

# University of Nebraska

## Preplant burndown treatments in corn

Trial ID: L0718  
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.	LAMAM	Henbit	Lamium amplexicaule
2.	DESSS	Tansymustard	Descurainia sp.
3.	CAPBP	Shepherd's purse	Capsella bursa-pastoris
4.	ALOCA	Foxtail, Carolina	Alopecurus carolinianus
5.	ERICA	Horseweed, Canada	Erigeron canadensis

**Crop 1:** ZEAMX CORN, FIELD **Variety:** Dekalb 6019 RR  
**Planting Date:** 17/May/2007 **Planting Method:** planted  
**Rate:** 22000 seeds/acre **Depth:** 1.5 in  
**Row Spacing:** 30 in **Seed Bed:** good  
**Soil Temperature:** 12 C **Soil Moisture:** good **Emergence Date:** 23/May/2007

### SITE AND DESIGN

**Plot Width, Unit:** 10 FT **Plot Length, Unit:** 30 FT **Reps:** 3  
**Site Type:** field  
**Tillage Type:** no-till **Study Design:** RANDOMIZED COMPLETE BLOCK

### MAINTENANCE

**Field Prep./Maintenance:** Anhydrous Ammonia was applied at rate of 120 lbs Nitrogen/ acre.

### SOIL DESCRIPTION

**% Sand:** 6 **% OM:** 3.1 **Texture:** Silty Clay Loam  
**% Silt:** 65 **pH:** 6.6 **Soil Name:** Sharpesburg  
**% Clay:** 29 **CEC:** 31 **Fert. Level:** good

### APPLICATION DESCRIPTION

	A
<b>Application Date:</b>	2/May/2007
<b>Time of Day:</b>	6:30 pm
<b>Application Method:</b>	Spray
<b>Application Timing:</b>	pp
<b>Applic. Placement:</b>	BROFOL
<b>Air Temp., Unit:</b>	70 F
<b>% Relative Humidity:</b>	31
<b>Wind Velocity, Unit:</b>	8 mph
<b>Dew Presence (Y/N):</b>	n
<b>Soil Temp., Unit:</b>	12 C
<b>Soil Moisture:</b>	good
<b>% Cloud Cover:</b>	30

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## CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	ZEAMX
Stage Scale:	pre

## WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	LAMAM bloom
Stage Scale:	5in
Density, Unit:	50 m2
Weed 2 Code, Stage:	DESSS bloom
Stage Scale:	18in
Density, Unit:	6 m2
Weed 3 Code, Stage:	CAPBP bloom
Stage Scale:	18 in
Density, Unit:	4 m2
Weed 4 Code, Stage:	ALOCA
Stage Scale:	8 in
Density, Unit:	15 m2
Weed 5 Code, Stage:	ERICA

## APPLICATION EQUIPMENT

	A
Appl. Equipment:	IH cub
Operating Pressure:	30
Nozzle Type:	Turbo Tee
Nozzle Size:	110015
Nozzle Spacing, Unit:	15 in
Nozzles/Row:	2
Boom Length, Unit:	10 ft
Boom Height, Unit:	28 in
Ground Speed, Unit:	3 mph
Carrier:	water
Spray Volume, Unit:	15 gpa
Propellant:	air

