

Woolly cupgrass control in field corn

Trial ID: 98WOCG Investigator: Breitenbach, Hoverstad, & Gunsolus
 Location: Byron, MN Study Dir.: Fritz Breitenbach

GENERAL TRIAL INFORMATION

Study Director: Fritz Breitenbach **Title:** IPM Specialist
Affiliation: University of Minnesota **Postal Code:** 55906

Other Investigator: Hoverstad & Gunsolus **Title:** Weeds Group
Affiliation: University of Minnesota **Postal Code:**

Trial Status: Active **Initiation Date:** Apr-29-98 **Country:** USA
City: Rochester **State/Prov.:** MN **Postal Code:** 55906

CROP AND PEST DESCRIPTION

Weed 1. WOCCG	2.	3.
4.	5.	6.
7.	8.	9.

Crop 1: ZEAMX **Variety:** DK 493 GR **Planting Date:** Apr-29-98
Planting Method: SEEDED **Rate:** 32000 per acre **Depth:** 2.0 in
Perennial Age: **Row Spacing:** 30 inch **Seed Bed:** medium
Soil Temperature: **Soil Moisture:** **Emergence Date:**

Crop 2: ZEAMX **Variety:** DK 477 IMI **Planting Date:** Apr-29-98
Planting Method: SEEDED **Rate:** 32000 per acre **Depth:** 2.0 in
Perennial Age: **Row Spacing:** 30 inch **Seed Bed:** medium
Soil Temperature: **Soil Moisture:** **Emergence Date:**

Crop 3: ZEAMX **Variety:** DK 493 RR **Planting Date:** Apr-29-98
Planting Method: SEEDED **Rate:** 32000 per acre **Depth:** 2.0 in
Perennial Age: **Row Spacing:** 30 inch **Seed Bed:** medium
Soil Temperature: **Soil Moisture:** **Emergence Date:**

Plot Width, Unit: 10 FT **Plot Length, Unit:** 30 FT **Reps:** 4
Site Type: FIELD **Study Design:** SPLIT-BLOCK
Tillage Type: conventional
Field Prep./Maintenance:
Trial Initiation Comments:

Previous: Crops **Pesticides** **Year**

1. soybean		97
2. corn		96
3.		

SOIL DESCRIPTION

Texture: SILTY CLAY LOAM **% OM:** **% Sand:** **% Silt:** **% Clay:**
pH: CEC: **Soil Name:** Maxfield SCL **Fertility Level:** GOOD

MOISTURE CONDITIONS

On: Date	Time	Amount	Unit	Type	Interval	Unit
1. Apr-29-98		0.21	in	Weekly rainfall amounts	7	day
2. May-06-98		1.51	in			
3. May-13-98		0.63	in			
4. May-20-98		0.73	in			
5. May-27-98		0.41	in			
6. Jun-03-98		0.75	in			
7. Jun-10-98		1.05	in			
8. Jun-17-98		1.27	in			
9. Jun-24-98		2.33	in			
10. Jul-01-98		1.07	in			

APPLICATION DESCRIPTION

	A	B	C	D	E	F
Application Date:	Apr-29-98	May-21-98	May-29-98	Jun-11-98		
Time of Day:	pm	am	pm	am		
Application Method:	Broadcast	Broadcast	Broadcast	Broadcast		
Application Timing:	Pre	E-Post	Post	Post 2		
Applic. Placement:	Brofol	BROFOL	Brofol	Brofol		
Air Temp., Unit:	63 f	59 f	78 f	68 f		
% Relative Humidity:	49	40	36	87		
Wind Velocity, Unit:	8 mph	2.5 mph	14 mph	13 mph		
Dew Presence (Y/N):	n	y	n	n		
Water Hardness:						
Soil Temp., Unit:						
Soil Moisture:	ADEQUATE	ADEQUATE	ADEQUATE	EXCESSIVE		
% Cloud Cover:	0	100	0	100		

