

## Evaluation of Burndown of Winter Annuals with 2,4-D.

00-2A-E30

**OBJECTIVE:** Compare several rates of 2,4-D to standard burndown herbicides for control of winter annual weeds.

**SUMMARY:** Roundup Ultra and Gramoxone Extra provided 90 to 97% control of shepherdspurse, henbit, mouseear chickweed, and little barley 14 days after application. Control of these weeds with 2,4-D was 50% or less 14 days after application. By 28 days after application, shepherdspurse, henbit, and mouseear chickweed died naturally. Gramoxone Extra and Roundup Ultra controlled winter annuals better than 2,4-D. However, 2,4-D may provide residual control of weeds unlike Gramoxone Extra and Roundup Ultra.

### HERBICIDES

GRAMOXONE EXTRA 2.5 SL  
LIBERTY ATZ 4.32 EC  
ROUNDUP ULTRA 3 SL  
WEEDONE 638 2.8 EC

### WEEDS

BARLEY, LITTLE  
CHICKWEED, MOUSEEAR  
HENBIT  
SHEPHERDSPURSE

### CROP

CORN, FIELD

Ronald Krausz

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

## Evaluation of Burndown of Winter Annuals with 2,4-D.

Project Code: 00-2A-E30 Location: Belleville Research Center

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

Weed Code	Common Name	Scientific Name
1. LAMAM	HENBIT	LAMIUM AMPLEXICAULE L.
2. CERVU	CHICKWEED, MOUSEEAR	CERASTIUM VULGATUM L.
3. HORPU	BARLEY, LITTLE	HORDEUM PUSILLUM
4. CAPBP	SHEPHERDSPURSE	CAPSELLA BURSA-PASTORIS (L.) MEDIK.

Crop 1:	ZEAMX CORN, FIELD	Variety:	P33G28 LL
Planting Method:	SEEDED	Planting Date:	May-12-00
Rate:	28000 S/A	Depth:	1.5 IN
Row Spacing:	30 IN		

Plot Width, Unit:	10 FT	Plot Length, Unit:	28 FT	Reps:	3
Tillage Type:	NO-TILL	Study Design:	RCB		
Previous Crop, Year:	GLXMA, 1999	Fertilizer applied:	N 150 LB/A,	P <sub>2</sub> O <sub>5</sub> 0 LB/A,	K <sub>2</sub> O 0 LB/A

Soil Name:	WEIR	% OM:	2.3	pH:	6.5	CEC:	10
Texture:	SILT LOAM	P <sub>1</sub> :	78 LB/A,	K:	402 LB/A		

## APPLICATION DESCRIPTION

	A	B
Application Date:	Apr-22-00	May-23-00
Time of Day:	9:00	14:00
Application Method:	SPRAY	SPRAY
Application Timing:	EPP21	3CL
Applic. Placement:	BROFOL	BROFOL
Air Temp., Unit:	55 F	84 F
% Relative Humidity:	80	46
Wind Velocity, Unit:	0 MPH	2-3 MPH
Soil Moisture:	NORMAL	

## CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	NA	ZEAMX V2
Height, Unit:	NA	4 IN

## WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code:	LAMAM	
Stage(leaves):	10+	
Height(inches):	4-8	
Density:	HIGH	
Weed 2 Code:	CERVU	
Stage(leaves):	10+	
Height(inches):	3-5	
Density:	MEDIUM	
Weed 3 Code:	HORPU	HORPU
Stage(leaves):	3-5	3-5
Height(inches):	4-6	10-15
Density:	LOW	LOW
Weed 4 Code:	CAPBP	
Stage(leaves):	10+	
Height(inches):	6-24	
Density:	HIGH	

## APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	CO <sub>2</sub> SPRAY	CO <sub>2</sub> SPRAY
Operating Pressure:	40 PSI	40 PSI
Nozzle Type:	FLAT FAN	FLAT FAN
Nozzle Size:	8003	8002
Boom Length, Unit:	7.33 FT	7.33 FT
Spray Volume, Unit:	20 GPA	20 GPA

## NOTES:

Not harvested.

TABLE. EVALUATION OF BURNDOWN OF WINTER ANNUALS WITH 2,4-D. PROJECT CODE:00-2A-E30

TREATMENT	FORM.	RATE	UNIT	PROD RATE	APPL TIME	APPL CODE	CONTROL, DAYS AFTER EPP21							
							CAPBP		LAMAM		CERVU		HORPU	
							14	28	14	28	14	28	14	28
		%	%	%	%	%	%	%	%					
1 NONTREATED							0	100	80	100	0	100	0	0
2 WEEDONE 638	2.8 EC	0.5 LB A/A	1.43 PT/A	EPP21	A	0	100	90	100	35	100	0	0	
2 PRIME OIL COC	100 LIQ	1.0 % V/V	1.0 %V/V	EPP21	A									
2 LIBERTY ATZ	4.32 EC	1.35 LB A/A	2.5 PT/A	3CL	B									
2 AMS	100 DRY	2.0 % W/W	17.0 LB/100 GAL	3CL	B									
3 WEEDONE 638	2.8 EC	0.75 LB A/A	2.14 PT/A	EPP21	A	50	100	83	100	50	100	0	0	
3 PRIME OIL COC	100 LIQ	1.0 % V/V	1.0 %V/V	EPP21	A									
3 LIBERTY ATZ	4.32 EC	1.35 LB A/A	2.5 PT/A	3CL	B									
3 AMS	100 DRY	2.0 % W/W	17.0 LB/100 GAL	3CL	B									
4 WEEDONE 638	2.8 EC	1.0 LB A/A	2.86 PT/A	EPP21	A	50	100	87	100	50	100	0	0	
4 PRIME OIL COC	100 LIQ	1.0 % V/V	1.0 %V/V	EPP21	A									
4 LIBERTY ATZ	4.32 EC	1.35 LB A/A	2.5 PT/A	3CL	B									
4 AMS	100 DRY	2.0 % W/W	2.0 %W/W	3CL	B									
5 ROUNDUP ULTRA	3 SL	0.75 LB AE/A	2.0 PT/A	EPP21	A	93	100	93	100	93	100	93	100	
5 AMS	100 DRY	2.0 % W/W	17.0 LB/100 GAL	EPP21	A									
5 LIBERTY ATZ	4.32 EC	1.35 LB A/A	2.5 PT/A	3CL	B									
5 AMS	100 DRY	2.0 % W/W	17.0 LB/100 GAL	3CL	B									
6 GRAMOXONE EXTRA	2.5 SL	0.625 LB A/A	2.0 PT/A	EPP21	A	97	100	97	100	93	100	90	95	
6 ACTIVATOR 90	100 LIQ	0.25 % V/V	0.25 %V/V	EPP21	A									
6 LIBERTY ATZ	4.32 EC	1.35 LB A/A	2.5 PT/A	3CL	B									
6 AMS	100 DRY	2.0 % W/W	17.0 LB/100 GAL	3CL	B									
LSD						7	0	9	0	21	0	4	4	
P						0.01	1.0	0.01	1.0	0.01	1.0	0.01	0.01	

1. PROTOCOL: SIU-RFK.
2. RATING DATES:  
14 DAT, AND 28 DAT ON MAY-6-00, AND MAY-20-00, RESPECTIVELY.