

# University of Nebraska

## Evaluation of Impact

Trial ID: L0722  
Location: Havelock

Study Dir.: Kevin Horky  
Investigator: Dr. Mark Bernards

### GENERAL TRIAL INFORMATION

**Study Director:** Kevin Horky **Title:** Research Technician  
**Affiliation:** University of Nebraska Lincoln  
**Postal Code:** 68583  
**Investigator:** Dr. Mark Bernards **Title:** Ext. Weed Specialist  
**Affiliation:** University of Nebraska Lincoln  
**Postal Code:** 68583

### TRIAL LOCATION

**City:** Lincoln  
**State/Prov.:** NE  
**Postal Code:** 68583

**Conducted Under GLP (Y/N):** N

**Conducted Under GEP (Y/N):** N

### CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	HELAN	Common sunflower	Helianthus annuus
2.	ABUTH	Velvetleaf	Abutilon theophrasti
3.	AMAPA	Amaranth, Palmer	Amaranthus palmeri
4.	SETVI	Green foxtail	Setaria viridis

**Crop 1:** ZEAMX CORN, FIELD **Variety:** Dekalb 6019 RR  
**Planting Date:** 1/May/2007 **Planting Method:** planted  
**Rate:** 22000 seeds/acre **Depth:** 1.5 in  
**Row Spacing:** 30 in **Seed Bed:** medium  
**Soil Temperature:** 11 C **Soil Moisture:** good **Emergence Date:** 8/May/2007

### SITE AND DESIGN

**Plot Width, Unit:** 10 FT **Plot Length, Unit:** 30 FT **Reps:** 3  
**Site Type:** field  
**Tillage Type:** conventional **Study Design:** RANDOMIZED COMPLETE BLOCK

### MAINTENANCE

**Field Prep./Maintenance:** Field was disked once, Anhydrous Ammonia was applied at rate of 120 lbs Nitrogen/acre, field was then field cultivated once.

### SOIL DESCRIPTION

**% Sand:** 7 **% OM:** 2.7 **Texture:** Silt Loam  
**% Silt:** 69 **pH:** 6.8 **Soil Name:** Sharpesburg  
**% Clay:** 23 **CEC:** 26 **Fert. Level:** good

### APPLICATION DESCRIPTION

	A	B	C
<b>Application Date:</b>	2/May/2007	29/May/2007	4/Jun/2007
<b>Time of Day:</b>	10:45 am	1:30 pm	1:00 pm
<b>Application Method:</b>	Spray	Spray	Spray
<b>Application Timing:</b>	pre	epost	mpost
<b>Applic. Placement:</b>	BROS0I	BROF0L	BROF0L
<b>Air Temp., Unit:</b>	70 F	76 F	80 F
<b>% Relative Humidity:</b>	28	62	26
<b>Wind Velocity, Unit:</b>	4 mph	12 mph	8 mph
<b>Dew Presence (Y/N):</b>	n	n	n
<b>Soil Temp., Unit:</b>	11 C	12 C	15 C
<b>Soil Moisture:</b>	good	good	good
<b>% Cloud Cover:</b>	30	100	35

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## CROP STAGE AT EACH APPLICATION

	A	B	C
<b>Crop 1 Code, Stage:</b>	ZEAMX	ZEAMX	ZEAMX
<b>Stage Scale:</b>	pre	V4	V5
<b>Height, Unit:</b>		11 in	15 in

## WEED STAGE AT EACH APPLICATION

	A	B	C
<b>Weed 1 Code, Stage:</b>	HELAN	HELAN	HELAN
<b>Stage Scale:</b>	pre	4 in	10 in
<b>Density, Unit:</b>		10 m2	10 m2
<b>Weed 2 Code, Stage:</b>	ABUTH	ABUTH	ABUTH
<b>Stage Scale:</b>	pre	3 in	8 in
<b>Density, Unit:</b>		5 m2	5 m2
<b>Weed 3 Code, Stage:</b>	AMAPA	AMAPA	AMAPA
<b>Stage Scale:</b>	pre	4 in	8 in
<b>Density, Unit:</b>		15 m2	15 m2
<b>Weed 4 Code, Stage:</b>	SETVI	SETVI	SETVI
<b>Stage Scale:</b>	pre	3 in	5 in
<b>Density, Unit:</b>		5 m2	5 m2

## APPLICATION EQUIPMENT

	A	B	C
<b>Appl. Equipment:</b>	IH cub	IH cub	IH cub
<b>Operating Pressure:</b>	30	30	30
<b>Nozzle Type:</b>	Turbo Tee	Turbo Tee	Turbo Tee
<b>Nozzle Size:</b>	110015	110015	110015
<b>Nozzle Spacing, Unit:</b>	15 in	15 in	15 in
<b>Nozzles/Row:</b>	2	2	2
<b>Boom Length, Unit:</b>	10 ft	10 ft	10 ft
<b>Boom Height, Unit:</b>	18 in	24 in	30 in
<b>Ground Speed, Unit:</b>	3 mph	3 mph	3 mph
<b>Carrier:</b>	water	water	water
<b>Spray Volume, Unit:</b>	15 gpa	15 gpa	15 gpa
<b>Propellant:</b>	air	air	air

