

## WEED CONTROL IN CORN WITH HPPD INHIBITORS, 2010

Trial ID: C0210 Protocol ID: C0210  
 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  
**Harvested Width, Unit:** 5 FT **Harvested Length, Unit:** 35 FT

## 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 lb/A 46-0-0, 125 lb/A 19-19-19 in Row

## Application Description

	A	B
<b>Application Date:</b>	May-4-10	Jun-4-10
<b>Time of Day:</b>	7:00 pm	5:00 pm
<b>Application Method:</b>	SPRAY	SPRAY
<b>Application Timing:</b>	PRE	MP
<b>Application Placement:</b>	BROADC	BROADC
<b>Air Temperature, Unit:</b>	78 F	82 F
<b>% Relative Humidity:</b>	31	59
<b>Wind Velocity, Unit:</b>	2.5 MPH	5 MPH
<b>Wind Direction:</b>	SW	SW
<b>Soil Temperature, Unit:</b>	61 F	72 F
<b>Soil Moisture:</b>	4	2
<b>% Cloud Cover:</b>	5	95

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## Crop Stage At Each Application

	A	B
Crop 1 Code, BBCH Scale:	ZEAMX BCOR	ZEAMX BCOR
Stage Scale Used:	BBCH	BBCH
Stage Majority, Percent:		V4
Height, Unit:		10 IN
Height Minimum, Maximum:		8 12

## Pest Stage At Each Application

	A	B
Pest 1 Code, Type, Scale:	ANGR W	ANGR W
Stage Majority, Percent:		L4
Stage Minimum, Percent:		L4
Stage Maximum, Percent:		L6
Height, Unit:		5 IN
Height Minimum, Maximum:		0.5 8
Density, Unit:		13 FT2
Pest 2 Code, Type, Scale:	CHEAL W	CHEAL W
Stage Majority, Percent:		L6
Stage Minimum, Percent:		L4
Stage Maximum, Percent:		L8
Height, Unit:		3 IN
Height Minimum, Maximum:		0.5 5
Density, Unit:		29 FT2
Pest 3 Code, Type, Scale:	AMARE W	AMARE W
Stage Majority, Percent:		L6
Stage Minimum, Percent:		L5
Stage Maximum, Percent:		L9
Height, Unit:		5 IN
Height Minimum, Maximum:		1 7
Density, Unit:		4 FT2
Pest 4 Code, Type, Scale:	AMBEL W	AMBEL W
Stage Majority, Percent:		L4
Stage Minimum, Percent:		L4
Stage Maximum, Percent:		L6
Height, Unit:		4 IN
Height Minimum, Maximum:		1 6
Density, Unit:		9 FT2
Pest 5 Code, Type, Scale:	ABUTH W	ABUTH W
Stage Majority, Percent:		L3
Stage Minimum, Percent:		L3
Stage Maximum, Percent:		14
Height, Unit:		3 IN
Height Minimum, Maximum:		3 5
Density, Unit:		1 FT2

## Application Equipment

	B	
Equipment Type:	CUB	CUB
Operating Pressure, Unit:	30 PSI	30 PSI
Nozzle Type:	FF	FF
Nozzle Size:	8003	8003
Nozzle Spacing, Unit:	20 IN	20 IN
Boom Length, Unit:	100 IN	100 IN
Boom Height, Unit:	18 IN	22 IN
Ground Speed, Unit:	3.5 MPH	3.5 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	20 gal/ac	20 gal/ac
Mix Size, Unit:	1 gallons	1 gallons

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Pest Type					W Weed	W Weed
Pest Code					ANGR	CHEAL
Crop Code						
Rating Date						
Rating Type						
Rating Unit						
Trt-Eval Interval						

