

2008 metolachlor vs. acetochlor - corn efficacy

Trial ID: 08 MAN Parallel Heavy	Protocol ID: 08 MAN Parallel
Location: Concord, NE	Study Director: Stevan Knezevic
	Investigator: Stevan Knezevic

General Trial Information

Study Director: Stevan Knezevic
Investigator: Stevan Knezevic

Trial Location

City: Concord
State/Prov.: NE
Postal Code: 68728
Country: USA

Cooperator/Landowner

Cooperator: Haskell Agricultural Laboratory	Country: USA
Organization: University of Nebraska	Phone No: 402-584-2261
Address 1: 57905 866 RD	Fax No: 402-584-3859
City: Concord	
State/Prov: NE	
Postal Code: 68728	

Crop Description

Crop 1: ZEAMX Zea mays	Corn
Variety: Dekalb DKC 54-20	Description: RR2 CB
BBCH Scale: BCOR	Planting Date: 06-02-08
Planting Method: seeded	Rate, Unit: 24503 s/a
Depth, Unit: 1.75 in	
Row Spacing, Unit: 30 in	
Harvest Date: 11-03-08	Harvest Equipment: Almaco sheller
Harvested Width, Unit: 5 ft	Harvested Length, Unit: 12 ft
% Standard Moisture: 15.5	Moisture Meter: Dickey John GAC 2000
Weighing Equipment: Ohaus 100# scale	

Pest Description

Pest 1 Type: W	Code: SETVI	Setaria viridis (L.) P.Beauv.
	Common Name: Foxtail, green	
Pest 2 Type: W	Code: CCHIN	Cenchrus incertis M.A.Curtis
	Common Name: Sandbur, field	
Pest 3 Type: W	Code: ABUTH	Abutilon theophrasti Medik.
	Common Name: Velvetleaf	
Pest 4 Type: W	Code: AMATU	Amaranthus tuberculatos (Moq.) J
	Common Name: Waterhemp, tall	

Site and Design

Plot Width, Unit: 10	FT	Site Type: FIELD
Plot Length, Unit: 30	FT	Tillage Type: MINIMUM-TILL
Replications: 4		Study Design: Randomized Complete Block

Field Prep./Maintenance:
Field cultivated 6-1-08

Soil Description

% Sand: 16	% OM: 3.3	Texture: SILT LOAM
% Silt: 62	pH: 6.9	
% Clay: 22	CEC: 16.9	Fert. Level: FAIR
Analyzed By:		
Midwest Labs		

	Date	Amount	Unit	Type
1.	06-02-08	0.05	IN	RAIN
2.	06-03-08	0.70	IN	RAIN
3.	06-05-08	0.40	IN	RAIN
4.	06-06-08	0.31	IN	RAIN
5.	06-08-08	0.86	IN	RAIN
6.	06-11-08	0.05	IN	RAIN
7.	06-12-08	0.10	IN	RAIN
8.	06-19-08	1.20	IN	SPRINKLER - CENTER PIVOT
9.	06-20-08	0.33	IN	RAIN
10.	06-27-08	1.70	IN	SPRINKLER - CENTER PIVOT
11.	06-28-08	0.09	IN	RAIN
12.	07-02-08	1.10	IN	SPRINKLER - CENTER PIVOT
13.	07-05-08	0.68	IN	RAIN
14.	07-07-08	1.22	IN	RAIN
15.	07-10-08	0.35	IN	RAIN
16.	07-12-08	0.30	IN	RAIN
17.	07-14-08	1.70	IN	SPRINKLER - CENTER PIVOT
18.	07-15-08	1.25	IN	SPRINKLER - CENTER PIVOT
19.	07-16-08	0.18	IN	RAIN
20.	07-18-08	1.36	IN	RAIN
21.	07-20-08	0.15	IN	RAIN
22.	07-21-08	0.65	IN	RAIN

Application Description

	A
Application Date:	06-02-08
Time of Day:	11:00 pm
Application Method:	spray
Application Timing:	PRE
Application Placement:	surface
Applied By:	js
Air Temperature, Unit:	70 F
% Relative Humidity:	80
Wind Velocity, Unit:	8 mph
Wind Direction:	e
Dew Presence (Y/N):	n
Soil Temperature, Unit:	70 F
Soil Moisture:	good
% Cloud Cover:	50

Crop Stage At Each Application

	A
Crop 1 Code, BBCH Scale:	ZEAMX BCOR

Pest Stage At Each Application

	A
Pest 1 Code, Disc., Scale:	SETVI W
Pest 2 Code, Disc., Scale:	CCHIN W
Pest 3 Code, Disc., Scale:	ABUTH W
Pest 4 Code, Disc., Scale:	AMATU W

Application Equipment

	A
Appl. Equipment:	backpack
Operating Pressure, Unit:	20 psi
Nozzle Type:	Turbo Tee
Nozzle Size:	11003
Nozzle Spacing, Unit:	20 IN
Boom Length, Unit:	10 FT
Boom Height, Unit:	12 IN
Ground Speed, Unit:	2.7 MPH
Carrier:	WATER
Spray Volume, Unit:	20 GPA
Mix Size, Unit:	1.8 Liters
Propellant:	co2

