

# Wheat

12-06-05 (05-5A)

Southern Illinois University

Winter Annual Grass Control in No-Till Wheat.

Project Code: 05-5A      Location: Belleville Research Center  
Investigator: Bryan Young

Investigator: Bryan Young, Associate Professor, Southern Illinois University

City State Zip Country:      Belleville      IL 62221 USA  
Trial Status: Final      Updated:      11-14-05

## Objective:

Determine the most effective strategy for control of winter annual grasses in no-till wheat production.

Weed Code	Common Name	Scientific Name
1. HORPU	barley, little	Hordeum pusillum Nutt.
2. RANAB	buttercup, smallflower	Ranunculus abortivus L.

Crop 1:      TRZAW      wheat, winter      Variety:      AP112 CL  
Planting Method:      Seeded      Planting Date:      10-29-04  
Rate:      1.3      mil. S/A      Depth:      1.5      IN  
Row Spacing:      7.5      IN

Plot Width, Unit:      10      FT      Plot Length, Unit:      27      FT      Reps:      3  
Tillage Type:      No-Till      Study Design:      Randomized complete block  
Previous Crop, Year:      TRAZW, 2004

Field Prep./Maintenance:      N 30 LB/A applied on 10-29-04 and N 85 LB/A applied on 1-28-05

Soil Name:      Stoy      % OM:      1.6      pH:      5.3      CEC:      8  
Texture:      Silt loam      Fert. Level:      P1: 109 LB/A, K: 592 LB/A

## APPLICATION DESCRIPTION

	A	B	C
Application Date:	10-31-04	11-23-04	03-12-05
Time of Day:	7:30	11:00	10:00
Application Method:	Spray	Spray	Spray
Application Timing:	PRE	FALL	SPRING
Applic. Placement:	BROFOL	BROFOL	BROFOL
Air Temp., Unit:	46 F	46 F	38 F
% Relative Humidity:	94	94	88
Wind Velocity, Unit:	0 MPH	0 MPH	3 MPH
Soil Moisture:	ABONOR	ABONOR	NORMAL

## CROP STAGE AT EACH APPLICATION

	A	B	C
Crop 1 Code, Stage:	TRZAW NA	TRZAW F2	TRZAW F3
Height, Unit:	NA NA	2-3 IN	2-4 IN

## WEED STAGE AT EACH APPLICATION

	A	B	C
Weed 1 Code:	HORPU	HORPU	HORPU
Stage (leaves):	5-6	5-6	5-6
Height (inches):	1-2	2-3	3-4
Density:	High	High	Medium
Weed 2 Code:	RANAB	RANAB	RANAB
Stage (leaves):	2-4	5-10	3-5
Height (inches):	1-2	2-3	2-3
Density:	Low	Low	Low

## APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	CO2 sprayer	CO2 sprayer	CO2 sprayer
Operating Pressure:	40 PSI	40 PSI	40 PSI
Nozzle Type:	Flat fan	Flat fan	Flat fan
Nozzle Size:	8002	8002	8002
Boom Length, Unit:	7.5 FT	7.5 FT	7.5 FT
Spray Volume, Unit:	20 GPA	20 GPA	20 GPA

NOTES:

Winter Annual Grass Control in No-Till Wheat.