## Trial Comments

FMC Burndown protocol

Data requested  
weed control - 7, 14 DAT

Apply 14 Days before planting

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Weed Code			LAMAM	DESSS	CAPSS	ALOCA	ERICA	
Crop Code			ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	
Rating Data Type			CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit			%	%	%	%	%	
Rating Date			9/May/2007	9/May/2007	9/May/2007	9/May/2007	9/May/2007	
Trt-Eval Interval			7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A	
Trt Treatment	Rate	Grow						
No. Name	Unit	Stg	Plot	1	2	3	4	5
1 Check			101	0	0	0	0	0
			205	0	0	0	0	0
			302	0	0	0	0	0
			Mean =	0	0	0	0	0
2 Rage D-tech	0.75 pt/a	pp	102	20	50	30	10	50
COC	1 qt/a	pp	204	50	70	65	5	40
			307	60	75	75	10	60
			Mean =	43	65	57	8	50
3 Rage D-tech	0.5 pt/a	pp	103	20	50	40	10	50
Roundup Original Max	22 oz/a	pp	201	60	60	65	30	60
AMS	2.5 lb/a	pp	305	70	70	75	10	65
			Mean =	50	60	60	17	58
4 2,4-D ester	1.5 pt/a	pp	104	15	10	20	10	10
			206	20	20	20	10	10
			303	20	20	20	10	20
			Mean =	18	17	20	10	13
5 Roundup Original Max	22 oz/a	pp	105	20	50	60	10	60
AMS	2.5 lb/a	pp	207	20	50	65	20	60
			306	60	70	70	10	60
			Mean =	33	57	65	13	60
6 2,4-D ester	1 pt/a	pp	106	20	50	60	10	50
Roundup Original Max	22 oz/a	pp	203	60	65	65	40	50
AMS	2.5 lb/a	pp	301	50	60	20	40	60
			Mean =	43	58	48	30	53
7 Rage D-tech	0.5 pt/a	pp	107	95	70	95	15	95
Atrazine	1 lb ai/a	pp	202	95	90	95	20	90
COC	1 qt/a	pp	304	90	85	85	20	85
			Mean =	93	82	92	18	90

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Weed Code					LAMAM	DESSS	CAPSS	ALOCA	ERICA	
Crop Code					ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	
Rating Data Type					CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	
Rating Unit					%	%	%	%	%	
Rating Date					16/May/2007	16/May/2007	16/May/2007	16/May/2007	16/May/2007	
Trt-Eval Interval					14 DA-A	14 DA-A	14 DA-A	14 DA-A	14 DA-A	
Trt No.	Treatment Name	Rate	Unit	Grow Stg	Plot	6	7	8	9	10
1	Check				101	0	0	0	0	0
					205	0	0	0	0	0
					302	0	0	0	0	0
				Mean =		0	0	0	0	0
2	Rage D-tech	0.75	pt/a	pp	102	85	95	95	20	95
	COC	1	qt/a	pp	204	60	95	90	20	90
					307	90	85	95	10	95
				Mean =		78	92	93	17	93
3	Rage D-tech	0.5	pt/a	pp	103	90	99	99	95	95
	Roundup Original Max	22	oz/a	pp	201	90	99	99	99	95
	AMS	2.5	lb/a	pp	305	99	99	99	90	95
				Mean =		93	99	99	95	95
4	2,4-D ester	1.5	pt/a	pp	104	85	90	95	10	90
					206	90	85	95	10	90
					303	70	80	85	20	90
				Mean =		82	85	92	13	90
5	Roundup Original Max	22	oz/a	pp	105	85	99	99	90	95
	AMS	2.5	lb/a	pp	207	90	99	99	99	95
					306	85	99	99	85	95
				Mean =		87	99	99	91	95
6	2,4-D ester	1	pt/a	pp	106	99	99	99	99	95
	Roundup Original Max	22	oz/a	pp	203	85	99	99	99	90
	AMS	2.5	lb/a	pp	301	99	99	99	99	95
				Mean =		94	99	99	99	93
7	Rage D-tech	0.5	pt/a	pp	107	99	99	99	95	99
	Atrazine	1	lb ai/a	pp	202	99	99	99	99	99
	COC	1	qt/a	pp	304	99	99	99	99	99
				Mean =		99	99	99	98	99