## Trial Comments

Amvac protocol 07-tpz-h-100 & H 103

Data requested

Crop Injury 7, 14, 28 DAT

Weed Control 14,28, 56 DAT

Yield

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Evaluation of Impact										
Trial ID: L0722					Study Dir.: Kevin Horkey					
Location: Havelock					Investigator: Dr. Mark Bernards					
					AMAPA ZEAMX CONTROL %	HELAN ZEAMX CONTROL %	ABUTH ZEAMX CONTROL %	SETVI ZEAMX CONTROL %	ZEAMX PHYNEC %	
					29/May/2007	29/May/2007	29/May/2007	29/May/2007	5/Jun/2007	
Trt No.	Treatment Name	Rate	Unit	Grow Stg	Plot	1	2	3	4	5
1	Check				101 210 309					
Mean =										
2	Bicep II Magnum	1.44	lb ai/a	pre	102 205 308	70 80 20	75 50 30	50 70 60	20 60 60	
Mean =						57	52	60	47	.
3	Bicep II Magnum Impact Aatrex MSO 28%	1.44 0.016 0.5 1 2.5	lb ai/a lb ai/a lb ai/a % v/v % v/v	pre epost epost epost epost	103 207 301	75 20 50	60 20 50	70 30 60	75 60 70	15 25 15
Mean =						48	43	53	68	18
4	Bicep II Magnum Callisto Aatrex COC 28%	1.44 0.094 0.5 1 2.5	lb ai/a lb ai/a lb ai/a % v/v % v/v	pre epost epost epost epost	104 209 305	75 50 60	65 60 60	75 70 75	80 70 80	2 15 25
Mean =						62	62	73	77	14
5	Bicep II Magnum Laudis Aatrex COC 28%	1.44 0.082 0.5 1 2.5	lb ai/a lb ai/a lb ai/a % v/v % v/v	pre epost epost epost epost	105 204 303	70 60 70	65 50 40	70 65 50	85 70 60	5 5 20
Mean =						67	52	62	72	10
6	Harness Impact Roundup Weathermax AMS	0.875 0.011 0.945 8.5	lb ai/a lb ai/a lb ai/a lb/100 gal	pre mpost mpost mpost	106 208 302	70 40 60	45 20 20	65 60 40	70 80 70	
Mean =						57	28	55	73	.
7	Harness Impact Roundup Weathermax Aatrex AMS	0.875 0.011 0.945 0.5 8.5	lb ai/a lb ai/a lb ai/a lb ai/a lb/100 gal	pre mpost mpost mpost mpost	107 201 304	80 60 70	40 20 40	70 60 50	80 30 75	
Mean =						70	33	60	62	.
8	Harness Roundup Weathermax AMS	0.875 0.945 8.5	lb ai/a lb ai/a lb/100 gal	pre mpost mpost	108 206 307	80 75 20	30 50 20	70 70 50	75 80 70	
Mean =						58	33	63	75	.

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Weed Code						AMAPA	HELAN	ABUTH	SETVI	ZEAMX
Crop Code						ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Rating Data Type						CONTROL	CONTROL	CONTROL	CONTROL	PHYNEC
Rating Unit						%	%	%	%	%
Rating Date						29/May/2007	29/May/2007	29/May/2007	29/May/2007	5/Jun/2007
ARM Action Codes										
# Subsamples, Dec.										
Trt No.	Treatment Name	Rate	Unit	Grow Stg	Plot	1	2	3	4	5
9	Impact	0.016	lb ai/a	epost	109					5
	Aatrex	0.5	lb ai/a	epost	202					15
	MSO	1	% v/v	epost	311					20
	28%	2.5	% v/v	epost						
				Mean =		.	.	.	.	13
10	Callisto	0.094	lb ai/a	epost	110					10
	Aatrex	0.5	lb ai/a	epost	211					10
	COC	1	% v/v	epost	306					15
	28%	2.5	% v/v	epost						
				Mean =		.	.	.	.	12
11	Laudis	0.082	lb ai/a	epost	111					5
	Aatrex	0.5	lb ai/a	epost	203					5
	COC	1	% v/v	epost	310					15
	28%	2.5	% v/v	epost						
				Mean =		.	.	.	.	8