CROP STAGE AT EACH APPLICATION

	A	B	C	D	E	F
Crop 1 ZEAMX Stage:	NA	2-3	4-5	5-6		
Stage Scale:		collar	collar	collar		
Height, Unit:		4.5 inch	8 inch	11 inch		

WEED STAGE AT EACH APPLICATION						E	F
	A	B	C	D			
Weed 1 WOCG Stage:	NA	2.5"	3lf	3.5	4-6		
Stage Scale:				inches	inches		
Density, Unit:		132	sqft				

APPLICATION EQUIPMENT							E	F
	A	B	C	D				
Appl. Equipment:	Tractor	Tractor	Tractor	Tractor				
Operating Pressure:	32 PSI	32 PSI	32 PSI	32 PSI				
Nozzle Type:	Drift grd	Drift grd	Drift grd	Drift grd				
Nozzle Size:	11002	11002	11002	11002				
Nozzle Spacing, Unit:	15 inch	15 inch	15 inch	15 inch				
Nozzles/Row:	2	2	2	2				
Band Width, Unit:								
Boom Length, Unit:	10 ft	10 ft	10 ft	10 ft				
Boom Height, Unit:	11 in	11 in	11 in	11 in				
Ground Speed, Unit:	3.5 mph	3.5 mph	3.5 mph	3.5 mph				
Incorporation Equip.:								
Hours to Incorp.:								
Incorp. Depth, Unit:								
Carrier:	water	water	water	water				
Spray Volume, Unit:	20 gpa	20 gpa	20 gpa	20 gpa				
Spray pH:								
Propellant:	Comp air	Comp air	Comp air	Comp air				
Tank Mix (Y/N):								

Trt No	Treatment Application Comment
	woolly cupgrass in Balance plots 1-2 inches.
	Woolly cupgrass in other soil applied plots 2-4 inches.
	Heavy rainfall at 11:00 am.

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Weed Code Crop Code Part Rated Rating Data Type Rating Unit Rating Date Footnote Number Trt-Eval Interval PRM Data Type # Subsamples, Dec.					Wocg ZEAMX Injury Percent May-21-98 P	Wocg ZeaMX Control Percent May-21-98 P	Wocg ZeaMX Control Percent May-29-98 P	Wocg ZeaMX Control Percent Jun-11-98 P	Wocg ZeaMX Control Percent Jul-07-98	Wocg ZeaMX Control Percent Aug-14-98 P		
Trt No.	Treatment Name	Form Amt	Fm Ds Rate	Rate Unit	Grow Stg							
1	Balance	75	WG	2.0	OZ/A	PRE	0.0	93.3	90.0	87.7	86.7	87.3
2	Surpass	6.4	E	3.0	PT/A	PRE	0.0	86.7	75.0	65.0	68.3	60.0
3	Balance	75	WG	2.0	OZ/A	PRE	0.0	93.0	89.3	89.0	85.5	89.3
3	Atrazine	90	DF	1.1	LB/A	PRE						
4	Balance	75	WG	2.0	OZ/A	PRE	0.0	95.5	92.5	90.0	90.8	90.5
4	Surpass	6.4	E	1.25	PT/A	PRE						
5	Harness	7	E	2.48	PT/A	PRE	0.0	97.5	90.5	89.5	88.5	88.0
5	Balance	75	WG	1.41	OZ/A	PRE						
6	Untreated						0.0	0.0	0.0	0.0	0.0	0.0
7	Balance	75	WG	2.0	OZ/A	PRE	0.0	91.3	88.0	88.8	96.0	97.3
7	Surpass	6.4	E	1.25	PT/A	PRE						
7	Accent	75	WG	0.5	OZ/A	POST 2						
7	COC	L		1.0	% V/V	POST 2						
7	28% N	L		2.0	QT/A	POST 2						
8	Surpass	6.4	E	2.0	PT/A	PRE	0.0	85.5	71.3	95.0	90.0	90.0
8	Accent	75	WG	0.5	OZ/A	POST						
8	Homet	85.6	WG	2.40	OZ/A	POST						
8	COC	L		1.0	% V/V	POST						
8	28% N	L		2.0	QT/A	POST						
9	Surpass	6.4	E	1.00	PT/A	PRE	0.0	80.0	53.8	91.3	84.5	83.0
9	Accent Gold	83.8	WG	2.9	OZ/A	POST						
9	Clarity	4	L	2.0	OZ/A	POST						
9	COC	L		1.0	% V/V	POST						
9	28% N	L		2.0	QT/A	POST						
10	Untreated Check						0.0	0.0	0.0	0.0	0.0	0.0
11	Balance	75	WG	2.0	OZ/A	PRE	0.0	96.0	90.5	90.8	88.5	91.3
11	Surpass	6.4	E	1.25	PT/A	PRE						
11	Atrazine	90	DF	1.1	LB/A	PRE						
12	Balance	75	WG	2.0	OZ/A	PRE	0.0	96.3	90.0	87.5	87.5	88.5
12	Dual II Mag	7.64	E	0.835	PT/A	PRE						

