

Ohio State University Horticulture and Crop Science

2010/WHEAT/NO-TILL/BURNDOWN/SULFENTRAZONE/

Title No. 2:
Trial ID: 11WHEAT1 Protocol ID:
Location: Study Director:
Project ID: Investigator: Dr. Mark M. Loux
Sponsor Contact:

General Trial Information

Study Director: Anthony F. Dobbels **Title:** Research Specialist
Investigator: Dr. Mark M. Loux **Title:** Professor

Trial Location

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

Crop Description

Crop 1: TRZAW Triticum aestivum (winter) Winter wheat
Variety: Seed Consultants 1358
BBCH Scale: BCER
Planting Method: DIRDRI direct drilled
Depth, Unit: 1 IN
Row Spacing, Unit: 7.5 IN
Seed Bed: MEDIUM medium
Planting Date: 10/8/10
Rate, Unit: 126 LB/A
Emergence Date: 10/15/10
Harvest Equipment: MASSEY 8 XP
Harvested Length, Unit: 30 FT
Moisture Meter: HARVEST MASTER
Harvest Date: 7/11/11
Harvested Width, Unit: 6.25 FT
% Standard Moisture: 13.0
Weighing Equipment: HARVEST MASTER 401

Pest Description

Pest 1 Type: W **Code:** LAMPU Lamium purpureum
Common Name: Purple deadnettel
Pest 2 Type: W **Code:** TAROF Taraxacum officinale
Common Name: Common dandelion
Pest 3 Type: W **Code:** STEME Stellaria media
Common Name: Common chickweed

Site and Design

Plot Width, Unit: 6.67 FT
Plot Length, Unit: 30 FT
Plot Area, Unit: 200.1 FT²
Replications: 3
Site Type: FIELD field
Experimental Unit: 1 PLOT plot
Tillage Type: NOTILL no-till
Study Design: RACOB Randomized Complete Block (RCB)
Untreated Arrangement: INCLUDED single control randomized in each block

Soil Description

Description Name: J
% OM: 2.9 **Texture:** SIL silt loam
pH: 6.4 **Soil Name:** Crosby
CEC: 18.1 **Fert. Level:** G good
Soil Drainage: G good

Additional Measured Elements

Element Quantity Unit
P 122 ppm
K 196 ppm

Application Description

	A	B	C	D
Application Date:	10/6/10	10/1/10	10/8/10	11/9/10
Time of Day:	9:00 A.M.	9:00 A.M.	10:00 A.M	12:30 P.M
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	3 EPP	7 EPP	PRE	FALL
Application Placement:	BROFO	BROFO	BROFO	BROFO
Air Temperature, Unit:	65 F	66 F	62 F	71 F
% Relative Humidity:	44	42	51	35
Wind Velocity, Unit:	6 MPH	10 MPH	2.5 MPH	2.4 MPH
Wind Direction:	WNW	N	W	SSW
Dew Presence (Y/N):	N no	N no	N no	N no
Soil Temperature, Unit:	58 F	60 F	54 F	48 F
Soil Moisture:	DRY	DRY	DRY	DRY
% Cloud Cover:	0	0	0	0
Next Rain Occurred On:	10/13/10	10/2/10	10/13/10	11/14/10

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Crop Stage At Each Application

	A	B	C	D
Crop 1 Code, BBCH Scale:	TRZAW	BCER TRZAW	BCER TRZAW	BCER TRZAW BCER
Stage Scale Used:				BBCH
Stage Majority, Percent:				14 80
Stage Minimum, Percent:				13 20
Stage Maximum, Percent:				14 80
Height, Unit:				5 IN
Height Minimum, Maximum:				4 5

Pest Stage At Each Application

	A	B	C	D
Pest 1 Code, Type, Scale:	LAMPU W LAMPU W	LAMPU W LAMPU W	LAMPU W LAMPU W	LAMPU W
Stage Majority, Percent:				14 100
Diameter, Unit:	0.25 IN	0.25 IN	0.25 IN	0.5 IN
Height, Unit:	0.25 IN	0.25 IN	0.25 IN	0.5 IN
Height Minimum, Maximum:	0.25 0.5	0.25 0.5	0.25 0.5	0.5 0.5
Pest 2 Code, Type, Scale:	TAROF W TAROF W	TAROF W TAROF W	TAROF W TAROF W	TAROF W
Diameter, Unit:	1 IN	1 IN	1 IN	2 IN
Height, Unit:	0.5 IN	0.5 IN	0.5 IN	0.5 IN
Height Minimum, Maximum:	0.5 1	0.5 1	0.5 1	0.5 1
Pest 3 Code, Type, Scale:	STEME W	STEME W	STEME W	STEME W
Diameter, Unit:				1 IN
Height, Unit:				0.5 IN
Height Minimum, Maximum:				0.5 0.5

