

# Washington State University

## Rattail Fescue Control with Powerflex, Goldsky, and Osprey in Winter Wheat

Trial ID: ICB1811      Protocol ID:  
 Location: Pullman-PCFS      Study Director:  
 Project ID:      Investigator: Dr. Ian C. Burke  
                                  Sponsor Contact:

### General Trial Information

**Investigator:** Dr. Ian C. Burke    **Title:** Assistant Professor

**Initiation Date:** Oct-20-2010

### Trial Location

**City:** Pullman  
**State/Prov.:** Washington  
**Postal Code:** 99163  
**Country:** USA United States  
**Directions:**

### Personnel

**Investigator:** Dr. Ian C. Burke    **Title:** Assistant Professor  
**Affiliation:** Washington State University  
**Postal Code:** 99164    **E-mail:** icburke@wsu.edu

### Crop Description

Winter Wheat  
**Variety:** Madsen  
**Planting Method:** DRILLE drilled  
**Depth, Unit:** 1.5 IN  
**Row Spacing, Unit:** 10 IN  
**Seed Bed:** COATRA coarse/trashy    **Soil Temperature, Unit:** 9 C  
**Soil Moisture:** MOIST  
**Harvest Date:** Sep-21-2011    **Harvest Equipment:** Kincaid 8 XP  
**Harvested Width, Unit:** 5 FT    **Harvested Length, Unit:** 35 FT  
**Planting Date:** Oct-20-2010  
**Rate, Unit:** 100 LB/A

### Pest Description

**Pest 1 Type:** W    **Code:** AMSIN *Amsinckia intermedia*  
**Common Name:** Coast fiddleneck

**Pest 2 Type:** W    **Code:** LAMAM *Lamium amplexicaule*  
**Common Name:** Henbit

**Pest 3 Type:** W    **Code:** ANTCO *Anthemis cotula*  
**Common Name:** Mayweed chamomile

**Pest 4 Type:** W    **Code:** GALAP *Galium aparine*  
**Common Name:** Catchweed bedstraw

### Site and Design

**Plot Width, Unit:** 8 FT  
**Plot Length, Unit:** 35 FT  
**Plot Area, Unit:** 280 FT<sup>2</sup>  
**Replications:** 4    **Study Design:** FACTOR Factorial

### Soil Description

**Description Name:** Silt Loam PCFS  
**% Sand:** 28.7    **% OM:** 3.33  
**% Silt:** 58.5    **pH:** 5.2  
**% Clay:** 12.8    **CEC:** 26.6  
**Analyzed By:**  
 Northwest Agricultural Consultants

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## Application Description

	A	B	C
<b>Application Date:</b>	Oct-27-2010	Apr-12-2011	May-11-2011
<b>Time of Day:</b>	1030	12000	1600
<b>Application Method:</b>	SPRAY	SPRAY	SPRAY
<b>Application Timing:</b>	PREE	POST	POSPOS
<b>Application Placement:</b>	SOIL	FOLIAR	FOLIAR
<b>Applied By:</b>	RR	RR	RR
<b>Air Temperature, Unit:</b>	45 F	52.4 F	70 F
<b>% Relative Humidity:</b>	67	35	25
<b>Wind Velocity, Unit:</b>	4.5 MPH	2.4 MPH	3 MPH
<b>Wind Direction:</b>	E	E	SW
<b>Dew Presence (Y/N):</b>	N no	N no	N no
<b>Soil Temperature, Unit:</b>	5 C	4 C	10 C
<b>Soil Moisture:</b>	WET	MOIST	DRY
<b>% Cloud Cover:</b>	5	30	90
<b>Next Rain Occurred On:</b>			May-12-2011

## Crop Stage At Each Application

	A	B	C
<b>Stage Scale Used:</b>	PREE	DESC	DESC
<b>Stage Majority, Percent:</b>		2-3 lf. 100	Tillered 100
<b>Stage Minimum, Percent:</b>			1 tiller 50
<b>Stage Maximum, Percent:</b>			2 Tiller 50
<b>Height, Unit:</b>		5 IN	6 IN
<b>Height Minimum, Maximum:</b>		5 6	
<b>Plant Foliage Height, Unit:</b>		5 IN	6 IN
<b>Crop coverage (%):</b>			20

## Pest Stage At Each Application

	A	B	C
<b>Pest 1 Code, Type, Scale:</b>	AMSIN W	AMSIN W	AMSIN W
<b>Stage Majority, Percent:</b>	Pree 0	Pree 0	3-12lf
<b>Density, Unit:</b>			73 Plants
<b>Coverage, Unit:</b>	0 0	0 0	1 M2
<b>Pest 2 Code, Type, Scale:</b>	LAMAM W	LAMAM W	LAMAM W
<b>Stage Majority, Percent:</b>	Pree 0	Pree 0	cot-2l 100
<b>Density, Unit:</b>			16 Plants
<b>Coverage, Unit:</b>	0 0	0 0	1 M2
<b>Pest 3 Code, Type, Scale:</b>	ANTCO W	ANTCO W	ANTCO W
<b>Stage Majority, Percent:</b>	Pree 0	Pree 0	2-6lf
<b>Density, Unit:</b>			31 Plants
<b>Coverage, Unit:</b>	0 0	0 0	1 M2
<b>Pest 4 Code, Type, Scale:</b>	GALAP W	GALAP W	GALAP W
<b>Stage Majority, Percent:</b>	Pree 0	Pree 0	2-3lf
<b>Density, Unit:</b>			200 Plants
<b>Coverage, Unit:</b>	0 0	0 0	1 M2

