

Ohio State University Horticulture and Crop Science

FALL AND SPRING WEED CONTROL IN WHEAT

Trial ID: 10WHEAT1 Study Dir.: Anthony F. Dobbels
Location: WESTERN BRANCH ENT W-6 Investigator: Dr. Mark M. Loux

GENERAL TRIAL INFORMATION

Study Director: Anthony F. Dobbels
Investigator: Dr. Mark M. Loux

TRIAL LOCATION

City: South Charleston
State/Prov.: Ohio
Postal Code: 45368
Country: USA

Conducted Under GLP (Y/N): Yes Conducted Under GEP (Y/N): Yes

CROP AND WEED DESCRIPTION

Weed Code Common Name Scientific Name
1. LAMPU Pu rple deadnettel Lamium purpureum

Crop 1: TRZAW WHEAT, WINTER Variety: PIONEER 25R47
Planting Date: 10/8/09 Planting Method: GREAT PLAINS DRILL
Rate: 125 LB/A Depth: 1 IN
Row Spacing: 7.5 IN Seed Bed: NO-TILL

SITE AND DESIGN

Plot Width, Unit: 10 FT Plot Length, Unit: 30 FT Reps: 3
Tillage Type: NO-TILL Study Design: RACOBL

SOIL DESCRIPTION

% OM: 2.6 Texture: SILTY CLAY LOAM
pH: 7.1 Soil Name: Kokomo
CEC: 17.8 Fert. Level: GOOD

APPLICATION DESCRIPTION

	A	B
Application Date:	11/24/09	4/14/10
Time of Day:	1:00 P.M.	10:00 A.M.
Application Method:	SPRAY	SPRAY
Application Timing:	FALL	SPRING
Applic. Placement:	BROFOL	BROFOL
Air Temp., Unit:	53 F	55 F
% Relative Humidity:	70	54
Wind Velocity, Unit:	3 S	6 E
Dew Presence (Y/N):	N	N
Soil Temp., Unit:	48 F	50 F
Soil Moisture:	WET	DRY
% Cloud Cover:	100	2

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	TRZAW	TRZAW
Stage Scale:	BBCH	BBCH
Height, Unit:	4 IN	15 IN

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	LAMPU 1-2"	LAMPU
Stage Scale:	6-8"	6-8"
Density, Unit:	2 M2	2 M2

APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	BACKPACK	BACKPACK
Operating Pressure:	53	53
Nozzle Type:	DG	DG
Nozzle Size:	11002	11002
Nozzle Spacing, Unit:	18 IN	18 IN
Ground Speed, Unit:	3 MPH	3 MPH
Carrier:	WATER	WATER
Spray Volume, Unit:	20 GPA	20 GPA
Propellant:	CO2	CO2

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	STEME		LAMP		STEME		LAMP	
						TRZAW	PHYTO CONTROL	CONTROL	PHYTO CONTROL	CONTROL	CONTROL	MOISTURE	TRAZ
						%	%	%	%	%	%	%	LBS
						4/27/10	4/27/10	4/27/10	5/12/10	5/12/10	5/12/10	7/7/10	7/7/10
						13 DA-B	13 DA-B	13 DA-B	28 DA-B	28 DA-B	28 DA-B	HARVEST	HARVEST
Trt No.	Treatment Name	Form Conc	Product Rate	Product Rate	Appl Unit Code	1	2	3	4	5	6	7	8
12	EXPRESS	75	0.0996 oz/a										
12	BANVEL	4	2 oz/a										
12	NIS	100	6.4 oz/a										
13	BRASH	3.87	1.33 pt/a	A		2	80	40	0	63	10	11	17
14	HARMONY EXTRA 0.3 OZ					6	100	93	0	100	97	12	22
14	HARMONY XP	75	0.198 oz/a	A									
14	EXPRESS	75	0.0996 oz/a										
14	BANVEL	4	2 oz/a										
14	NIS	100	6.4 oz/a										
14	HARMONY EXTRA 0.3 OZ												
14	HARMONY XP	75	0.198 oz/a	B									
14	EXPRESS	75	0.0996 oz/a										
14	2,4-D	4	1 pt/a										
14	NIS	100	6.4 oz/a										
15	BRASH	3.87	1 pt/a	B		6	93	40	0	100	47	12	21
16	Widematch 1.3 pts					3	90	60	0	100	60	12	20
16	STARANE	1.5	10 oz/a	B									
16	STINGER	3	5 oz/a										
16	2,4-D	4	1 pt/a										
17	Widematch 1.3 pts					3	87	37	0	100	20	12	20
17	STARANE	1.5	10 oz/a	B									
17	STINGER	3	5 oz/a										
17	EXPRESS	75	0.33 oz/a										
17	NIS	100	6.4 oz/a										
18	Widematch 1.3 pts					5	100	57	3	100	43	12	19
18	STARANE	1.5	10 oz/a	B									
18	STINGER	3	5 oz/a										
18	EXPRESS	75	0.33 oz/a										
18	2,4-D	4	1 pt/a										
18	NIS	100	6.4 oz/a										
19	Widematch 1.3 pts					1	70	60	0	100	47	12	19
19	STARANE	1.5	10 oz/a	B									
19	STINGER	3	5 oz/a										
19	HARMONY EXTRA 0.5 OZ												
19	HARMONY XP	75	0.333 oz/a										
19	EXPRESS	75	0.166 oz/a										
19	NIS	100	6.4 oz/a										
20	CURTAIL	2.38	2.67 pt/a	B		2	67	57	0	90	53	12	20
21	CURTAIL	2.38	2.67 pt/a			3	90	53	0	100	45	12	20
21	EXPRESS	75	0.33 oz/a										
21	NIS	100	6.4 oz/a										
22	EXPRESS	75	0.33 oz/a	B		1	70	47	0	100	55	12	21
22	2,4-D	4	1 pt/a										
22	NIS	100	6.4 oz/a										
23	Widematch 1.3 pts					3	73	57	0	100	77	12	19
23	STARANE	1.5	10 oz/a	B									
23	STINGER	3	5 oz/a										
23	EXPRESS	75	0.33 oz/a										
23	2,4-D	4	1 pt/a										
23	NIS	100	6.4 oz/a										
24	UTC					2	0	0	0	0	0	11	20
LSD (P=.05)						3.5	22.7	18.7	1.9	12.7	36.6	0.8	2.9