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Weed Code					HELAN	AMAPA	ABUTH	SETVI	HELAN
Crop Code					ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Rating Data Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit					%	%	%	%	%
Rating Date					18/Jun/2007	18/Jun/2007	18/Jun/2007	18/Jun/2007	3/Jul/2007
ARM Action Codes									
# Subsamples, Dec.									
Trt	Treatment	Rate	Grow	Plot	6	7	8	9	10
No.	Name	Rate	Unit	Stg					
1	Check			101	0	0	0	0	0
				210	0	0	0	0	0
				309	0	0	0	0	0
				Mean =	0	0	0	0	0
2	Bicep II Magnum	1.44	lb ai/a	pre 102	40	45	35	30	30
				205	20	30	30	30	20
				308	20	40	40	30	20
				Mean =	27	38	35	30	23
3	Bicep II Magnum	1.44	lb ai/a	pre 103	99	99	99	80	99
	Impact	0.016	lb ai/a	epost 207	99	99	99	80	99
	Aatrex	0.5	lb ai/a	epost 301	99	99	99	99	99
	MSO	1	% v/v	epost					
	28%	2.5	% v/v	epost					
				Mean =	99	99	99	86	99
4	Bicep II Magnum	1.44	lb ai/a	pre 104	99	99	99	70	99
	Callisto	0.094	lb ai/a	epost 209	99	99	99	85	99
	Aatrex	0.5	lb ai/a	epost 305	99	99	99	60	99
	COC	1	% v/v	epost					
	28%	2.5	% v/v	epost					
				Mean =	99	99	99	72	99
5	Bicep II Magnum	1.44	lb ai/a	pre 105	99	99	99	90	99
	Laudis	0.082	lb ai/a	epost 204	99	99	99	99	99
	Aatrex	0.5	lb ai/a	epost 303	95	99	99	99	95
	COC	1	% v/v	epost					
	28%	2.5	% v/v	epost					
				Mean =	98	99	99	96	98
6	Harness	0.875	lb ai/a	pre 106	95	99	99	85	95
	Impact	0.011	lb ai/a	mpost 208	99	99	99	95	99
	Roundup Weathermax	0.945	lb ai/a	mpost 302	99	99	99	99	99
	AMS	8.5	lb/100 gal	mpost					
				Mean =	98	99	99	93	98
7	Harness	0.875	lb ai/a	pre 107	99	99	99	99	99
	Impact	0.011	lb ai/a	mpost 201	95	99	95	99	95
	Roundup Weathermax	0.945	lb ai/a	mpost 304	99	99	99	99	99
	Aatrex	0.5	lb ai/a	mpost					
	AMS	8.5	lb/100 gal	mpost					
				Mean =	98	99	98	99	98
8	Harness	0.875	lb ai/a	pre 108	95	99	99	99	95
	Roundup Weathermax	0.945	lb ai/a	mpost 206	99	99	99	90	99
	AMS	8.5	lb/100 gal	mpost 307	95	99	95	85	95
				Mean =	96	99	98	91	96
9	Impact	0.016	lb ai/a	epost 109	99	95	99	80	99
	Aatrex	0.5	lb ai/a	epost 202	95	90	90	60	95
	MSO	1	% v/v	epost 311	95	90	95	70	95
	28%	2.5	% v/v	epost					
				Mean =	96	92	95	70	96

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Weed Code						HELAN	AMAPA	ABUTH	SETVI	HELAN
Crop Code						ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Rating Data Type						CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit						%	%	%	%	%
Rating Date						18/Jun/2007	18/Jun/2007	18/Jun/2007	18/Jun/2007	3/Jul/2007
ARM Action Codes										
# Subsamples, Dec.										
Trt No.	Treatment Name	Rate	Unit	Grow Stg	Plot	6	7	8	9	10
10	Callisto	0.094	lb ai/a	epost	110	99	99	99	70	99
	Aatrex	0.5	lb ai/a	epost	211	99	99	99	50	99
	COC	1	% v/v	epost	306	95	99	99	60	95
	28%	2.5	% v/v	epost						
				Mean =		98	99	99	60	98
11	Laudis	0.082	lb ai/a	epost	111	99	99	99	80	99
	Aatrex	0.5	lb ai/a	epost	203	99	99	99	60	99
	COC	1	% v/v	epost	310	95	95	99	50	95
	28%	2.5	% v/v	epost						
				Mean =		98	98	99	63	98

