

Control of Little Barley in Winter Wheat.

01-OS-PINCKY

OBJECTIVE: Evaluate conventional and experimental herbicides for little barley control in winter wheat.

SUMMARY: Wheat injury was less than 5% from fall herbicide applications. However, spring herbicide applications caused 0 to 38% wheat injury with the greatest injury observed from Olympus alone. Wheat injury ranging from 5 to 18% was still visible on May 4 from treatments that included Olympus.

Little barley and wild garlic control was less than 70% from all herbicide treatments. Treatments that included Maverick applied in the spring tended to provide the greatest control of little barley.

There was no difference in wheat yield between the handweeded, nontreated, and herbicide treated plots.

HERBICIDES

AIM 40 WG
HARMONY EXTRA 75 WG
HARMONY GT 75 WG
MAVERICK 75 WG
OLYMPUS 70 WG
SENCOR 75 WG
WEEDAR 64 3.8 EC

WEEDS

barley, little
garlic, wild

CROP

wheat, winter

Bryan Young

PLANT, SOIL AND GENERAL AGRICULTURE DEPARTMENT

SOUTHERN ILLINOIS UNIVERSITY

Control of Little Barley in Winter Wheat.

Project Code: 01-OS-PINCKY Location: Pinckneyville, IL

Investigator: Bryan Young, Assistant Professor, Southern Illinois University

City State Zip Country: Pinckneyvill IL 62274 USA
Trial Status: Established Initiation Date: 10-25-00

Objective:

Evaluate conventional and experimental herbicides for little barley control in winter wheat.

Weed Code	Common Name	Scientific Name
1.	HORPU barley, little	Hordeum pusillum Nutt.
2.	ALLVI garlic, wild	Allium vineale L.

Crop 1:	TRZAW	wheat, winter
Planting Method:	Seeded	
Rate:	90 lb/A	Depth: 1.0 IN
Row Spacing:	7.5 IN	

Plot Width, Unit:	10 FT	Plot Length, Unit:	30 FT	Reps:	4
Tillage Type:	No-Till	Study Design:	Randomized complete block		
Previous Crop, Year:	GLXMA, 2000				
Field Prep./Maintenance:	N 100 LB/A, K20 0 LB/A				

Texture: Silt loam

APPLICATION DESCRIPTION

	A	B
Application Date:	11-21-00	4-6-01
Time of Day:	13:00	14:00
Application Method:	Spray	Spray
Application Timing:	FALL	SPRING
Applic. Placement:	BROFOL	BROFOL
Air Temp., Unit:	32 F	75 F
Wind Velocity, Unit:	4-5 MPH	6-8 MPH
Dew Presence (Y/N):	N	N
Soil Moisture:	BELNOR	NORMAL
% Cloud Cover:	0	0

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	TRZAW F3	TRZAW F5
Height, Unit:	4-5 IN	6-7 IN

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code:	HORPU	HORPU
Stage(leaves):	1-2	4-5
Height(inches):	1-2	5-6
Density:	Medium	Medium
Weed 2 Code:	ALLVI	ALLVI
Stage(leaves):	1-2	3-4
Height(inches):	2-3	4-6
Density:	Low	Low

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	CO2 Sprayer	CO2 Sprayer
Operating Pressure:	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan
Nozzle Size:	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT
Incorporation Equip.:	NA	NA
Spray Volume, Unit:	20.0 GPA	20.0 GPA

NOTES: HARVESTED 6-14-01, 7 ROWS X 25 FT.