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Weed Code						
Crop Code					TRAZ	
Rating Data Type					YIELD	
Rating Unit					BU	
Rating Date					7/7/10	
Trt-Eval Interval					HARVEST	
Trt No.	Treatment Name	Form Conc	Product Rate	Product Rate Unit	Appl Code	9
1	UTC					77.4
2	Widematch 1.3 pts					77.4
2	STARANE	1.5	10 oz/a		A	
2	STINGER	3	5 oz/a			
3	Widematch 1.3 pts					83.2
3	STARANE	1.5	10 oz/a		A	
3	STINGER	3	5 oz/a			
3	EXPRESS	75	0.33 oz/a			
3	NIS	100	6.4 oz/a			
4	Widematch 1.3 pts					81.5
4	STARANE	1.5	10 oz/a		A	
4	STINGER	3	5 oz/a			
4	HARMONY EXTRA 0.5 OZ					
4	HARMONY XP	75	0.333 oz/a			
4	EXPRESS	75	0.166 oz/a			
4	NIS	100	6.4 oz/a			
5	Widematch 1.3 pts					74.4
5	STARANE	1.5	10 oz/a		A	
5	STINGER	3	5 oz/a			
5	BANVEL	4	4 oz/a			
6	Widematch 1.3 pts					79.6
6	STARANE	1.5	10 oz/a		A	
6	STINGER	3	5 oz/a			
6	EXPRESS	75	0.33 oz/a			
6	BANVEL	4	4 oz/a			
6	NIS	100	6.4 oz/a			
7	EXPRESS	75	0.33 oz/a		A	77.2
7	BANVEL	4	4 oz/a			
7	NIS	100	6.4 oz/a			
8	EXPRESS	75	0.33 oz/a		A	77.1
8	BANVEL	4	2 oz/a			
8	NIS	100	6.4 oz/a			
9	HARMONY EXTRA 0.5 OZ					78.8
9	HARMONY XP	75	0.333 oz/a		A	
9	EXPRESS	75	0.166 oz/a			
9	BANVEL	4	4 oz/a			
9	NIS	100	6.4 oz/a			
10	HARMONY EXTRA 0.5 OZ					80.1
10	HARMONY XP	75	0.333 oz/a		A	
10	EXPRESS	75	0.166 oz/a			
10	BANVEL	4	2 oz/a			
10	NIS	100	6.4 oz/a			
11	HARMONY EXTRA 0.3 OZ					77.0
11	HARMONY XP	75	0.198 oz/a		A	
11	EXPRESS	75	0.0996 oz/a			
11	BANVEL	4	4 oz/a			
11	NIS	100	6.4 oz/a			
12	HARMONY EXTRA 0.3OZ					74.8
12	HARMONY XP	75	0.198 oz/a		A	

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Weed Code
 Crop Code TRAZ
 Rating Data Type YIELD
 Rating Unit BU
 Rating Date 7/7/10
 Trt-Eval Interval HARVEST