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Weed Code					AMAPA	ABUTH	SETVI	HELAN	AMAPA	
Crop Code					ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	
Rating Data Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit					%	%	%	%	%	
Rating Date					3/Jul/2007	3/Jul/2007	3/Jul/2007	2/Aug/2007	2/Aug/2007	
ARM Action Codes										
# Subsamples, Dec.										
Trt	Treatment	Rate	Grow							
No.	Name	Rate	Unit	Stg	Plot	11	12	13	14	15
1	Check				101	0	0	0	0	0
					210	0	0	0	0	0
					309	0	0	0	0	0
					Mean =	0	0	0	0	0
2	Bicep II Magnum	1.44	lb ai/a	pre	102	30	30	20	30	30
					205	20	20	20	30	30
					308	30	30	20	40	40
					Mean =	27	27	20	33	33
3	Bicep II Magnum	1.44	lb ai/a	pre	103	99	99	75	95	95
	Impact	0.016	lb ai/a	epost	207	99	95	70	99	99
	Aatrex	0.5	lb ai/a	epost	301	99	99	99	99	99
	MSO	1	% v/v	epost						
	28%	2.5	% v/v	epost						
					Mean =	99	98	81	98	98
4	Bicep II Magnum	1.44	lb ai/a	pre	104	99	99	65	99	95
	Callisto	0.094	lb ai/a	epost	209	99	99	80	99	99
	Aatrex	0.5	lb ai/a	epost	305	99	99	50	99	99
	COC	1	% v/v	epost						
	28%	2.5	% v/v	epost						
					Mean =	99	99	65	99	98
5	Bicep II Magnum	1.44	lb ai/a	pre	105	99	99	85	99	99
	Laudis	0.082	lb ai/a	epost	204	99	99	99	99	99
	Aatrex	0.5	lb ai/a	epost	303	99	99	99	90	95
	COC	1	% v/v	epost						
	28%	2.5	% v/v	epost						
					Mean =	99	99	94	96	98
6	Harness	0.875	lb ai/a	pre	106	99	95	80	99	99
	Impact	0.011	lb ai/a	mpost	208	99	99	90	99	99
	Roundup Weathermax	0.945	lb ai/a	mpost	302	99	95	99	99	99
	AMS	8.5	lb/100 gal	mpost						
					Mean =	99	96	90	99	99
7	Harness	0.875	lb ai/a	pre	107	99	99	99	99	99
	Impact	0.011	lb ai/a	mpost	201	99	90	95	95	99
	Roundup Weathermax	0.945	lb ai/a	mpost	304	99	99	95	99	99
	Aatrex	0.5	lb ai/a	mpost						
	AMS	8.5	lb/100 gal	mpost						
					Mean =	99	96	96	98	99
8	Harness	0.875	lb ai/a	pre	108	99	95	99	99	90
	Roundup Weathermax	0.945	lb ai/a	mpost	206	99	95	90	99	99
	AMS	8.5	lb/100 gal	mpost	307	99	90	85	90	99
					Mean =	99	93	91	96	96
9	Impact	0.016	lb ai/a	epost	109	90	95	75	99	90
	Aatrex	0.5	lb ai/a	epost	202	85	85	50	90	90
	MSO	1	% v/v	epost	311	80	90	60	90	85
	28%	2.5	% v/v	epost						
					Mean =	85	90	62	93	88

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Weed Code						AMAPA	ABUTH	SETVI	HELAN	AMAPA
Crop Code						ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Rating Data Type						CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit						%	%	%	%	%
Rating Date						3/Jul/2007	3/Jul/2007	3/Jul/2007	2/Aug/2007	2/Aug/2007
ARM Action Codes										
# Subsamples, Dec.										
Trt No.	Treatment Name	Rate	Unit	Grow Stg	Plot	11	12	13	14	15
10	Callisto	0.094	lb ai/a	epost	110	99	99	60	95	90
	Aatrex	0.5	lb ai/a	epost	211	99	99	30	99	99
	COC	1	% v/v	epost	306	95	95	30	90	90
	28%	2.5	% v/v	epost						
				Mean =		98	98	40	95	93
11	Laudis	0.082	lb ai/a	epost	111	99	95	75	95	90
	Aatrex	0.5	lb ai/a	epost	203	99	99	50	99	99
	COC	1	% v/v	epost	310	95	95	40	90	90
	28%	2.5	% v/v	epost						
				Mean =		98	96	55	95	93

