 pt/a | MP | | | | | | | | | |
| | 7 N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | | | | | |
| 8 | Touchdown Total | 4.17 L | | 24 fl oz/a | MP | | 95 | 98 | 98 | 91 | 98 | 88 | 100 | 100 |
| | 8 Impact | 2.8 SC | | 0.5 fl oz/a | MP | | | | | | | | | |
| | 8 Atrazine | 4 L | | 1 pt/a | MP | | | | | | | | | |
| | 8 N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | | | | | |
| | LSD (P=.05) | | | | | | 5.2 | 4.1 | 4.4 | 6.4 | 3.2 | 7.1 | 6.1 | 4.6 |
| | Standard Deviation | | | | | | 3.0 | 2.3 | 2.5 | 3.6 | 1.9 | 4.0 | 3.5 | 2.6 |
| | CV | | | | | | 3.61 | 2.7 | 2.96 | 4.38 | 2.13 | 5.24 | 4.13 | 3.12 |

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| | | |
|-------------------|----------|----------|
| Pest Type | W Weed | W Weed |
| Pest Code | AMBEL | ABUTH |
| Crop Code | | |
| Rating Date | Jul-6-10 | Jul-6-10 |
| Rating Type | control | control |
| Rating Unit | % | % |
| Trt-Eval Interval | 35 DAMP | 35 DAMP |

| Trt No. | Treatment Name | Form Conc | Form Type | Rate | Rate Unit | Growth Stage | 17 | 18 | 19 | 20 |
|---------|--------------------|-----------|-----------|-------------|-----------|--------------|-----|-------|----|----|
| 1 | Non-Treated | | | | | | 0 | 0.0 | | |
| 2 | Touchdown Total | 4.17 L | | 24 fl oz/a | MP | | 100 | 100.0 | | |
| 2 | Callisto Xtra | 3.7 SC | | 20 fl oz/a | MP | | | | | |
| 2 | N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | |
| 3 | Touchdown Total | 4.17 L | | 24 fl oz/a | MP | | 100 | 100.0 | | |
| 3 | Callisto Xtra | 3.7 SC | | 24 fl oz/a | MP | | | | | |
| 3 | N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | |
| 4 | Touchdown Total | 4.17 L | | 24 fl oz/a | MP | | 97 | 98.3 | | |
| 4 | Laudis | 3.5 SC | | 2 fl oz/a | MP | | | | | |
| 4 | N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | |
| 5 | Touchdown Total | 4.17 L | | 24 fl oz/a | MP | | 79 | 90.0 | | |
| 5 | N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | |
| 6 | Halex GT | 4.39 L | | 3.6 pt/a | MP | | 97 | 100.0 | | |
| 6 | Atrazine | 4 L | | 1 pt/a | MP | | | | | |
| 6 | N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | |
| 7 | Touchdown Total | 4.17 L | | 24 fl oz/a | MP | | 96 | 100.0 | | |
| 7 | Laudis | 3.5 SC | | 2 fl oz/a | MP | | | | | |
| 7 | Atrazine | 4 L | | 1 pt/a | MP | | | | | |
| 7 | N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | |
| 8 | Touchdown Total | 4.17 L | | 24 fl oz/a | MP | | 87 | 96.7 | | |
| 8 | Impact | 2.8 SC | | 0.5 fl oz/a | MP | | | | | |
| 8 | Atrazine | 4 L | | 1 pt/a | MP | | | | | |
| 8 | N-Pak AMS | 100 L | | 2.5 % v/v | MP | | | | | |
| | LSD (P=.05) | | | | | | 5.3 | 4.11 | . | . |
| | Standard Deviation | | | | | | 3.0 | 2.35 | . | . |
| | CV | | | | | | 3.7 | 2.74 | . | . |