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	TRZAW		HORPU		HORPU		RANAB		RANAB			
						Injury Percent	Injury Percent	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent	Control Percent				
Trt No.	Treatment Name	Form Conc	Form Type	Rate	Rate Unit	Prod Rate	Prod Unit	Grow Stg	Appl Code	14 DAT	28 DAT	14 DAT	28 DAT	14 DAT	28 DAT	28 DA-C	
1	ROUNDUP W-MAX	4.5	SL	0.375	lb ae/a	10.7	fl oz/a	PRE	A	0	0	83	96	93	60	87	80
2	GRAMOXONE MAX	3	SL	0.56	lb ai/a	1.5	pt/a	PRE	A	0	0	92	90	93	75	90	93
2	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	PRE	A								
3	PARAMOUNT	75	WG	0.248	lb ai/a	5.3	oz/a	PRE	A	0	0	0	0	0	0	0	0
3	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	PRE	A								
3	28% UAN	100	LIQ	2.5	% v/v	2.5	% v/v	PRE	A								
4	BEYOND	1	AS	0.0312	lb ai/a	4	fl oz/a	FALL	B			0	0	0	0	0	90
4	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	FALL	B								
4	28% UAN	100	LIQ	2.5	% v/v	2.5	% v/v	FALL	B								
5	BEYOND	1	AS	0.0312	lb ai/a	4	fl oz/a	FALL	B	0	17	33	0	0	0	0	60
5	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	FALL	B								
5	28% UAN	100	LIQ	20	% v/v	20	% v/v	FALL	B								
6	MAVERICK	75	WG	0.0314	lb ai/a	0.67	oz/a	FALL	B	0	25	25	0	0	0	0	90
6	ACTIVATOR 90	100	LIQ	0.5	% v/v	0.5	% v/v	FALL	B								
7	OSPREY	4.5	WG	0.0134	lb ai/a	4.75	oz/a	FALL	B	0	25	52	0	0	0	0	60
7	DESTINY MSO	100	LIQ	1.0	% v/v	1	% v/v	FALL	B								
7	28% UAN	100	LIQ	2.5	% v/v	2.5	% v/v	FALL	B								
8	OLYMPUS	70	WG	0.0394	lb ai/a	0.9	oz/a	FALL	B	0	25	25	0	0	0	0	90
8	ACTIVATOR 90	100	LIQ	0.5	% v/v	0.5	% v/v	FALL	B								
9	OLYMPUS	70	WG	0.0394	lb ai/a	0.9	oz/a	FALL	B	0	17	25	0	0	0	0	90
9	ACTIVATOR 90	100	LIQ	0.5	% v/v	0.5	% v/v	FALL	B								
9	28% UAN	100	LIQ	20	% v/v	20	% v/v	FALL	B								
10	BEYOND	1	AS	0.0312	lb ai/a	4	fl oz/a	SPRING	C	0	17	17	0	0	83	83	
10	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	SPRING	C								
10	28% UAN	100	LIQ	2.5	% v/v	2.5	% v/v	SPRING	C								
11	BEYOND	1	AS	0.0312	lb ai/a	4	fl oz/a	SPRING	C	0	70	70	0	0	90	90	
11	ACTIVATOR 90	100	LIQ	0.25	% v/v	0.25	% v/v	SPRING	C								
11	28% UAN	100	LIQ	20	% v/v	20	% v/v	SPRING	C								
12	NONTREATED									0	0	0	0	0	0	0	0
LSD (P=.05)										0.0	0.0	3.0	32.6	31.4	8.5	3.9	37.1
Replicate F										0.000	0.000	1.941	10.376	3.121	1.000	1.571	0.370
Replicate Prob(F)										1.0000	1.0000	0.1673	0.0007	0.0641	0.3840	0.2302	0.6951
Treatment F										0.000	0.000	1083.824	9.445	9.977	84.068	1051.572	7.265
Treatment Prob(F)										1.0000	1.0000	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Trial Comments

1. Protocol: BASF, Bayer.
2. Ratings: CI and WC 14 and 28 DAT, rate all plots at 28 DA SPRING application.
3. Yield.
4. FALL timing - target < 2 inch grasses, temperature > 40 degrees.  
 SPRING timing - Early March when wheat and weeds resume growth and temperature > 40 degrees.
5. Mixing instructions, some treatments have 28% UAN at 20% v/v, so decrease amount of water accordingly.
6. DAT = Days after treatment. DA-C = Days after SPRING application.
7. Rating dates:  
 14 days after PRE, FALL, and SPRING applications were on 11-14-04, 11-28-04, and 3-26-05, respectively.  
 28 days after PRE, FALL, and SPRING applications were on 11-28-04, 12-21-04, and 4-9-05, respectively.
8. Not possible to rate crop injury for all plots as wheat stand was too thin.
9. Not harvested.