

(01-NCC-3)

Preemergence applied tank-mixtures and prepackaged herbicides for weed control in corn, Nashua, Iowa, 2001. Owen, Micheal D.K., James F. Lux, and Damian D. Franzenburg. The purpose of this study was to evaluate flufenacet and other chloracetamide herbicides for weed efficacy and corn phytotoxicity. The soil was a Floyd, Kenyon, Ostrander loam with a pH 6.95 and 5.1% organic matter. The experimental design was a randomized complete block with three replications and plots were 10 by 25 ft. The 2000 crop was soybean. Fertilization included 140 lb/A actual N applied as anhydrous ammonia. Tillage included a spring field cultivation. Crop residue on the soil surface was 15% at planting. "DeKalb hybrid DK 537" corn was planted 1.5 inches deep on May 16, at 32,454 seeds/A in 30-inch rows. May rainfall included: 0.11, 1.27, 0.52, 0.03, 0.17, 0.34, 0.01, 0.06, 0.14, 0.01, 0.08, 0.60, 0.44, 0.05, 0.13, 0.51, 0.08, 0.26 and 0.23 inches, on May 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 13, 20, 21, 22, 23, 24, 25, 26 and 31, respectively. Total rainfall for May was 5.04 inches. June rainfall included: 0.42, 0.52, 0.01, 0.07, 0.04, 0.73, 0.09 and 0.27 inches on June 1, 5, 6, 11, 12, 14, 17 and 18, respectively. Total rainfall for June was 2.15 inches. July rainfall included: 0.05 inches and 2.37 inches from July 1 through 15 and 16 through 31, respectively. Rainfall total for August was 2.50 inches. Application information is listed below:

Date	May 16
Treatment	PRE
Sprayer	
gpa	20
psi	30
nozzle	11002
Temperature (C)	
air	27
soil (4 inch)	19
Soil moisture	dry
Wind (mph)	3-4 NE
Sky	pt. cloudy
Relative humidity (%)	41%

Significant differences in corn stand between treatments were not attributable to herbicides. No PRE applied treatments caused corn injury when observed on June 1 and 15. Giant foxtail, velvetleaf, common waterhemp, common lambsquarters, and Pennsylvania smartweed control was good to excellent with most treatments when observed on June 15, July 13, and August 22. Harness Xtra, FulTime, FulTime plus Hornet WDG, and Degree Xtra did not effectively control velvetleaf. All treatments yielded significantly better than the untreated check. Corn yields ranged from 156 to 198 bu/A. (Dept. of Agronomy, Iowa State University, Ames)

DATA MEAN

TITLE: Preemergence applied tank-mixtures and prepackaged herbicides for weed control in corn.

CREATED: 06/05/2001 REVISED: 12/12/2001

COMPLETED: N

PROJECT TYPE: HERBICIDE

LOCATION: NASHUA, IA

RESEARCHED BY: IA State University

DESIGN: RANDOMIZED COMPLETE BLOCK DESIGN

PLOT SIZE: 10.00 FT WIDE X 25.00 FT LONG

REPS: 03

TRT NUM	TREATMENT COMPONENT	DOSAGE			ZEAMD	ZEAMD	ZEAMD	SETFA	ABUTH	
		RATE	UNIT	TM	17.5 FT 06/15/01	PHY % 06/01/01	PHY % 06/15/01	CON % 06/15/01	CON % 06/15/01	
1A	UNTREATED CHECK	0.00	NA	0	30	0	0	0	0	
2A	»AXIOM (68DF)	0.98	LAA	1	30	0	0	99	93	
	B»HORNET WDG (68.5WG)	0.128	LAA	1						
3A	HARNES XTRA (6SC)	3.45	LAA	1	30	0	0	99	67	
4A	»EPIC (58DF)	0.54	LAA	1	27	0	0	99	96	
5A	»EPIC (58DF)	0.44	LAA	1	28	0	0	99	98	
	B ATRAZINE 90DF (WG)	0.90	LAA	1						
6A	»USA 2001 (71.5DF)	0.58	LAA	1	30	0	0	99	96	
7A	»USA 2001 (71.5DF)	0.72	LAA	1	30	0	0	99	98	
8A	»USA 2001 (71.5DF)	0.58	LAA	1	29	0	0	99	96	
	B ATRAZINE 90DF (WG)	0.90	LAA	1						
9A	»USA 2001 (71.5DF)	0.72	LAA	1	30	0	0	99	98	
	B ATRAZINE 90DF (WG)	0.90	LAA	1						
10A	»FULTIME (4SC)	3.00	LAA	1	30	0	0	99	57	
11A	»FULTIME (4SC)	3.00	LAA	1	28	0	0	99	78	
	B»HORNET WDG (68.5WG)	0.128	LAA	1						
12A	»DEGREE XTRA (4.04CS)	3.54	LAA	1	27	0	0	99	65	
					LSD (0.05)	2.32	0.00	0.00	0.00	15.76