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Weed Code	LAMAM	DESSS	CAPSS	ALOCA	ERICA	LAMAM		
Crop Code	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX	ZEAMX		
Rating Data Type	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL		
Rating Unit	%	%	%	%	%	%		
Rating Date	9/May/2007	9/May/2007	9/May/2007	9/May/2007	9/May/2007	16/May/2007		
Trt-Eval Interval	7 DA-A	7 DA-A	7 DA-A	7 DA-A	7 DA-A	14 DA-A		
Trt Treatment	Rate	Grow						
No. Name	Rate Unit	Stg	1	2	3	4	5	6
1 Check			0 c	0 d	0 c	0 b	0 d	0 b
2 Rage D-tech	0.75 pt/a	pp	43 b	65 b	57 ab	8 b	50 b	78 a
COC	1 qt/a	pp						
3 Rage D-tech	0.5 pt/a	pp	50 b	60 b	60 ab	17 ab	58 b	93 a
Roundup Orginal Max	22 oz/a	pp						
AMS	2.5 lb/a	pp						
4 2,4-D ester	1.5 pt/a	pp	18 bc	17 c	20 c	10 b	13 c	82 a
5 Roundup Orginal Max	22 oz/a	pp	33 b	57 b	65 ab	13 ab	60 b	87 a
AMS	2.5 lb/a	pp						
6 2,4-D ester	1 pt/a	pp	43 b	58 b	48 b	30 a	53 b	94 a
Roundup Orginal Max	22 oz/a	pp						
AMS	2.5 lb/a	pp						
7 Rage D-tech	0.5 pt/a	pp	93 a	82 a	92 a	18 ab	90 a	99 a
Atrazine	1 lb ai/a	pp						
COC	1 qt/a	pp						
LSD (P=.05)			24.6	10.8	26.9	13.7	9.8	15.0
Standard Deviation			13.8	6.1	15.1	7.7	5.5	8.5
CV			34.32	12.57	31.0	55.59	11.87	11.1
Grand Mean			40.24	48.33	48.81	13.81	46.43	76.14
Bartlett's X2			10.504	1.393	6.171	8.1	1.179	5.121
P(Bartlett's X2)			0.062	0.925	0.187	0.088	0.882	0.275
Replicate F			5.101	10.484	0.769	2.202	2.235	0.542
Replicate Prob(F)			0.0249	0.0023	0.4848	0.1532	0.1496	0.5952
Treatment F			13.322	68.194	12.007	4.465	91.176	49.564
Treatment Prob(F)			0.0001	0.0001	0.0002	0.0133	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.

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Weed Code				DESSS	CAPSS	ALOCA	ERICA
Crop Code				ZEAMX	ZEAMX	ZEAMX	ZEAMX
Rating Data Type				CONTROL	CONTROL	CONTROL	CONTROL
Rating Unit				%	%	%	%
Rating Date				16/May/2007	16/May/2007	16/May/2007	16/May/2007
Trt-Eval Interval				14 DA-A	14 DA-A	14 DA-A	14 DA-A
Trt No.	Treatment Name	Rate	Grow Unit	7	8	9	10
1	Check			0 d	0 c	0 c	0 d
2	Rage D-tech	0.75 pt/a	pp	92 b	93 ab	17 b	93 b
	COC	1 qt/a	pp				
3	Rage D-tech	0.5 pt/a	pp	99 a	99 a	95 a	95 b
	Roundup Original Max	22 oz/a	pp				
	AMS	2.5 lb/a	pp				
4	2,4-D ester	1.5 pt/a	pp	85 c	92 b	13 b	90 c
5	Roundup Original Max	22 oz/a	pp	99 a	99 a	91 a	95 b
	AMS	2.5 lb/a	pp				
6	2,4-D ester	1 pt/a	pp	99 a	99 a	99 a	93 b
	Roundup Original Max	22 oz/a	pp				
	AMS	2.5 lb/a	pp				
7	Rage D-tech	0.5 pt/a	pp	99 a	99 a	98 a	99 a
	Atrazine	1 lb ai/a	pp				
	COC	1 qt/a	pp				
LSD (P=.05)				4.8	4.5	8.0	2.5
Standard Deviation				2.7	2.5	4.5	1.4
CV				3.27	3.04	7.66	1.74
Grand Mean				81.81	83.0	58.95	80.81
Bartlett's X2				0.04	0.862	2.041	0.0
P(Bartlett's X2)				0.842	0.353	0.728	1.00
Replicate F				2.167	0.563	0.997	2.400
Replicate Prob(F)				0.1573	0.5841	0.3975	0.1328
Treatment F				558.753	637.473	313.190	1930.816
Treatment Prob(F)				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.