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	1	2	3	4	5	6	7	
1	Non-Treated											0	0	0
2	Dual II Magnum	7.64 L		0.75 pt/a		PRE						0	99	30
3	Dual II Magnum	7.64 L		0.75 pt/a		PRE	0	0	0	0	0	0	100	100
3	Impact	2.8 SC		0.75 fl oz/a		V3-V5ZE								
3	Atrazine	4 L		1 pt/a		V3-V5ZE								
3	MSO	100 L		1 % v/v		V3-V5ZE								
3	28% UAN	100 L		2.5 % v/v		V3-V5ZE								
4	Dual II Magnum	7.64 L		0.75 pt/a		PRE	0	0	0	0	0	0	100	70
4	Impact	2.8 SC		0.5 fl oz/a		V3-V5ZE								
4	Roundup WeatherMax	4.5 L		22 fl oz/a		V3-V5ZE								
4	Ammonium Sulfate	100 DF		8.5 lb/100 gal		V3-V5ZE								
5	Dual II Magnum	7.64 L		0.75 pt/a		PRE						0	100	100
5	Impact	2.8 SC		0.5 fl oz/a		V3-V5ZE								
5	Roundup WeatherMax	4.5 L		22 fl oz/a		V3-V5ZE								
5	Atrazine	4 L		1 pt/a		V3-V5ZE								
5	Ammonium Sulfate	100 DF		8.5 lb/100 gal		V3-V5ZE								
6	Dual II Magnum	7.64 L		0.75 pt/a		PRE						0	100	65
6	Roundup WeatherMax	4.5 L		22 fl oz/a		V3-V5ZE								
6	Ammonium Sulfate	100 DF		8.5 lb/100 gal		V3-V5ZE								
7	Impact	2.8 SC		0.75 fl oz/a		V3-V5ZE						0	98	100
7	Atrazine	4 L		1 pt/a		V3-V5ZE								
7	MSO	100 L		1 % v/v		V3-V5ZE								
7	28% UAN	100 L		2.5 % v/v		V3-V5ZE								
8	Laudis	3.5 SC		3 fl oz/a		V3-V5ZE	10	3	8	0	0	0	96	100
8	Atrazine	4 L		1 pt/a		V3-V5ZE								
8	MSO	100 L		1 % v/v		V3-V5ZE								
8	28% UAN	100 L		2.5 % v/v		V3-V5ZE								
9	Impact	2.8 SC		1 fl oz/a		V3-V5ZE						0	97	100
9	Atrazine	4 L		1 pt/a		V3-V5ZE								
9	MSO	100 L		1 % v/v		V3-V5ZE								
9	28% UAN	100 L		2.5 % v/v		V3-V5ZE								
10	Capreno	3.45 SC		3 fl oz/a		V3-V5ZE	15	5	10	0	0	0	95	100
10	Atrazine	4 L		1 pt/a		V3-V5ZE								
10	MSO	100 L		1 % v/v		V3-V5ZE								
10	28% UAN	100 L		2.5 % v/v		V3-V5ZE								
	LSD (P=.05)						.	.	.	.	0.0	2.2	14.6	
	Standard Deviation						.	.	.	.	0.0	1.3	8.5	
	CV						.	.	.	.	0.0	1.44	11.09	

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	AMARE	AMBEL	ABUTH	ANGR	CHEAL	AMARE	AMBEL
Crop Code							
Rating Date	Jun-18-10	Jun-18-10	Jun-18-10	Jul-2-10	Jul-2-10	Jul-2-10	Jul-2-10
Rating Type	control	control	control	control	control	control	control
Rating Unit	%	%	%	%	%	%	%
Trt-Eval Interval	14 DAPO	14 DAPO	14 DAPO	28 DAPO	28 DAPO	28 DAPO	28 DAPO

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	8	9	10	11	12	13	14
1	Non-Treated							0	0	0	0	0	0
2	Dual II Magnum	7.64 L		0.75 pt/a		PRE	72	10	7	100	18	60	0
3	Dual II Magnum	7.64 L		0.75 pt/a		PRE	100	100	100	100	100	98	96
3	Impact	2.8 SC		0.75 fl oz/a		V3-V5ZE							
3	Atrazine	4 L		1 pt/a		V3-V5ZE							
3	MSO	100 L		1 % v/v		V3-V5ZE							
3	28% UAN	100 L		2.5 % v/v		V3-V5ZE							
4	Dual II Magnum	7.64 L		0.75 pt/a		PRE	100	98	100	93	72	87	93
4	Impact	2.8 SC		0.5 fl oz/a		V3-V5ZE							
4	Roundup WeatherMax	4.5 L		22 fl oz/a		V3-V5ZE							
4	Ammonium Sulfate	100 DF		8.5 lb/100 gal		V3-V5ZE							
5	Dual II Magnum	7.64 L		0.75 pt/a		PRE	100	100	100	94	100	100	95
5	Impact	2.8 SC		0.5 fl oz/a		V3-V5ZE							
5	Roundup WeatherMax	4.5 L		22 fl oz/a		V3-V5ZE							
5	Atrazine	4 L		1 pt/a		V3-V5ZE							
5	Ammonium Sulfate	100 DF		8.5 lb/100 gal		V3-V5ZE							
6	Dual II Magnum	7.64 L		0.75 pt/a		PRE	98	98	98	92	73	86	88
6	Roundup WeatherMax	4.5 L		22 fl oz/a		V3-V5ZE							
6	Ammonium Sulfate	100 DF		8.5 lb/100 gal		V3-V5ZE							
7	Impact	2.8 SC		0.75 fl oz/a		V3-V5ZE	100	100	100	90	98	100	99
7	Atrazine	4 L		1 pt/a		V3-V5ZE							
7	MSO	100 L		1 % v/v		V3-V5ZE							
7	28% UAN	100 L		2.5 % v/v		V3-V5ZE							
8	Laudis	3.5 SC		3 fl oz/a		V3-V5ZE	100	100	100	84	100	100	100
8	Atrazine	4 L		1 pt/a		V3-V5ZE							
8	MSO	100 L		1 % v/v		V3-V5ZE							
8	28% UAN	100 L		2.5 % v/v		V3-V5ZE							
9	Impact	2.8 SC		1 fl oz/a		V3-V5ZE	100	100	100	87	100	100	97
9	Atrazine	4 L		1 pt/a		V3-V5ZE							
9	MSO	100 L		1 % v/v		V3-V5ZE							
9	28% UAN	100 L		2.5 % v/v		V3-V5ZE							
10	Capreno	3.45 SC		3 fl oz/a		V3-V5ZE	100	100	100	87	100	100	100
10	Atrazine	4 L		1 pt/a		V3-V5ZE							
10	MSO	100 L		1 % v/v		V3-V5ZE							
10	28% UAN	100 L		2.5 % v/v		V3-V5ZE							
	LSD (P=.05)						6.0	9.8	6.6	5.9	5.5	10.7	3.9
	Standard Deviation						3.5	5.7	3.9	3.4	3.2	6.3	2.3
	CV						4.0	7.07	4.8	4.13	4.24	7.54	2.93

