

## Corn Plant Growth Regulator Herbicide Safener Study.

00-8A

**OBJECTIVE:** Determine the potential safening effect of PCC 972 when using plant growth regulator type broadleaf herbicides in corn.

**SUMMARY:** Corn injury 7 days after treatment was 4, 13, and 13%, respectively, from Salvo, Amine 4, and Clarity when tank mixed with Activator 90. Adding PCC 972 to Salvo and Clarity did not reduce corn injury. However, adding PCC 972 at 48 oz/A to Amine 4 reduced corn injury by 8%. By 28 DAT, no corn injury was observed with any treatment.

Corn yield was not reduced in plots treated with Salvo, Amine 4, Clarity or Fluroxypyr compared to the handweeded plots.

### HERBICIDES

AMINE 4 3.74 EC  
CLARITY 4 EC  
FLUROXYPYR 1.5 EC  
SALVO 5 EC  
PCC 972 100 LIQ

### WEEDS

LAMBSQUARTERS, COMMON  
MORNINGGLORY, IVYLEAF  
RAGWEED, COMMON  
SMARTWEED, PENNSYLVANIA

### CROP

CORN, FIELD

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SOUTHERN ILLINOIS UNIVERSITY

## Corn Plant Growth Regulator Herbicide Safener Study.

Project Code: 00-8A                      Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

Weed Code	Common Name	Scientific Name
1. CHEAL	LAMBSQUARTERS, COMMON	CHENOPODIUM ALBUM L.
2. AMBEL	RAGWEED, COMMON	AMBROSIA ARTEMISIIFOLIA L.
3. POLPY	SMARTWEED, PENNSYLVANIA	POLYGONUM PENSYLVANICUM L.
4. IPOHE	MORNINGGLORY, IVYLEAF	IPOMOEA HEDERACEA (L.) JACQ.

Crop 1:	ZEAMX CORN, FIELD	Variety:	GR SENSITIVE P33A14
Planting Method:	SEEDED	Planting Date:	5-17
Rate:	28000 S/A	Depth:	1.5 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	27 FT	Reps:	4
Tillage Type:	REDUCED-TILL	Study Design:	RCB		
Previous Crop, Year:	ZEAMX, 1999	Fertilizer applied:	N 150 LB/A,	P <sub>2</sub> O <sub>5</sub> 50 LB/A,	K <sub>2</sub> O 150 LB/A

Soil Name:	WEIR	% OM:	1.8	pH:	6.3	CEC:	11
Texture:	SILT LOAM	P <sub>i</sub> :	75 LB/A,	K:	373 LB/A		

## APPLICATION DESCRIPTION

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Application Date:	Jun-7-00
Time of Day:	9:00
Application Method:	SPRAY
Application Timing:	8"CN
Applic. Placement:	BROFOL
Air Temp., Unit:	66 F
% Relative Humidity:	90
Wind Velocity, Unit:	3-4 MPH
Dew Presence (Y/N):	N
Soil Moisture:	NORMAL
% Cloud Cover:	0

## CROP STAGE AT EACH APPLICATION

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Crop 1 Code, Stage:	ZEAMX V4
Height, Unit:	8 IN

## WEED STAGE AT EACH APPLICATION

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Weed 1 Code:	CHEAL
Stage(leaves):	6-10+
Height(inches):	2-6
Density:	LOW

Weed 2 Code:	AMBEL
Stage(leaves):	3-4
Height(inches):	1-3
Density:	LOW

Weed 3 Code:	POLPY
Stage(leaves):	5-6
Height(inches):	3-4
Density:	LOW

Weed 4 Code:	IPOHE
Stage(leaves):	5-7
Height(inches):	2-3
Density:	LOW

## APPLICATION EQUIPMENT

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Appl. Equipment:	CO, SPRAY
Operating Pressure:	40 PSI
Nozzle Type:	FLAT FAN
Nozzle Size:	8002
Boom Length, Unit:	7.33 FT
Spray Volume, Unit:	20 GPA

## NOTES:

Harvested Oct-06-00, (2) 30 inch rows by 24 ft.