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## Application Equipment

	A	B	C
<b>Appl. Equipment:</b>	CO2 BP	CO2 BP	CO2 BP
<b>Equipment Type:</b>	SPRAY	SPRAY	SPRAY
<b>Operation Pressure, Unit:</b>	35 PSI	35 PSI	35 PSI
<b>Nozzle Type:</b>	FLAT FAN	FLAT FAN	FLAT FAN
<b>Nozzle Size:</b>	8015	8015	8015
<b>Nozzle Spacing, Unit:</b>	18 IN	18 IN	18 IN
<b>Nozzles/Row:</b>	4	4	4
<b>Boom Length, Unit:</b>	6 FT	6 FT	6 FT
<b>Boom Height, Unit:</b>	24 IN	24 IN	24 IN
<b>Ground Speed, Unit:</b>	3 MPH	3 MPH	3 MPH
<b>Spray Volume, Unit:</b>	15 gal/ac	15 gal/ac	15 gal/ac
<b>Mix Size, Unit:</b>	1.5 liters	1.5 liters	1.5 liters
<b>Propellant:</b>	CO2	CO2	CO2

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Pest Type	W Weed	W Weed					
Pest Scientific Name	Vulpia myuros	Vulpia myuros					
Pest Name	Rattail Fescue	Rattail Fescue					
Crop Name			Winter Wheat	Winter Wheat			
Description							
Part Rated							
Rating Date	Foliag - Jul-7-2011	Foliag - Aug-11-2011	Seed - Sep-21-2011	Seed - Sep-21-2011			
Rating Type	CONTROL	CONTROL	Test Weight	YIELD			
Rating Unit	%	%	lbs/bu	BU/A			
Number of Subsamples	1	1	1	1			
Assessed By	ICB	mrm					
Days After First/Last Applic.	253 57	288 92	329 133	329 133			
Plant-Eval Interval	260 DP-1	295 DP-1	336 DP-1	336 DP-1			
ARM Action Codes							
Number of Decimals							
Trt No.	Treatment Name	Rate	Appl Code				
		Rate Unit		1	2	16	17
1	Early Timing POWERFLEX R-11	B 3.5 oz/a 0.5 % v/v	B B B	47.5	63.8	58.723	52.873
2	Early Timing POWERFLEX R-11 AMMONIUM SULFATE	B 3.5 oz/a 0.5 % v/v 1.7 oz/a	B B B B	63.8	73.8	59.783	66.710
3	Early Timing GOLDSKY R-11	B 1.68 oz/a 0.5 % v/v	B B B	56.3	63.8	59.585	67.618
4	Early Timing GOLDSKY R-11 AMMONIUM SULFATE	B 16 oz/a 0.5 % v/v 1.7 oz/a	B B B B	62.5	65.0	58.955	67.478
5	Early Timing OSPREY R-11 AMMONIUM SULFATE	B 15 oz/a 0.5 % v/v 1.7 oz/a	B B B B	42.5	43.8	59.003	52.455
6	Mid Timing POWERFLEX R-11	C 18.4 oz/a 0.5 % v/v	C C C	55.0	64.5	59.415	55.198
7	Mid Timing POWERFLEX R-11 AMMONIUM SULFATE	C 18.4 oz/a 0.5 % v/v 1.7 oz/a	C C C C	70.0	62.5	58.943	53.480
8	Mid Timing GOLDSKY R-11	C 16 oz/a 0.5 % v/v	C C C	70.0	57.5	58.935	63.788
9	Mid Timing GOLDSKY R-11 AMMONIUM SULFATE	C 1.68 oz/a 0.5 % v/v 1.7 oz/a	C C C C	55.0	60.0	58.173	47.223
10	Mid Timing OSPREY R-11 AMMONIUM SULFATE	C 15 oz/a 0.5 % v/v 1.7 oz/a	C C C C	46.3	45.0	59.120	60.155
11	UNTREATED			0.0	0.0	59.100	34.670
12	AXIOM	380 oz/a	A	73.8	75.0	60.058	58.600
13	AXIOM POWERFLEX R-11 AMMONIUM SULFATE	380 oz/a 18.4 oz/a 0.5 % v/v 1.7 oz/a	A C C C	83.3	82.5	59.245	69.815

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ARM Action Codes					
Number of Decimals					
Trt No.	Treatment Name	Rate	Appl Unit	Code	
					1 2 16 17
14	AXIOM	380 oz/a	A		78.8 73.8 59.245 64.233
	GOLDSKY	1.68 oz/a	C		
	R-11	0.5 % v/v	C		
	AMMONIUM SULFATE	1.7 oz/a	C		
15	AXIOM	380 oz/a	A		89.5 84.5 59.623 71.255
	OSPREY	15 oz/a	C		
	R-11	0.5 % v/v	C		
	AMMONIUM SULFATE	1.7 oz/a	C		
LSD (P=.05)		19.58	18.41	1.3288	21.0324
Standard Deviation		13.70	12.88	0.9299	14.7176
CV		22.98	21.11	1.57	24.93