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										HORPU			ALLVI		ALLVI							
										TRZAW	TRZAW	TRZAW	TRZAW	TRZAW	Control	Control	Control	Control	Control	Control		
										Test wt.	Yield	Injury	Injury	Injury	Percent	Percent	Percent	Percent	Percent	Percent		
										lb/bu	bu/A	Percent	Percent	Percent	6-14-01	6-14-01	5-4-01	14 DAT	28 DAT	5-4-01		
										14 DAT			28 DAT		14 DAT		28 DAT		14 DAT		28 DAT	
Trt	Treatment	Form	Form	Rate	Rate	Prod	Prod	Grow	Appl													
No.	Name	Conc	Type		Unit	Rate	Unit	Stg	Code													
1	OLYMPUS	70	WG	0.04	LB A/A	0.914	OZ/A	FALL	A	57.7	71	0	0	20		3	0				0	
1	ACTIVATOR 90	100	LIQ	0.50	% V/V	0.5	%V/V	FALL	A													
2	MAVERICK	75	WG	0.03125	LB A/A	0.67	OZ/A	FALL	A	59.2	72	1	0	18		27	0				0	
2	ACTIVATOR 90	100	LIQ	0.50	% V/V	0.5	%V/V	FALL	A													
3	HARMONY EXTRA	75	WG	0.0235	LB A/A	0.5	OZ/A	FALL	A	59.5	54	1	0	15		3	18				33	
3	ACTIVATOR 90	100	LIQ	0.50	% V/V	0.5	%V/V	FALL	A													
4	OLYMPUS	70	WG	0.04	LB A/A	0.914	OZ/A	FALL	A	58.0	69	0	0	25		10	35				33	
4	HARMONY EXTRA	75	WG	0.0235	LB A/A	0.5	OZ/A	FALL	A													
4	ACTIVATOR 90	100	LIQ	0.50	% V/V	0.5	%V/V	FALL	A													
5	MAVERICK	75	WG	0.03125	LB A/A	0.67	OZ/A	FALL	A	58.1	74	1	0	13		43	43				35	
5	HARMONY EXTRA	75	WG	0.0235	LB A/A	0.5	OZ/A	FALL	A													
5	ACTIVATOR 90	100	LIQ	0.50	% V/V	0.5	%V/V	FALL	A													
6	OLYMPUS	70	WG	0.04	LB A/A	0.914	OZ/A	FALL	A	56.2	68	0	0	10		3	54				33	
6	SENCOR	75	WG	0.094	LB A/A	2.0	OZ/A	FALL	A													
6	ACTIVATOR 90	100	LIQ	0.50	% V/V	0.5	%V/V	FALL	A													
7	MAVERICK	75	WG	0.03125	LB A/A	0.67	OZ/A	FALL	A	56.9	69	0	0	8		33	30				35	
7	SENCOR	75	WG	0.094	LB A/A	2.0	OZ/A	FALL	A													
7	ACTIVATOR 90	100	LIQ	0.50	% V/V	0.5	%V/V	FALL	A													
8	OLYMPUS	70	WG	0.04	LB A/A	0.914	OZ/A	SPRING	B	58.0	68	38	13	13	18	45	45	25	50		50	
8	ACTIVATOR 90	100	LIQ	0.50	% V/V	0.5	%V/V	SPRING	B													
9	MAVERICK	75	WG	0.03125	LB A/A	0.67	OZ/A	SPRING	B	60.5	63	0	0	0	10	60	60	25	55		55	
9	ACTIVATOR 90	100	LIQ	0.50	% V/V	0.5	%V/V	SPRING	B													
10	HARMONY EXTRA	75	WG	0.0235	LB A/A	0.5	OZ/A	SPRING	B	59.4	62	0	0	0	1	0	0	23	27		27	
10	ACTIVATOR 90	100	LIQ	0.50	% V/V	0.5	%V/V	SPRING	B													
11	OLYMPUS	70	WG	0.04	LB A/A	0.914	OZ/A	SPRING	B	57.3	64	33	18	18	13	53	53	38	55		55	
11	HARMONY EXTRA	75	WG	0.0235	LB A/A	0.5	OZ/A	SPRING	B													
11	ACTIVATOR 90	100	LIQ	0.50	% V/V	0.5	%V/V	SPRING	B													
12	MAVERICK	75	WG	0.03125	LB A/A	0.67	OZ/A	SPRING	B	58.1	59	8	10	10	13	68	68	23	58		58	
12	HARMONY EXTRA	75	WG	0.0235	LB A/A	0.5	OZ/A	SPRING	B													
12	ACTIVATOR 90	100	LIQ	0.50	% V/V	0.5	%V/V	SPRING	B													
13	OLYMPUS	70	WG	0.04	LB A/A	0.914	OZ/A	SPRING	B	58.2	63	23	15	15	15	40	40	25	48		48	
13	SENCOR	75	WG	0.094	LB A/A	2.0	OZ/A	SPRING	B													
13	ACTIVATOR 90	100	LIQ	0.50	% V/V	0.5	%V/V	SPRING	B													
14	MAVERICK	75	WG	0.03125	LB A/A	0.67	OZ/A	SPRING	B	57.6	66	3	5	5	18	68	68	28	63		63	
14	SENCOR	75	WG	0.094	LB A/A	2.0	OZ/A	SPRING	B													
14	ACTIVATOR 90	100	LIQ	0.50	% V/V	0.5	%V/V	SPRING	B													
15	HANDWEED									58.0	59	0	0	0	99	99	99	99	99		99	
16	NONTREATED									59.3	61	0	0	0	0	0	0	0	0		0	