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed	W Weed	ZEAMX
Pest Code	ABUTH	ANGR	CHEAL	AMARE	AMBEL	ABUTH	
Crop Code							
Rating Date	Jul-2-10	Jul-26-10	Jul-26-10	Jul-26-10	Jul-26-10	Jul-26-10	Oct-6-10
Rating Type	control	control	control	control	control	control	yield
Rating Unit	%	%	%	%	%	%	bu/ac
Trt-Eval Interval	28 DAPO	52 DAPO	52 DAPO	52 DAPO	52 DAPO	52 DAPO	HARVEST

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Growth Stage	15	16	17	18	19	20	21
1	Non-Treated						0	0	0	0	0	0	54
2	Dual II Magnum	7.64 L		0.75 pt/a		PRE	28	100	27	33	0	0	93
3	Dual II Magnum	7.64 L		0.75 pt/a		PRE	98	97	100	98	93	100	216
3	Impact	2.8 SC		0.75 fl oz/a		V3-V5ZE							
3	Atrazine	4 L		1 pt/a		V3-V5ZE							
3	MSO	100 L		1 % v/v		V3-V5ZE							
3	28% UAN	100 L		2.5 % v/v		V3-V5ZE							
4	Dual II Magnum	7.64 L		0.75 pt/a		PRE	98	97	70	92	87	97	216
4	Impact	2.8 SC		0.5 fl oz/a		V3-V5ZE							
4	Roundup WeatherMax	4.5 L		22 fl oz/a		V3-V5ZE							
4	Ammonium Sulfate	100 DF		8.5 lb/100 gal		V3-V5ZE							
5	Dual II Magnum	7.64 L		0.75 pt/a		PRE	100	96	100	100	92	100	220
5	Impact	2.8 SC		0.5 fl oz/a		V3-V5ZE							
5	Roundup WeatherMax	4.5 L		22 fl oz/a		V3-V5ZE							
5	Atrazine	4 L		1 pt/a		V3-V5ZE							
5	Ammonium Sulfate	100 DF		8.5 lb/100 gal		V3-V5ZE							
6	Dual II Magnum	7.64 L		0.75 pt/a		PRE	97	93	67	93	77	93	215
6	Roundup WeatherMax	4.5 L		22 fl oz/a		V3-V5ZE							
6	Ammonium Sulfate	100 DF		8.5 lb/100 gal		V3-V5ZE							
7	Impact	2.8 SC		0.75 fl oz/a		V3-V5ZE	100	88	100	98	97	100	211
7	Atrazine	4 L		1 pt/a		V3-V5ZE							
7	MSO	100 L		1 % v/v		V3-V5ZE							
7	28% UAN	100 L		2.5 % v/v		V3-V5ZE							
8	Laudis	3.5 SC		3 fl oz/a		V3-V5ZE	100	77	100	100	97	100	215
8	Atrazine	4 L		1 pt/a		V3-V5ZE							
8	MSO	100 L		1 % v/v		V3-V5ZE							
8	28% UAN	100 L		2.5 % v/v		V3-V5ZE							
9	Impact	2.8 SC		1 fl oz/a		V3-V5ZE	100	87	100	98	93	100	220
9	Atrazine	4 L		1 pt/a		V3-V5ZE							
9	MSO	100 L		1 % v/v		V3-V5ZE							
9	28% UAN	100 L		2.5 % v/v		V3-V5ZE							
10	Capreno	3.45 SC		3 fl oz/a		V3-V5ZE	98	80	100	100	100	97	217
10	Atrazine	4 L		1 pt/a		V3-V5ZE							
10	MSO	100 L		1 % v/v		V3-V5ZE							
10	28% UAN	100 L		2.5 % v/v		V3-V5ZE							
	LSD (P=.05)						6.8	5.3	6.8	8.0	9.4	5.0	11.7
	Standard Deviation						3.9	3.1	4.0	4.6	5.5	2.9	6.8
	CV						4.82	3.83	5.23	5.71	7.43	3.71	3.62