Application Equipment

	A	B	C	D
Appl. Equipment:	6 foot boom	6 foot boom	6 foot boom	6 foot boom
Equipment Type:	SPRBAC	SPRBAC	SPRBAC	SPRBAC
Operating Pressure, Unit:	53 PSI	53 PSI	53 PSI	53 PSI
Nozzle Type:	TEEJET DG	TEEJET DG	TEEJET DG	TEEJET DG
Nozzle Size:	8002	8002	8002	8002
Nozzle Spacing, Unit:	18 IN	18 IN	18 IN	18 IN
Boom Length, Unit:	6 FT	6 FT	6 FT	6 FT
Boom Height, Unit:	20 IN	20 IN	20 IN	20 IN
Ground Speed, Unit:	3 MPH	3 MPH	3 MPH	3 MPH
Carrier:	WATER	WATER	WATER	WATER
Spray Volume, Unit:	20 GPA	20 GPA	20 GPA	20 GPA
Mix Size, Unit:	0.33 Gallons	0.33 Gallons	0.33 Gallons	0.33 Gallons
Propellant:	CO2	CO2	CO2	CO2

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Pest Type	W Weed	W Weed	W Weed	W Weed	W Weed
Pest Code	STEME	LAMPU	TAROF	STEME	LAMPU
Pest Scientific Name	Stellaria media	Lamium purpure>	Taraxacum offi>	Stellaria media	Lamium purpure>
Pest Name	Common chickwe>	Purple deadnet>	Common dandel>	Common chickwe>	Purple deadnet>
Crop Code					
BBCH Scale					
Crop Scientific Name					
Crop Name					
Rating Date	4/13/11	4/13/11	4/13/11	3/29/11	3/29/11
Rating Type	CONTRO	CONTRO	CONTRO	CONTRO	CONTRO
Rating Unit	%	%	%	%	%
Number of Subsamples	1	1	1	1	1
Days After First/Last Applic.	194 155	194 155	194 155	179 140	179 140
Plant-Eval Interval	187 DP-1	187 DP-1	187 DP-1	172 DP-1	172 DP-1
Days After Emergence	180 DE-1	180 DE-1	180 DE-1	165 DE-1	165 DE-1
ARM Action Codes					
Number of Decimals					

Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate	Appl Unit Code	1	2	3	4	5
1						96.7 a	76.7 a	100.0 a	98.3 a	80.0 a
2	RAGE D-TECH	4.06	8 oz/a		A	100.0 a	81.7 a	100.0 a	100.0 a	81.7 a
	2 Roundup WeatherMax	4.5	22 oz/a		A					
	2 N-PAK AMS	100	64 oz/a		A					
3	RAGE D-TECH	4.06	16 oz/a		B	100.0 a	78.3 a	100.0 a	100.0 a	71.7 a
	3 Roundup WeatherMax	4.5	22 oz/a		B					
	3 N-PAK AMS	100	64 oz/a		B					
4	AUTHORITY MTZ	45	5.5 oz/a		C	100.0 a	91.7 a	100.0 a	94.3 a	86.7 a
	4 Roundup WeatherMax	4.5	22 oz/a		C					
	4 N-PAK AMS	100	64 oz/a		C					
5	AUTHORITY MTZ	45	11 oz/a		C	100.0 a	95.0 a	100.0 a	98.3 a	86.7 a
	5 Roundup WeatherMax	4.5	22 oz/a		C					
	5 N-PAK AMS	100	64 oz/a		C					
6	AUTHORITY MTZ	45	5.5 oz/a		C	100.0 a	95.0 a	90.0 a	100.0 a	76.7 a
	6 GRAMOXONE INTEON	2.762	24 oz/a		C					
	6 N-PAK AMS	100	64 oz/a		C					
7	AUTHORITY MTZ	45	11 oz/a		C	100.0 a	100.0 a	100.0 a	100.0 a	91.7 a
	7 GRAMOXONE INTEON	2.762	24 oz/a		C					
	7 N-PAK AMS	100	64 oz/a		C					
8	Roundup WeatherMax	4.5	22 oz/a		B	100.0 a	78.3 a	100.0 a	98.3 a	73.3 a
	8 2,4-D Ester	4	16 oz/a		B					
	8 N-PAK AMS	100	64 oz/a		B					
9	Roundup WeatherMax	4.5	22 oz/a		A	100.0 a	96.7 a	100.0 a	91.7 a	78.3 a
	9 2,4-D Ester	4	16 oz/a		A					
	9 N-PAK AMS	100	64 oz/a		A					
10	Express	50	0.375 oz/a		D	100.0 a	100.0 a	100.0 a	100.0 a	100.0 a
	10 Clarity	4	2 oz/a		D					
	10 NIS	100	6.4 oz/a		D					
LSD (P=.05)						3.13	18.70	9.40	6.22	17.95
Standard Deviation						1.83	10.90	5.48	3.63	10.47
CV						1.83	12.2	5.53	3.7	12.66
Bartlett's X2						0.0	7.855	0.0	4.395	3.723
P(Bartlett's X2)						.	0.346	.	0.355	0.881
Replicate F						1.000	9.730	1.000	2.380	22.877
Replicate Prob(F)						0.3874	0.0014	0.3874	0.1210	0.0001
Treatment F						1.000	2.279	1.000	1.870	2.083
Treatment Prob(F)						0.4742	0.0654	0.4742	0.1235	0.0885