Northeast Research & Extension Center

2008 metolachlor vs. acetochlor - corn efficacy

Trial ID: 08 MAN Parallel Heavy Protocol ID: 08 MAN Parallel
 Location: Concord, NE Study Director: Stevan Knezevic
 Investigator: Stevan Knezevic

Description	Corn, field	Corn, field	Corn, field	Corn, field	WEEDS	Green Foxtail	Green Foxtail	Green Foxtail	Green Foxtail	Sandbur					
Rating Date	11-03-08	11-03-08	11-03-08	11-03-08	06-18-08	07-01-08	07-14-08	07-14-08	08-06-08	07-14-08					
Rating Data Type	Yield	Moisture	Harv Stand	Harv Ears	OverallCont	Control	Control	Density	Control	Control					
Rating Unit	bu/A15.5	Percent	plants/A	Ears/A	Percent	Percent	Percent	m2 RunCH	Percent	Percent					
Days After First/Last Applic.	154 154	154 154	154 154	154 154	16 16	29 29	42 42	42 42	65 65	42 42					
Trt-Eval Interval	154 DA-A	154 DA-A	154 DA-A	154 DA-A	16 DA-A	29 DA-A	42 DA-A	42 DA-A	65 DA-A	42 DA-A					
Plant-Eval Interval	154 DP-1	154 DP-1	154 DP-1	154 DP-1	16 DP-1	29 DP-1	42 DP-1	42 DP-1	65 DP-1	42 DP-1					
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage										
1	Parallel	0.9 pt/a	0.88 lb a/a		PRE	173.2 a	14.8 a	25435.9 a	24035.8 a	100.0 a	60.0 d	15.0 f	1.0 a	20.0 g	20.0 e
2	Harness	1.0 pt/a	0.875 lb a/a		PRE	199.7 a	14.8 a	26499.0 a	25773.0 a	100.0 a	75.0 c	21.3 f	1.0 a	27.5 fg	25.0 de
3	Parallel	1.35 pt/a	1.32 lb a/a		PRE	200.1 a	14.9 a	26680.5 a	25228.5 a	100.0 a	72.5 c	40.0 de	1.3 a	37.5 f	50.0 b-e
4	Harness	1.5 pt/a	1.31 lb a/a		PRE	191.9 a	15.1 a	27225.0 a	26136.0 a	100.0 a	81.3 c	27.5 ef	1.0 a	36.3 fg	20.0 e
5	Parallel	1.8 pt/a	1.76 lb a/a		PRE	188.9 a	14.9 a	26862.0 a	25228.5 a	100.0 a	78.8 c	47.5 d	1.0 a	56.3 e	45.0 b-e
6	Harness	2.0 pt/a	1.75 lb a/a		PRE	198.8 a	14.6 a	26317.5 a	25228.5 a	100.0 a	81.3 c	66.3 c	1.3 a	63.8 de	42.5 cde
7	Parallel	2.25 pt/a	2.2 lb a/a		PRE	199.7 a	15.1 a	26862.0 a	25773.0 a	100.0 a	83.5 bc	75.0 bc	1.0 a	80.0 cd	52.5 bcd
8	Harness	2.5 pt/a	2.19 lb a/a		PRE	185.2 a	14.9 a	25736.7 a	24393.6 a	100.0 a	93.5 ab	92.3 ab	1.0 a	88.8 abc	60.0 bc
9	Parallel	2.7 pt/a	2.63 lb a/a		PRE	186.0 a	14.5 a	26058.2 a	24217.3 a	100.0 a	98.0 a	87.3 ab	1.0 a	88.5 abc	74.5 ab
10	Harness	3.0 pt/a	2.63 lb a/a		PRE	213.8 a	14.7 a	25503.3 a	24725.5 a	100.0 a	96.8 a	87.0 ab	1.0 a	82.5 bc	96.0 a
11	Parallel	5.4 pt/a	5.26 lb a/a		PRE	216.2 a	15.0 a	26913.9 a	26136.0 a	100.0 a	99.0 a	99.0 a	1.0 a	99.0 a	99.0 a
12	Harness	6.0 pt/a	5.25 lb a/a		PRE	200.1 a	14.7 a	25072.9 a	23958.0 a	100.0 a	99.0 a	99.0 a	1.0 a	97.0 ab	99.0 a
LSD (P=.05)		29.58	0.46			1830.07	2545.12	0.00			11.68	17.41	0.33	16.41	31.29
Standard Deviation		20.49	0.32			1267.44	1762.65	0.00			8.09	12.05	0.22	11.36	19.56
CV		10.44	2.13			4.83	7.03	0.0			9.53	19.11	21.59	17.55	34.34
Grand Mean		196.14	14.83			26263.92	25069.47	100.0			84.88	63.08	1.04	64.75	56.96
Replicate F		4.745	0.624			2.174	1.173	0.000			2.750	0.735	0.549	1.449	0.161
Replicate Prob(F)		0.0075	0.6047			0.1097	0.3347	1.0000			0.0583	0.5390	0.6530	0.2477	0.9196
Treatment F		1.384	1.225			1.199	0.813	0.000			9.573	27.134	0.749	25.123	9.074
Treatment Prob(F)		0.2276	0.3108			0.3260	0.6273	1.0000			0.0001	0.0001	0.6848	0.0001	0.0013