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TRT NUM	TREATMENT COMPONENT	DOSAGE			AMATA	CHEAL	POLPY	SETFA	ABUTH	
		RATE	UNIT	TM	CON % 06/15/01	CON % 06/15/01	CON % 06/15/01	CON % 07/13/01	CON % 07/13/01	
1A	UNTREATED CHECK	0.00	NA	0	0	0	0	0	0	
2A	»AXIOM (68DF)	0.98	LAA	1	99	99	99	99	99	
	B»HORNET WDG (68.5WG)	0.128	LAA	1						
3A	HARNES XTRA (6SC)	3.45	LAA	1	99	99	99	99	48	
4A	»EPIC (58DF)	0.54	LAA	1	99	99	98	99	95	
5A	»EPIC (58DF)	0.44	LAA	1	99	99	99	99	99	
	B ATRAZINE 90DF (WG)	0.90	LAA	1						
6A	»USA 2001 (71.5DF)	0.58	LAA	1	99	99	99	98	95	
7A	»USA 2001 (71.5DF)	0.72	LAA	1	99	99	99	99	98	
8A	»USA 2001 (71.5DF)	0.58	LAA	1	99	99	99	99	93	
	B ATRAZINE 90DF (WG)	0.90	LAA	1						
9A	»USA 2001 (71.5DF)	0.72	LAA	1	99	99	99	99	99	
	B ATRAZINE 90DF (WG)	0.90	LAA	1						
10A	»FULTIME (4SC)	3.00	LAA	1	99	99	99	99	43	
11A	»FULTIME (4SC)	3.00	LAA	1	99	99	99	99	62	
	B»HORNET WDG (68.5WG)	0.128	LAA	1						
12A	»DEGREE XTRA (4.04CS)	3.54	LAA	1	99	99	99	99	62	
					LSD (0.05)	0.00	0.00	1.13	1.13	15.86

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TRT NUM	TREATMENT COMPONENT	DOSAGE			AMATA	CHEAL	POLPY	SETFA	ABUTH	
		RATE	UNIT	TM	CON % 07/13/01	CON % 07/13/01	CON % 07/13/01	CON % 08/22/01	CON % 08/22/01	
1A	UNTREATED CHECK	0.00	NA	0	0	0	0	0	0	
2A	»AXIOM (68DF)	0.98	LAA	1	99	99	99	99	99	
	B»HORNET WDG (68.5WG)	0.128	LAA	1						
3A	HARNESS XTRA (6SC)	3.45	LAA	1	99	99	99	99	40	
4A	»EPIC (58DF)	0.54	LAA	1	99	99	98	99	95	
5A	»EPIC (58DF)	0.44	LAA	1	99	99	99	99	99	
	B ATRAZINE 90DF (WG)	0.90	LAA	1						
6A	»USA 2001 (71.5DF)	0.58	LAA	1	98	99	96	98	93	
7A	»USA 2001 (71.5DF)	0.72	LAA	1	99	99	99	99	93	
8A	»USA 2001 (71.5DF)	0.58	LAA	1	99	99	99	99	93	
	B ATRAZINE 90DF (WG)	0.90	LAA	1						
9A	»USA 2001 (71.5DF)	0.72	LAA	1	99	99	99	99	98	
	B ATRAZINE 90DF (WG)	0.90	LAA	1						
10A	»FULTIME (4SC)	3.00	LAA	1	99	99	99	99	38	
11A	»FULTIME (4SC)	3.00	LAA	1	99	99	99	99	47	
	B»HORNET WDG (68.5WG)	0.128	LAA	1						
12A	»DEGREE XTRA (4.04CS)	3.54	LAA	1	99	99	99	99	55	
					LSD (0.05)	1.13	0.00	2.83	1.13	15.09

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TRT TREATMENT NUM COMPONENT	DOSAGE			AMATA	CHEAL	POLPY	ZEAMD	
	RATE	UNIT	TM	CON % 08/22/01	CON % 08/22/01	CON % 08/22/01	BU/A 10/29/01	
1A UNTREATED CHECK	0.00	NA	0	0	0	0	120	
2A»AXIOM (68DF)	0.98	LAA	1	99	99	99	169	
B»HORNET WDG (68.5WG)	0.128	LAA	1					
3A HARNESS XTRA (6SC)	3.45	LAA	1	99	99	99	183	
4A»EPIC (58DF)	0.54	LAA	1	98	99	98	175	
5A»EPIC (58DF)	0.44	LAA	1	99	99	99	177	
B ATRAZINE 90DF (WG)	0.90	LAA	1					
6A»USA 2001 (71.5DF)	0.58	LAA	1	98	99	96	174	
7A»USA 2001 (71.5DF)	0.72	LAA	1	98	99	99	176	
8A»USA 2001 (71.5DF)	0.58	LAA	1	99	99	99	174	
B ATRAZINE 90DF (WG)	0.90	LAA	1					
9A»USA 2001 (71.5DF)	0.72	LAA	1	98	99	99	198	
B ATRAZINE 90DF (WG)	0.90	LAA	1					
10A»FULTIME (4SC)	3.00	LAA	1	99	99	99	183	
11A»FULTIME (4SC)	3.00	LAA	1	99	99	99	190	
B»HORNET WDG (68.5WG)	0.128	LAA	1					
12A»DEGREE XTRA (4.04CS)	3.54	LAA	1	99	99	99	156	
				LSD (0.05)	2.18	0.00	2.83	33.66

» = SUPPLEMENTAL CHEMICAL

* TIMING CODES

00 = UNTRCHK / UNTREATED TIMING (FP)

01 = PREPRE / PRE 05/16/2001(1)