TABLE. CORN PLANT GROWTH REGULATOR HERBICIDE SAFENER STUDY. PROJECT CODE:00-8A

TREATMENT	FORM.	RATE	UNIT	PROD RATE	APPL TIME	APPL CODE	YIELD	ZEAMX INJURY DA 8"CN			CONTROL, DAYS AFTER 8"CN							
								7	14	28	ABUTH		CHEAL		AMBEL		POLPY	
											%	%	%	%	%	%	%	%
1 NONTREATED							160	0	0	0	0	0	0	0	0	0	0	0
2 PCC 972	100 LIQ	36.0	OZ/A	36.0	OZ/A	8"CN A	154	1	0	0	0	0	0	0	0	0	0	0
3 PCC 972	100 LIQ	48.0	OZ/A	48.0	OZ/A	8"CN A	145	1	1	0	0	0	0	0	0	0	0	0
4 PCC 972	100 LIQ	60.0	OZ/A	60.0	OZ/A	8"CN A	180	1	0	0	0	0	0	0	23	23	0	0
5 SALVO	5 EC	0.375	LB A/A	9.6	OZ/A	8"CN A	171	4	1	0	92	98	99	99	98	99	85	96
5 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	8"CN A												
6 SALVO	5 EC	0.375	LB A/A	9.6	OZ/A	8"CN A	166	6	3	0	95	95	98	99	99	99	98	99
6 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	8"CN A												
6 PCC 972	100 LIQ	36.0	OZ/A	36.0	OZ/A	8"CN A												
7 SALVO	5 EC	0.375	LB A/A	9.6	OZ/A	8"CN A	178	3	1	0	87	95	78	77	98	99	80	87
7 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	8"CN A												
7 PCC 972	100 LIQ	48.0	OZ/A	48.0	OZ/A	8"CN A												
8 SALVO	5 EC	0.375	LB A/A	9.6	OZ/A	8"CN A	191	1	0	0	99	99	98	99	99	99	94	96
8 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	8"CN A												
8 PCC 972	100 LIQ	60.0	OZ/A	60.0	OZ/A	8"CN A												
9 AMINE 4	3.74 EC	0.468	LB A/A	1.0	PT/A	8"CN A	171	13	8	0	97	99	99	99	99	99	99	99
9 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	8"CN A												
10 AMINE 4	3.74 EC	0.468	LB A/A	1.0	PT/A	8"CN A	171	5	4	0	99	99	98	99	99	99	92	97
10 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	8"CN A												
10 PCC 972	100 LIQ	48.0	OZ/A	48.0	OZ/A	8"CN A												
11 CLARITY	4 EC	0.5	LB A/A	16.0	OZ/A	8"CN A	168	13	6	0	86	99	99	99	99	99	99	99
11 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	8"CN A												
12 CLARITY	4 EC	0.5	LB A/A	16.0	OZ/A	8"CN A	157	15	6	0	98	77	99	99	99	99	99	99
12 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	8"CN A												
12 PCC 972	100 LIQ	48.0	OZ/A	48.0	OZ/A	8"CN A												
13 FLUROXYPYR	1.5 EC	0.0352	LB A/A	3.0	OZ/A	8"CN A	182	0	3	0	10	0	18	0	45	0	5	0
13 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	8"CN A												
14 FLUROXYPYR	1.5 EC	0.0352	LB A/A	3.0	OZ/A	8"CN A	181	0	1	0	0	0	0	0	8	0	0	0
14 ACTIVATOR 90	100 LIQ	0.25	% V/V	0.25	%V/V	8"CN A												
14 PCC 972	100 LIQ	48.0	OZ/A	48.0	OZ/A	8"CN A												
15 HANDWEED							163	0	0	0	99	99	99	99	99	99	99	99
LSD							28	5	4	0	11	17	17	17	23	17	15	6
P							0.1	0.01	0.01	1.0	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

1. PROTOCOL: UAP.
2. RATING DATES:  
7 DAT, 14 DAT, AND 28 DAT ON JUN-14-00, JUN-21-00, AND JUL-4-00, RESPECTIVELY.