Weed Code Crop Code Part Rated Rating Data Type Rating Unit Rating Date Footnote Number Trt-Eval Interval PRM Data Type # Subsamples, Dec.					Wocg ZEAMX	Wocg ZeaMX	Wocg ZeaMX	Wocg ZeaMX	Wocg ZeaMX	Wocg ZeaMX
					Injury Percent May-21-98	Control Percent May-21-98	Control Percent May-29-98	Control Percent Jun-11-98	Control Percent Jul-07-98	Control Percent Aug-14-98
					P	P	P	P		P
Trt No.	Treatment Name	Form Amt	Fm Ds	Rate Rate Unit	Grow Stg					
13	Dual II Mag	7.64	E	1.34 PT/A	PRE	0.0	85.0	67.5	90.0	82.3
13	Northstar	47.4	WG	5.0 OZ/A	POST					
13	Accent	75	WG	0.335 OZ/A	POST					
13	COC		L	1.0 % V/V	POST					
13	28% N		L	2.0 QT/A	POST					
14	Balance	75	WG	1.0 OZ/A	PRE	0.0	87.5	77.5	77.5	95.0
14	Accent	75	WG	0.67 OZ/A	POST 2					
14	COC		L	1.0 % V/V	POST 2					
14	28% N		L	2.0 QT/A	POST 2					
15	Balance	75	WG	2.0 OZ/A	PRE	0.0	93.8	86.0	88.8	94.8
15	Accent	75	WG	0.335 OZ/A	POST 2					
15	COC		L	1.0 % V/V	POST 2					
15	28% N		L	2.0 QT/A	POST 2					
16	Balance	75	WG	1.0 OZ/A	PRE	0.8	88.0	73.8	92.5	87.0
16	Accent Gold	83.8	WG	2.9 OZ/A	POST					
16	COC		L	1.00 % V/V	POST					
16	28% N		L	2.0 QT/A	POST					
17	Balance	75	WG	2.0 OZ/A	PRE	0.0	95.0	89.8	92.5	91.5
17	Accent Gold	83.8	WG	1.5 OZ/A	POST					
17	COC		L	1.00 % V/V	POST					
17	28% N		L	2.0 QT/A	POST					
18	BAS 656 07H	6	E	20.8 OZ/A	PRE	0.0	84.8	73.8	62.5	64.5
19	BAS 656 07H	6	E	17.5 OZ/A	PRE	0.0	86.5	66.3	65.0	75.0
19	Distinct	70	WG	6.0 OZ/A	POST					
19	NIS		L	0.25 % V/V	POST					
19	28% N		L	1.25 % V/V	POST					
20	BAS 656 07H	6	E	17.5 OZ/A	PRE	0.0	84.3	66.3	87.5	73.0
20	Distinct	70	WG	6.0 OZ/A	POST					
20	Accent	75	WG	0.335 OZ/A	POST					
20	NIS		L	0.25 % V/V	POST					
20	28% N		L	2.0 QT/A	POST					
21	Balance	75	WG	1.0 OZ/A	PRE	0.0	81.3	72.5	93.8	92.0
21	Liberty	1.67	S	20.0 OZ/A	POST					
21	AMS		SG	3.0 LB/A	POST					
22	Balance	75	WG	2.0 OZ/A	PRE	0.0	92.5	86.5	86.3	97.0
22	Liberty	1.67	S	14.0 OZ/A	POST 2					
22	AMS		SG	3.0 LB/A	POST 2					
23	Liberty	1.67	S	20.0 OZ/A	POST	0.0	0.0	0.0	95.0	94.3
23	Atrazine	90	DF	1.1 LB/A	POST					
23	AMS		SG	3.0 LB/A	POST					