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Weed Code					ABUTH	SETVI				
Crop Code					ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	
Rating Data Type					CONTROL	CONTROL	YIELD	MOICON	YIELD	
Rating Unit					%	%	LB	%	bu/ac	
Rating Date					2/Aug/2007	2/Aug/2007	24/Oct/2007	24/Oct/2007	24/Oct/2007	
ARM Action Codes										
# Subsamples, Dec.									TY1 1	
Trt No.	Treatment Name	Rate	Unit	Grow Stg	Plot	16	17	18	19	20
1	Check				101	0	0	3	16	7.9
					210	0	0	3	17	8.7
					309	0	0	3	17	7.8
					Mean =	0	0	3	17	8.1
2	Bicep II Magnum	1.44	lb ai/a	pre	102	30	40	23	16	59.2
					205	30	40	29	17	74.5
					308	45	40	6	16	14.5
					Mean =	35	40	19	16	49.4
3	Bicep II Magnum	1.44	lb ai/a	pre	103	95	75	47	17	118.4
	Impact	0.016	lb ai/a	epost	207	90	60	40	17	100.9
	Aatrex	0.5	lb ai/a	epost	301	99	90	33	16	84.1
	MSO	1	% v/v	epost						
	28%	2.5	% v/v	epost						
					Mean =	95	75	40	16	101.1
4	Bicep II Magnum	1.44	lb ai/a	pre	104	95	65	54	16	137.6
	Callisto	0.094	lb ai/a	epost	209	99	70	48	16	123.4
	Aatrex	0.5	lb ai/a	epost	305	99	60	49	16	123.9
	COC	1	% v/v	epost						
	28%	2.5	% v/v	epost						
					Mean =	98	65	50	16	128.3
5	Bicep II Magnum	1.44	lb ai/a	pre	105	95	85	51	16	129.2
	Laudis	0.082	lb ai/a	epost	204	99	90	55	16	139.9
	Aatrex	0.5	lb ai/a	epost	303	99	99	42	17	107.7
	COC	1	% v/v	epost						
	28%	2.5	% v/v	epost						
					Mean =	98	91	49	16	125.6
6	Harness	0.875	lb ai/a	pre	106	90	80	53	16	136.5
	Impact	0.011	lb ai/a	mpost	208	99	80	51	17	128.7
	Roundup Weathermax	0.945	lb ai/a	mpost	302	90	95	20	16	50.6
	AMS	8.5	lb/100 gal	mpost						
					Mean =	93	85	41	16	105.3
7	Harness	0.875	lb ai/a	pre	107	95	95	52	16	133.0
	Impact	0.011	lb ai/a	mpost	201	90	90	48	16	121.9
	Roundup Weathermax	0.945	lb ai/a	mpost	304	99	90	41	16	104.2
	Aatrex	0.5	lb ai/a	mpost						
	AMS	8.5	lb/100 gal	mpost						
					Mean =	95	92	47	16	119.7
8	Harness	0.875	lb ai/a	pre	108	90	95	52	17	132.6
	Roundup Weathermax	0.945	lb ai/a	mpost	206	90	90	54	17	138.1
	AMS	8.5	lb/100 gal	mpost	307	90	90	48	17	123.0
					Mean =	90	92	52	17	131.2
9	Impact	0.016	lb ai/a	epost	109	90	80	38	17	97.6
	Aatrex	0.5	lb ai/a	epost	202	90	60	28	17	71.7
	MSO	1	% v/v	epost	311	90	65	42	17	106.0
	28%	2.5	% v/v	epost						
					Mean =	90	68	36	17	91.8

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Weed Code					ABUTH	SETVI	ZEAMX	ZEAMX	ZEAMX	
Crop Code					ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	
Rating Data Type					CONTROL	CONTROL	YIELD	MOICON	YIELD	
Rating Unit					%	%	LB	%	bu/ac	
Rating Date					2/Aug/2007	2/Aug/2007	24/Oct/2007	24/Oct/2007	24/Oct/2007	
ARM Action Codes										
# Subsamples, Dec.									TY1 1	
Trt	Treatment	Rate	Rate	Grow						
No.	Name	Rate	Unit	Stg	Plot	16	17	18	19	20
10	Callisto	0.094	lb ai/a	epost	110	90	70	48	16	122.4
	Aatrex	0.5	lb ai/a	epost	211	99	50	45	16	115.8
	COC	1	% v/v	epost	306	90	40	38	17	97.3
	28%	2.5	% v/v	epost						
				Mean =		93	53	44	16	111.8
11	Laudis	0.082	lb ai/a	epost	111	90	75	47	16	119.5
	Aatrex	0.5	lb ai/a	epost	203	95	60	52	17	132.5
	COC	1	% v/v	epost	310	90	50	45	17	114.4
	28%	2.5	% v/v	epost						
				Mean =		92	62	48	16	122.1
Column 20: TY1 = 2.592857*[18]*(100-[19])/85										