Trt No.	Treatment Name	Form Conc	Product Rate	Product Rate Unit	Appl Code	9
12	EXPRESS	75	0.0996 oz/a			
12	BANVEL	4	2 oz/a			
12	NIS	100	6.4 oz/a			
13	BRASH	3.87	1.33 pt/a		A	62.9
14	HARMONY EXTRA 0.3 OZ					81.2
14	HARMONY XP	75	0.198 oz/a		A	
14	EXPRESS	75	0.0996 oz/a			
14	BANVEL	4	2 oz/a			
14	NIS	100	6.4 oz/a			
14	HARMONY EXTRA 0.3 OZ					
14	HARMONY XP	75	0.198 oz/a		B	
14	EXPRESS	75	0.0996 oz/a			
14	2,4-D	4	1 pt/a			
14	NIS	100	6.4 oz/a			
15	BRASH	3.87	1 pt/a		B	77.0
16	Widematch 1.3 pts					73.3
16	STARANE	1.5	10 oz/a		B	
16	STINGER	3	5 oz/a			
16	2,4-D	4	1 pt/a			
17	Widematch 1.3 pts					74.6
17	STARANE	1.5	10 oz/a		B	
17	STINGER	3	5 oz/a			
17	EXPRESS	75	0.33 oz/a			
17	NIS	100	6.4 oz/a			
18	Widematch 1.3 pts					70.3
18	STARANE	1.5	10 oz/a		B	
18	STINGER	3	5 oz/a			
18	EXPRESS	75	0.33 oz/a			
18	2,4-D	4	1 pt/a			
18	NIS	100	6.4 oz/a			
19	Widematch 1.3 pts					73.2
19	STARANE	1.5	10 oz/a		B	
19	STINGER	3	5 oz/a			
19	HARMONY EXTRA 0.5 OZ					
19	HARMONY XP	75	0.333 oz/a			
19	EXPRESS	75	0.166 oz/a			
19	NIS	100	6.4 oz/a			
20	CURTAIL	2.38	2.67 pt/a		B	74.8
21	CURTAIL	2.38	2.67 pt/a			75.7
21	EXPRESS	75	0.33 oz/a			
21	NIS	100	6.4 oz/a			
22	EXPRESS	75	0.33 oz/a		B	80.0
22	2,4-D	4	1 pt/a			
22	NIS	100	6.4 oz/a			
23	Widematch 1.3 pts					71.0
23	STARANE	1.5	10 oz/a		B	
23	STINGER	3	5 oz/a			
23	EXPRESS	75	0.33 oz/a			
23	2,4-D	4	1 pt/a			
23	NIS	100	6.4 oz/a			
24	UTC					75.0
LSD (P=.05)						10.50

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Weed Code	STEME	LAMPU	STEME	LAMPU	STEME	LAMPU	TRAZ	TRAZ				
Crop Code	TRZAW		TRAZ									
Rating Data Type	PHYTO CONTROL	CONTROL	PHYTO CONTROL	CONTROL	CONTROL	MOISTURE		YIELD				
Rating Unit	%	%	%	%	%	%	%	LBS				
Rating Date	4/27/10	4/27/10	4/27/10	5/12/10	5/12/10	5/12/10	7/7/10	7/7/10				
Trt-Eval Interval	13 DA-B	13 DA-B	13 DA-B	28 DA-B	28 DA-B	28 DA-B	HARVEST	HARVEST				
Trt Treatment No. Name	Form Conc	Product Rate	Product Rate	Appl Unit Code	1	2	3	4	5	6	7	8
Standard Deviation					2.2	13.8	11.3	1.2	7.7	22.2	0.5	1.7
CV					118.17	16.41	19.0	848.53	8.63	41.0	4.18	8.6
Bartlett's X2					15.186	5.746	19.087	0.0	0.735	37.079	21.69	28.281
P(Bartlett's X2)					0.649	0.765	0.451	.	0.692	0.016*	0.539	0.205
Replicate F					1.301	3.194	16.504	1.000	1.146	3.066	1.977	13.566
Replicate Prob(F)					0.2821	0.0503	0.0001	0.3757	0.3267	0.0562	0.1501	0.0001
Treatment F					2.050	12.561	19.860	1.000	41.309	6.720	2.250	1.296
Treatment Prob(F)					0.0191	0.0001	0.0001	0.4839	0.0001	0.0001	0.0096	0.2230

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Weed Code	
Crop Code	TRAZ
Rating Data Type	YIELD
Rating Unit	BU
Rating Date	7/7/10
Trt-Eval Interval	HARVEST
Trt Treatment	Form Product Product Appl
No. Name	Conc Rate Rate Unit Code 9
Standard Deviation	6.36
CV	8.36
Bartlett's X2	26.121
P(Bartlett's X2)	0.295
Replicate F	13.723
Replicate Prob(F)	0.0001
Treatment F	1.367
Treatment Prob(F)	0.1805

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FALL AND SPRING WEED CONTROL IN WHEAT

Trial ID: 10WHEAT1 Study Dir.: Anthony F. Dobbels
Location: WESTERN BRANCH ENT W-6 Investigator: Dr. Mark M. Loux

Weed Code

STEME = Stellaria media

LAMPU = Lamium purpureum

Crop Code

TRZAW = WHEAT, WINTER / TRITICUM AESTIVUM L.

Rating Unit

% = PERCENT

BU = BUSHEL

ARM Action Codes

TY1 = $3.666667 \times 8 \times (100 - 7) / 86$