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Trt No.	Treatment Name	Form Amt	Fm Ds	Rate Unit	Grow Stg						
24	Balance	75	WG	1.0 OZ/A	PRE	0.0	89.8	93.8	90.0	84.3	83.8
24	Lightning	70	WG	1.28 OZ/A	E-POST						
24	NIS		L	0.25 % V/V	E-POST						
24	28% N		L	1.0 QT/A	E-POST						
25	Balance	75	WG	2.0 OZ/A	PRE	0.0	93.8	100.0	93.8	93.8	95.0
25	Lightning	70	WG	0.64 OZ/A	E-POST						
25	NIS		L	0.25 % V/V	E-POST						
25	28% N		L	1.0 QT/A	E-POST						
26	Lightning	70	WG	1.28 OZ/A	E-POST	0.0	0.0	85.0	95.0	85.5	76.3
26	Clarity	4	E	6.0 OZ/A	E-POST						
26	NIS		L	0.25 % V/V	E-POST						
26	28% N		L	1.0 QT/A	E-POST						
27	Prowl	3.3	E	3.0 PT/A	E-POST	0.0	0.0	85.0	95.0	88.3	87.3
27	Lightning	70	WG	1.28 OZ/A	E-POST						
27	Clarity	4	E	6.0 OZ/A	E-POST						
27	NIS		L	0.25 % V/V	E-POST						
27	28% N		L	1.0 QT/A	E-POST						
28	Balance	75	WG	1.0 OZ/A	PRE	0.0	82.5	77.5	76.3	96.0	95.8
28	Roundup Ultra	3	L	32.0 OZ/A	POST 2						
28	AMS		SG	3.0 LB/A	POST 2						
29	Balance	75	WG	2.0 OZ/A	PRE	0.0	95.0	89.3	89.5	94.5	93.8
29	Roundup Ultra	3	L	16.0 OZ/A	POST 2						
29	AMS		SG	3.0 LB/A	POST 2						
30	Harness	7	E	2.25 PT/A	PRE	0.0	85.5	73.8	71.3	92.5	89.3
30	Roundup Ultra	3	L	32.0 OZ/A	POST 2						
30	AMS		SG	3.0 LB/A	POST 2						
31	Harness	7	E	1.125 PT/A	POST	0.0	0.0	0.0	95.0	92.5	91.3
31	Roundup Ultra	3	L	32.0 OZ/A	POST						
31	AMS		SG	3.0 LB/A	POST						
32	BAS 656 07H	6	E	17.5 OZ/A	PRE	0.0	82.5	70.0	65.0	85.0	76.3
32	Laddock S12	5	L	1.75 PT/A	POST 2						
32	Poast Plus	1	E	1.50 PT/A	POST 2						
32	COC		L	1.25 % V/V	POST 2						
32	28% N		L	1.25 % V/V	POST 2						
LSD (P=.10)						0.32	3.11	5.88	3.94	5.31	8.85
Standard Deviation						0.27	2.63	4.97	3.34	4.50	7.49
CV						1163.07	3.63	7.03	4.15	5.48	9.24
Grand Mean						0.02	75.53	73.65	83.79	85.36	84.34
Bartlett's X2						0.0	21.23	47.116	34.275	57.925	89.259
P(Bartlett's X2)						0.00	0.567	0.002	0.046	0.001	0.001