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## Evaluation of Impact

Trial ID: L0722

Study Dir.: Kevin Horkey

Location: Havelock

Investigator: Dr. Mark Bernards

Weed Code				AMAPA ZEAMX	HELAN ZEAMX	ABUTH ZEAMX	SETVI ZEAMX	ZEAMX PHYNEC	
Crop Code				CONTROL	CONTROL	CONTROL	CONTROL	PHYNEC	
Rating Data Type				%	%	%	%	%	
Rating Unit									
Rating Date				29/May/2007	29/May/2007	29/May/2007	29/May/2007	5/Jun/2007	
ARM Action Codes									
# Subsamples, Dec.									
Trt No.	Treatment Name	Rate	Unit	Grow Stg	1	2	3	4	5
1	Check								
2	Bicep II Magnum	1.44	lb ai/a	pre	57 a	52 a	60 a	47 a	
3	Bicep II Magnum	1.44	lb ai/a	pre	48 a	43 a	53 a	68 a	18 a
	Impact	0.016	lb ai/a	epost					
	Aatrex	0.5	lb ai/a	epost					
	MSO	1	% v/v	epost					
	28%	2.5	% v/v	epost					
4	Bicep II Magnum	1.44	lb ai/a	pre	62 a	62 a	73 a	77 a	14 a
	Callisto	0.094	lb ai/a	epost					
	Aatrex	0.5	lb ai/a	epost					
	COC	1	% v/v	epost					
	28%	2.5	% v/v	epost					
5	Bicep II Magnum	1.44	lb ai/a	pre	67 a	52 a	62 a	72 a	10 a
	Laudis	0.082	lb ai/a	epost					
	Aatrex	0.5	lb ai/a	epost					
	COC	1	% v/v	epost					
	28%	2.5	% v/v	epost					
6	Harness	0.875	lb ai/a	pre	57 a	28 a	55 a	73 a	
	Impact	0.011	lb ai/a	mpost					
	Roundup Weathermax	0.945	lb ai/a	mpost					
	AMS	8.5	lb/100 gal	mpost					
7	Harness	0.875	lb ai/a	pre	70 a	33 a	60 a	62 a	
	Impact	0.011	lb ai/a	mpost					
	Roundup Weathermax	0.945	lb ai/a	mpost					
	Aatrex	0.5	lb ai/a	mpost					
	AMS	8.5	lb/100 gal	mpost					
8	Harness	0.875	lb ai/a	pre	58 a	33 a	63 a	75 a	
	Roundup Weathermax	0.945	lb ai/a	mpost					
	AMS	8.5	lb/100 gal	mpost					
9	Impact	0.016	lb ai/a	epost					13 a
	Aatrex	0.5	lb ai/a	epost					
	MSO	1	% v/v	epost					
	28%	2.5	% v/v	epost					
10	Callisto	0.094	lb ai/a	epost					12 a
	Aatrex	0.5	lb ai/a	epost					
	COC	1	% v/v	epost					
	28%	2.5	% v/v	epost					
11	Laudis	0.082	lb ai/a	epost					8 a
	Aatrex	0.5	lb ai/a	epost					
	COC	1	% v/v	epost					
	28%	2.5	% v/v	epost					
LSD (P=.05)					34.6	23.5	20.5	28.5	9.9
Standard Deviation					19.5	13.2	11.5	16.0	5.5
CV					32.57	30.53	18.94	23.71	43.23
Grand Mean					59.76	43.33	60.95	67.62	12.61
Bartlett's X2					7.5	5.809	5.408	10.417	3.38
P(Bartlett's X2)					0.277	0.445	0.493	0.108	0.642
Replicate F					3.038	3.619	1.938	0.227	6.484
Replicate Prob(F)					0.0856	0.0589	0.1866	0.8002	0.0156
Treatment F					0.406	2.571	0.955	1.285	1.236
Treatment Prob(F)					0.8610	0.0773	0.4932	0.3341	0.3616

## University of Nebraska

Weed Code	AMAPA	HELAN	ABUTH	SETVI	
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL	PHYNEC
Rating Unit	%	%	%	%	%
Rating Date	29/May/2007	29/May/2007	29/May/2007	29/May/2007	5/Jun/2007
ARM Action Codes					
# Subsamples, Dec.					

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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# University of Nebraska

Weed Code Crop Code Rating Data Type Rating Unit Rating Date ARM Action Codes # Subsamples, Dec.				HELAN ZEAMX CONTROL %	AMAPA ZEAMX CONTROL %	ABUTH ZEAMX CONTROL %	SETVI ZEAMX CONTROL %	HELAN ZEAMX CONTROL %	
				18/Jun/2007	18/Jun/2007	18/Jun/2007	18/Jun/2007	3/Jul/2007	
Trt No.	Treatment Name	Rate	Unit	Grow Stg	6	7	8	9	10
1	Check				0 c	0 d	0 c	0 e	0 c
2	Bicep II Magnum	1.44	lb ai/a	pre	27 b	38 c	35 b	30 d	23 b
3	Bicep II Magnum	1.44	lb ai/a	pre	99 a	99 a	99 a	86 ab	99 a
	Impact	0.016	lb ai/a	epost					
	Aatrex	0.5	lb ai/a	epost					
	MSO	1	% v/v	epost					
	28%	2.5	% v/v	epost					
4	Bicep II Magnum	1.44	lb ai/a	pre	99 a	99 a	99 a	72 bc	99 a
	Callisto	0.094	lb ai/a	epost					
	Aatrex	0.5	lb ai/a	epost					
	COC	1	% v/v	epost					
	28%	2.5	% v/v	epost					
5	Bicep II Magnum	1.44	lb ai/a	pre	98 a	99 a	99 a	96 a	98 a
	Laudis	0.082	lb ai/a	epost					
	Aatrex	0.5	lb ai/a	epost					
	COC	1	% v/v	epost					
	28%	2.5	% v/v	epost					
6	Harness	0.875	lb ai/a	pre	98 a	99 a	99 a	93 a	98 a
	Impact	0.011	lb ai/a	mpost					
	Roundup Weathermax	0.945	lb ai/a	mpost					
	AMS	8.5	lb/100 gal	mpost					
7	Harness	0.875	lb ai/a	pre	98 a	99 a	98 a	99 a	98 a
	Impact	0.011	lb ai/a	mpost					
	Roundup Weathermax	0.945	lb ai/a	mpost					
	Aatrex	0.5	lb ai/a	mpost					
	AMS	8.5	lb/100 gal	mpost					
8	Harness	0.875	lb ai/a	pre	96 a	99 a	98 a	91 a	96 a
	Roundup Weathermax	0.945	lb ai/a	mpost					
	AMS	8.5	lb/100 gal	mpost					
9	Impact	0.016	lb ai/a	epost	96 a	92 b	95 a	70 bc	96 a
	Aatrex	0.5	lb ai/a	epost					
	MSO	1	% v/v	epost					
	28%	2.5	% v/v	epost					
10	Callisto	0.094	lb ai/a	epost	98 a	99 a	99 a	60 c	98 a
	Aatrex	0.5	lb ai/a	epost					
	COC	1	% v/v	epost					
	28%	2.5	% v/v	epost					
11	Laudis	0.082	lb ai/a	epost	98 a	98 a	99 a	63 c	98 a
	Aatrex	0.5	lb ai/a	epost					
	COC	1	% v/v	epost					
	28%	2.5	% v/v	epost					
LSD (P=.05)					6.5	4.3	3.7	15.3	4.2
Standard Deviation					3.8	2.5	2.2	9.0	2.4
CV					4.66	2.99	2.61	12.99	2.98
Grand Mean					82.33	83.7	83.55	69.15	82.03
Bartlett's X2					14.065	3.217	1.849	2.789	3.938
P(Bartlett's X2)					0.05	0.20	0.604	0.904	0.787
Replicate F					1.617	1.534	1.778	0.424	1.850
Replicate Prob(F)					0.2234	0.2400	0.1946	0.6602	0.1832
Treatment F					245.063	526.766	712.501	34.966	622.869
Treatment Prob(F)					0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