Means followed by same letter do not significantly differ (P=.05, LSD)
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Description	Sandbur 07-14-08	Sandbur 08-06-08	Velvetleaf 07-14-08	Velvetleaf 07-14-08	Velvetleaf 08-06-08	Waterhemp 07-14-08	Waterhemp 07-14-08	Waterhemp 08-06-08					
Rating Date	Density	Control	Control	Density	Control	Control	Density	Control					
Rating Data Type	m2 RunCH	Percent	Percent	m2 RunCH	Percent	Percent	m2 RunCH	Percent					
Rating Unit	42 42	65 65	42 42	42 42	65 65	42 42	42 42	65 65					
Days After First/Last Applic.	42 DA-A	65 DA-A	42 DA-A	42 DA-A	65 DA-A	42 DA-A	42 DA-A	65 DA-A					
Trt-Eval Interval	42 DP-1	65 DP-1	42 DP-1	42 DP-1	65 DP-1	42 DP-1	42 DP-1	65 DP-1					
Plant-Eval Interval													
Trt No.	Treatment Name	Rate	Other Rate	Other Rate	Growth Stage								
1	Parallel	0.9 pt/a	0.88 lb a/a		PRE	1.5 a	20.0 e	5.0 d	1.0 a	7.5 e	3.3 d	1.3 a	6.7 e
2	Harness	1.0 pt/a	0.875 lb a/a		PRE	1.0 a	30.0 de	5.0 d	1.0 a	12.5 de	15.0 d	1.5 a	15.0 e
3	Parallel	1.35 pt/a	1.32 lb a/a		PRE	1.0 a	50.0 cd	16.7 cd	1.7 a	25.0 cde	40.0 bc	2.3 a	25.0 de
4	Harness	1.5 pt/a	1.31 lb a/a		PRE	1.0 a	50.0 cd	17.5 cd	1.5 a	31.3 bcd	20.0 cd	1.7 a	33.3 de
5	Parallel	1.8 pt/a	1.76 lb a/a		PRE	1.0 a	50.0 cd	10.0 d	3.0 a	47.5 b	57.5 b	2.0 a	55.0 bcd
6	Harness	2.0 pt/a	1.75 lb a/a		PRE	1.0 a	65.0 bc	12.5 cd	2.0 a	17.5 cde	86.7 a	2.3 a	68.3 abc
7	Parallel	2.25 pt/a	2.2 lb a/a		PRE	1.0 a	50.0 cd	30.0 bc	1.0 a	25.0 cde	55.0 b	2.0 a	47.5 cd
8	Harness	2.5 pt/a	2.19 lb a/a		PRE	1.0 a	70.0 bc	45.0 ab	1.0 a	37.5 bc	90.0 a	1.0 a	87.5 a
9	Parallel	2.7 pt/a	2.63 lb a/a		PRE	1.0 a	97.0 a	50.0 a	1.0 a	50.0 b	87.3 a	1.0 a	86.3 ab
10	Harness	3.0 pt/a	2.63 lb a/a		PRE	1.0 a	86.7 ab	60.0 a	1.0 a	50.0 b	99.0 a	1.0 a	99.0 a
11	Parallel	5.4 pt/a	5.26 lb a/a		PRE	1.0 a	88.0 ab	50.0 a	10.5 a	50.0 b	92.0 a	1.0 a	97.0 a
12	Harness	6.0 pt/a	5.25 lb a/a		PRE	1.0 a	97.7 a		1.0 a	75.0 a	99.0 a	1.0 a	99.0 a
LSD (P=.05)		0.42	23.87	19.96	6.67	22.24	24.52	1.83	32.20				
Standard Deviation		0.23	14.92	12.82	4.24	14.44	16.43	1.21	21.68				
CV		21.66	23.74	46.76	198.01	40.4	26.48	80.02	36.15				
Grand Mean		1.04	62.86	27.42	2.14	35.73	62.06	1.51	59.97				
Replicate F		0.409	0.562	0.091	0.275	0.389	0.622	1.625	0.315				
Replicate Prob(F)		0.6760	0.6537	0.9633	0.8422	0.7630	0.6107	0.2257	0.8147				
Treatment F		1.227	11.773	10.075	1.629	7.354	18.361	0.791	9.992				
Treatment Prob(F)		0.3854	0.0005	0.0003	0.2251	0.0009	0.0001	0.6472	0.0001				

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<u>Additional Treatment Information</u>
<u>Rate Unit</u>
PT/A = Pints Product per Acre (Metric=L/HA) P
<u>Other Rate Unit</u>
LB A/A = Pounds Active Ingredient per Acre