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Pest Type	W Weed			
Pest Code	TAROF			
Pest Scientific Name	Taraxacum offi>			
Pest Name	Common dandel>			
Crop Code		TRZAW	TRZAW	TRZAW
BBCH Scale		BCER	BCER	BCER
Crop Scientific Name		Triticum aesti>	Triticum aesti>	Triticum aesti>
Crop Name		Winter wheat	Winter wheat	Winter wheat
Rating Date	3/29/11	7/11/11	7/11/11	7/11/11
Rating Type	CONTRO	WEIGHT	MOICON	YIELD
Rating Unit	%	lb/plot	%	BU
Number of Subsamples	1	1	1	1
Days After First/Last Applic.	179 140	283 244	283 244	283 244
Plant-Eval Interval	172 DP-1	276 DP-1	276 DP-1	276 DP-1
Days After Emergence	165 DE-1	269 DE-1	269 DE-1	269 DE-1
ARM Action Codes				TY1
Number of Decimals				1

Trt No.	Treatment Name	Form Conc	Other Rate	Other Rate	Appl Unit Code	6	7	8	9
1						100.0 a	18.20 a	12.93 a	70.5 a
2	RAGE D-TECH	4.06	8 oz/a		A	99.7 a	19.40 a	12.57 a	75.5 a
	2 Roundup WeatherMax	4.5	22 oz/a		A				
	2 N-PAK AMS	100	64 oz/a		A				
3	RAGE D-TECH	4.06	16 oz/a		B	99.7 a	19.27 a	13.07 a	74.6 a
	3 Roundup WeatherMax	4.5	22 oz/a		B				
	3 N-PAK AMS	100	64 oz/a		B				
4	AUTHORITY MTZ	45	5.5 oz/a		C	100.0 a	18.27 a	12.50 a	71.2 a
	4 Roundup WeatherMax	4.5	22 oz/a		C				
	4 N-PAK AMS	100	64 oz/a		C				
5	AUTHORITY MTZ	45	11 oz/a		C	100.0 a	18.57 a	12.87 a	72.0 a
	5 Roundup WeatherMax	4.5	22 oz/a		C				
	5 N-PAK AMS	100	64 oz/a		C				
6	AUTHORITY MTZ	45	5.5 oz/a		C	100.0 a	18.90 a	12.43 a	73.6 a
	6 GRAMOXONE INTEON	2.762	24 oz/a		C				
	6 N-PAK AMS	100	64 oz/a		C				
7	AUTHORITY MTZ	45	11 oz/a		C	99.8 a	18.77 a	12.53 a	73.1 a
	7 GRAMOXONE INTEON	2.762	24 oz/a		C				
	7 N-PAK AMS	100	64 oz/a		C				
8	Roundup WeatherMax	4.5	22 oz/a		B	99.9 a	19.43 a	12.53 a	75.6 a
	8 2,4-D Ester	4	16 oz/a		B				
	8 N-PAK AMS	100	64 oz/a		B				
9	Roundup WeatherMax	4.5	22 oz/a		A		19.70 a	12.63 a	76.6 a
	9 2,4-D Ester	4	16 oz/a		A				
	9 N-PAK AMS	100	64 oz/a		A				
10	Express	50	0.375 oz/a		D	100.0 a	18.53 a	12.60 a	72.1 a
	10 Clarity	4	2 oz/a		D				
	10 NIS	100	6.4 oz/a		D				
LSD (P=.05)						1.00	1.617	0.906	6.64
Standard Deviation						0.31	0.942	0.528	3.87
CV						0.31	4.99	4.17	5.27
Bartlett's X2						0.0	7.812	3.511	8.323
P(Bartlett's X2)						.	0.553	0.941	0.502
Replicate F						1.684	13.125	0.910	11.565
Replicate Prob(F)						0.2851	0.0003	0.4204	0.0006
Treatment F						0.348	0.924	0.483	0.843
Treatment Prob(F)						0.8967	0.5272	0.8676	0.5880

Means followed by same letter do not significantly differ (P=.05, LSD)
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Sponsor Contact:

Pest Type

W, Weed, G-BYRW7, G-WedStg = Weed or volunteer crop

Pest Code

STEME, Stellaria media, = US
LAMPU, Lamium purpureum, = US
TAROF, Taraxacum officinale, = US

Crop Code

TRZAW, BCER, Triticum aestivum (winter), = US

Rating Type

CONTRO = control / burndown or knockdown
WEIGHT = weight
MOICON = moisture content
YIELD = yield

Rating Unit

% = percent
lb/plot = pounds per plot
BU = bushel

Plant-Eval Interval

187 DP-1 = 1 10/8/10
172 DP-1 = 1 10/8/10
276 DP-1 = 1 10/8/10

ARM Action Codes

TY1 = 3.872*[7]*(100-[8])/87