# University of Nebraska

Weed Code Crop Code Rating Data Type Rating Unit Rating Date ARM Action Codes # Subsamples, Dec.				AMAPA ZEAMX CONTROL %	ABUTH ZEAMX CONTROL %	SETVI ZEAMX CONTROL %	HELAN ZEAMX CONTROL %	AMAPA ZEAMX CONTROL %	ABUTH ZEAMX CONTROL %	
				3/Jul/2007	3/Jul/2007	3/Jul/2007	2/Aug/2007	2/Aug/2007	2/Aug/2007	
Trt No.	Treatment Name	Rate	Unit	Grow Stg	11	12	13	14	15	16
1	Check				0 d	0 d	0 f	0 c	0 d	0 c
2	Bicep II Magnum	1.44	lb ai/a	pre	27 c	27 c	20 e	33 b	33 c	35 b
3	Bicep II Magnum	1.44	lb ai/a	pre	99 a	98 ab	81 abc	98 a	98 a	95 a
	Impact	0.016	lb ai/a	epost						
	Aatrex	0.5	lb ai/a	epost						
	MSO	1	% v/v	epost						
	28%	2.5	% v/v	epost						
4	Bicep II Magnum	1.44	lb ai/a	pre	99 a	99 a	65 bcd	99 a	98 a	98 a
	Callisto	0.094	lb ai/a	epost						
	Aatrex	0.5	lb ai/a	epost						
	COC	1	% v/v	epost						
	28%	2.5	% v/v	epost						
5	Bicep II Magnum	1.44	lb ai/a	pre	99 a	99 a	94 a	96 a	98 a	98 a
	Laudis	0.082	lb ai/a	epost						
	Aatrex	0.5	lb ai/a	epost						
	COC	1	% v/v	epost						
	28%	2.5	% v/v	epost						
6	Harness	0.875	lb ai/a	pre	99 a	96 ab	90 ab	99 a	99 a	93 a
	Impact	0.011	lb ai/a	mpost						
	Roundup Weathermax	0.945	lb ai/a	mpost						
	AMS	8.5	lb/100 gal	mpost						
7	Harness	0.875	lb ai/a	pre	99 a	96 ab	96 a	98 a	99 a	95 a
	Impact	0.011	lb ai/a	mpost						
	Roundup Weathermax	0.945	lb ai/a	mpost						
	Aatrex	0.5	lb ai/a	mpost						
	AMS	8.5	lb/100 gal	mpost						
8	Harness	0.875	lb ai/a	pre	99 a	93 ab	91 ab	96 a	96 a	90 a
	Roundup Weathermax	0.945	lb ai/a	mpost						
	AMS	8.5	lb/100 gal	mpost						
9	Impact	0.016	lb ai/a	epost	85 b	90 b	62 cd	93 a	88 b	90 a
	Aatrex	0.5	lb ai/a	epost						
	MSO	1	% v/v	epost						
	28%	2.5	% v/v	epost						
10	Callisto	0.094	lb ai/a	epost	98 a	98 ab	40 d	95 a	93 ab	93 a
	Aatrex	0.5	lb ai/a	epost						
	COC	1	% v/v	epost						
	28%	2.5	% v/v	epost						
11	Laudis	0.082	lb ai/a	epost	98 a	96 ab	55 cd	95 a	93 ab	92 a
	Aatrex	0.5	lb ai/a	epost						
	COC	1	% v/v	epost						
	28%	2.5	% v/v	epost						
LSD (P=.05)					4.2	5.4	19.9	6.6	5.7	6.9
Standard Deviation					2.5	3.2	11.7	3.9	3.3	4.1
CV					3.0	3.91	18.46	4.73	4.09	5.11
Grand Mean					81.91	81.09	63.15	81.91	81.33	79.76
Bartlett's X2					2.494	4.443	7.182	2.64	4.082	5.15
P(Bartlett's X2)					0.476	0.728	0.517	0.916	0.77	0.642
Replicate F					1.396	1.417	0.738	1.022	2.513	1.372
Replicate Prob(F)					0.2706	0.2658	0.4905	0.3779	0.1063	0.2765
Treatment F					595.565	346.825	22.858	219.459	294.537	183.587
Treatment Prob(F)					0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