Weed Code												HORPU	HORPU	HORPU	ALLVI	ALLVI	ALLVI			
Crop Code												Control	Control	Control	Control	Control	Control			
Rating Data Type		TRZAW	TRZAW	TRZAW	TRZAW	TRZAW				Control	Control	Control	Control	Control	Control					
Rating Unit		Test wt.	Yield	Injury	Injury	Injury				Percent	Percent	Percent	Percent	Percent	Percent					
Rating Date		6-14-01	6-14-01	14 DAT	28 DAT	5-4-01				14 DAT	28 DAT	5-4-01	14 DAT	28 DAT	5-4-01					
Trt-Eval Interval												14 DAT	28 DAT	14 DAT	28 DAT	14 DAT	28 DAT			
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code											
17	OLYMPUS	70	WG	0.04	LB A/A	0.914	OZ/A	SPRING	B	57.9	68	30	13	13	17	50	50	33	40	40
17	AIM	40	WG	0.025	LB A/A	1	OZ/A	SPRING	B											
17	ACTIVATOR 90	100	LIQ	0.50	% V/V	0.5	% V/V	SPRING	B											
18	OLYMPUS	70	WG	0.04	LB A/A	0.914	OZ/A	SPRING	B	57.9	62	10	5	5	13	23	23	18	23	23
18	SENCOR	75	WG	0.188	LB A/A	4	OZ/A	SPRING	B											
18	ACTIVATOR 90	100	LIQ	0.50	% V/V	0.5	% V/V	SPRING	B											
19	OLYMPUS	70	WG	0.04	LB A/A	0.914	OZ/A	SPRING	B	58.1	66	28	23	23	15	40	40	28	48	48
19	HARMONY GT	75	WG	0.02344	LB A/A	0.5	OZ/A	SPRING	B											
19	ACTIVATOR 90	100	LIQ	0.50	% V/V	0.5	% V/V	SPRING	B											
20	OLYMPUS	70	WG	0.04	LB A/A	0.914	OZ/A	SPRING	B	56.9	66	8	8	8	13	43	43	18	43	43
20	WEEDAR 64	3.8	EC	0.475	LB A/A	1	PT/A	SPRING	B											
20	ACTIVATOR 90	100	LIQ	0.50	% V/V	0.5	% V/V	SPRING	B											
21	OLYMPUS	70	WG	0.0263	LB A/A	0.6	OZ/A	FALL	A	57.6	63	10	8	8	20	55	55	0	43	43
21	ACTIVATOR 90	100	LIQ	0.50	% V/V	0.5	% V/V	FALL	A											
21	OLYMPUS	70	WG	0.0263	LB A/A	0.6	OZ/A	SPRING	B											
21	ACTIVATOR 90	100	LIQ	0.50	% V/V	0.5	% V/V	SPRING	B											
LSD (P=.05)										3.01	9.9	10.2	9.8	8.0	10.4	16.4	20.5	17.1	16.7	20.1
Replicate F										2.731	0.601	0.452	2.285	2.214	0.245	3.165	2.015	5.709	2.525	6.658
Replicate Prob(F)										0.0516	0.6170	0.7167	0.0939	0.0957	0.8648	0.0350	0.1222	0.0017	0.0720	0.0006
Treatment F										0.867	1.930	12.400	4.383	6.092	28.339	20.920	13.708	13.185	14.715	10.298
Treatment Prob(F)										0.6265	0.0264	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

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Trial Comments

1. Protocol: Bayer/SIU/AH.
2. FALL application timing is 2-3 leaf little barley, but after 3 leaf wheat. SPRING application timing is shortly after "green-up" of little barley and wheat.
3. DAT = days after treatment. 14 days after FALL and SPRING applications was on 12-5-00 and 4-20-01, respectively. 28 days after SPRING application was on 5-4-01.
4. At 28 days after FALL application, not possible to make ratings due to snow cover.
5. Harvested 6-14-01, 5 x 25 ft.
6. Study incomplete, addition ratings to be made in soybean follow crop.