# University of Nebraska

Weed Code Crop Code Rating Data Type Rating Unit Rating Date ARM Action Codes # Subsamples, Dec.				SETVI ZEAMX CONTROL %	ZEAMX YIELD LB	ZEAMX MOICON %	ZEAMX YIELD bu/ac	
				2/Aug/2007	24/Oct/2007	24/Oct/2007	24/Oct/2007 TY1 1	
Trt No.	Treatment Name	Rate	Unit	Grow Stg	17	18	19	20
1	Check				0 f	3 c	17 a	8.1 c
2	Bicep II Magnum	1.44	lb ai/a	pre	40 e	19 b	16 a	49.4 b
3	Bicep II Magnum	1.44	lb ai/a	pre	75 abc	40 a	16 a	101.1 a
	Impact	0.016	lb ai/a	epost				
	Aatrex	0.5	lb ai/a	epost				
	MSO	1	% v/v	epost				
	28%	2.5	% v/v	epost				
4	Bicep II Magnum	1.44	lb ai/a	pre	65 bcd	50 a	16 a	128.3 a
	Callisto	0.094	lb ai/a	epost				
	Aatrex	0.5	lb ai/a	epost				
	COC	1	% v/v	epost				
	28%	2.5	% v/v	epost				
5	Bicep II Magnum	1.44	lb ai/a	pre	91 a	49 a	16 a	125.6 a
	Laudis	0.082	lb ai/a	epost				
	Aatrex	0.5	lb ai/a	epost				
	COC	1	% v/v	epost				
	28%	2.5	% v/v	epost				
6	Harness	0.875	lb ai/a	pre	85 ab	41 a	16 a	105.3 a
	Impact	0.011	lb ai/a	mpost				
	Roundup Weathermax	0.945	lb ai/a	mpost				
	AMS	8.5	lb/100 gal	mpost				
7	Harness	0.875	lb ai/a	pre	92 a	47 a	16 a	119.7 a
	Impact	0.011	lb ai/a	mpost				
	Roundup Weathermax	0.945	lb ai/a	mpost				
	Aatrex	0.5	lb ai/a	mpost				
	AMS	8.5	lb/100 gal	mpost				
8	Harness	0.875	lb ai/a	pre	92 a	52 a	17 a	131.2 a
	Roundup Weathermax	0.945	lb ai/a	mpost				
	AMS	8.5	lb/100 gal	mpost				
9	Impact	0.016	lb ai/a	epost	68 bcd	36 a	17 a	91.8 a
	Aatrex	0.5	lb ai/a	epost				
	MSO	1	% v/v	epost				
	28%	2.5	% v/v	epost				
10	Callisto	0.094	lb ai/a	epost	53 de	44 a	16 a	111.8 a
	Aatrex	0.5	lb ai/a	epost				
	COC	1	% v/v	epost				
	28%	2.5	% v/v	epost				
11	Laudis	0.082	lb ai/a	epost	62 cd	48 a	16 a	122.1 a
	Aatrex	0.5	lb ai/a	epost				
	COC	1	% v/v	epost				
	28%	2.5	% v/v	epost				
LSD (P=.05)					15.0	11.4	0.4	29.01
Standard Deviation					8.8	6.7	0.2	17.03
CV					13.43	17.14	1.36	17.12
Grand Mean					65.73	39.03	16.43	99.51
Bartlett's X2					8.905	23.178	10.046	22.987
P(Bartlett's X2)					0.35	0.01*	0.437	0.011*
Replicate F					1.443	6.170	1.296	6.202
Replicate Prob(F)					0.2599	0.0082	0.2955	0.0080
Treatment F					29.318	14.985	1.035	15.036
Treatment Prob(F)					0.0001	0.0001	0.4511	0.0001

Means followed by same letter do not significantly differ (P=.05, Student-Newman-Keuls)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

Column 20: TY1 = 2.592857\*[18]\*(100-[19])/85