

# Oregon State University Columbia Basin Ag Research Center

Russian thistle control in chemical fallow with BAS 800

Trial ID: 07-350

Location: Morrow county

Study Director: Larry Bennett

Investigator: Daniel A Ball

## General Trial Information

Study Director: Larry Bennett

Title: Research Assistant

Affiliation: OSU-CBARC

Postal Code: 97801

Investigator: Larry Bennett

Title: Research Assistant

Affiliation: OSU-CBARC

Postal Code: 97801

## Trial Location

City: Lexington

State/Prov.: OR

## Cooperator/Landowner

Cooperator: Chris Rauch

Organization: Starvation Farms

City: Lexington

State/Prov: OR

## Pest Description

Pest 1 Code: RTHISTLE

Common Name: Russian thistle

Pest 2 Code: PLETTUCE

Common Name: Prickly lettuce

## Site and Design

Plot Width, Unit: 9 FT

Site Type: Chemical fallow

Plot Length, Unit: 30 FT

Replications: 4

Study Design: Randomized Complete Block

## Soil Description

% Sand: 29.4 % OM: 1.8

Texture: Silt loam

% Silt: 64.4 pH: 8.0

% Clay: 6.2 CEC: 13.6

## Application Description

A

Application Date: May-15-07

Time of Day: 10:00 am

Application Method: Broadcast

Application Timing: POST

Application Placement: Foliar

Air Temperature, Unit: 73 F

% Relative Humidity: 44

Wind Velocity, Unit: 3 mph

Wind Direction: E

Dew Presence (Y/N): N

Soil Temperature, Unit: 75 F

Soil Moisture: Dry

% Cloud Cover: 0

## Pest Stage At Each Application

A

Pest 1 Code: RTHISTLE

Stage: 2-4"Rosette

Pest 2 Code: PLETTU W

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## Application Equipment

A

Appl. Equipment:	Handboom
Operating Pressure, Unit:	30 psi
Nozzle Type:	Flat fan
Nozzle Size:	XR-8002
Nozzle Spacing, Unit:	18 in
Boom Length, Unit:	9 ft
Ground Speed, Unit:	3.5 mph
Carrier:	Water
Spray Volume, Unit:	16 gpa
Mix Size, Unit:	1.7 liters
Propellant:	CO2

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Pest Name	Rthistle	Rthistle	Rthistle
Part Rated	Weed	Weed	Weed
Rating Date	May-18-07	May-21-07	May-31-07
Rating Data Type	Control	Control	Control
Rating Unit	%	%	%

Trt No.	Treatment Name	Form Conc	Rate Type	Rthistle	Rthistle	Rthistle
				May-18-07	May-21-07	May-31-07
				Control	Control	Control
				%	%	%
1	Untreated control			0	0	0
2	BAS 80003H	1 EC	2.85 FL OZ/A	95	99	100
2	Roundup Org.	3 SL	32 FL OZ/A			
2	Agridex	100 SL	1 % V/V			
2	AMS	WG	17 LB/100 GAL			
3	BAS 80003H	1 EC	2.85 FL OZ/A	95	98	100
3	Roundup Org.	3 SL	32 FL OZ/A			
3	Silwett L-77	SL	0.25 % V/V			
3	AMS	WG	17 LB/100 GAL			
4	BAS 80003H	1 EC	2.85 FL OZ/A	83	97	100
4	Roundup Org.	3 SL	32 FL OZ/A			
4	Kinetic	SL	0.25 % V/V			
4	AMS	WG	17 LB/100 GAL			
5	BAS 80003H	1 EC	2.85 FL OZ/A	85	92	100
5	Roundup Org.	3 SL	32 FL OZ/A			
5	R-11	SL	0.25 % V/V			
5	AMS	WG	17 LB/100 GAL			
6	BAS 80003H	1 EC	2.85 FL OZ/A	85	91	100
6	Roundup Org.	3 SL	32 FL OZ/A			
6	Spreader 90	SL	0.25 % V/V			
6	AMS	WG	17 LB/100 GAL			
7	BAS 80003H	1 EC	2.85 FL OZ/A	93	97	100
7	Roundup Org.	3 SL	32 FL OZ/A			
7	Clarity	4 SL	64 FL OZ/A			
7	Agridex	SL	1 % V/V			
7	AMS	WG	17 LB/100 GAL			
8	BAS 800ADH	2.85 SC	1 FL OZ/A	79	93	100
8	Roundup Org.	3 SL	32 FL OZ/A			
8	Agridex	SL	1 % V/V			
8	AMS	WG	17 LB/100 GAL			
9	BAS 80003H	1 EC	2.85 FL OZ/A	93	98	100
9	Agridex	SL	1 % V/V			
9	AMS	WG	17 LB/100 GAL			
10	Roundup Org.	3 SL	32 FL OZ/A	40	59	73
10	Agridex	SL	1 % V/V			
10	AMS	WG	17 LB/100 GAL			

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Pest Name	Rthistle	Rthistle	Rthistle
Part Rated	Weed	Weed	Weed
Rating Date	May-18-07	May-21-07	May-31-07
Rating Data Type	Control	Control	Control
Rating Unit	%	%	%

Trt Treatment No. Name	Form Conc Type	Rate Prod/A			
11 BAS 80003H	1 EC	2.85 FL OZ/A	95	100	100
11 Roundup Org.	3 SL	32 FL OZ/A			
11 Agridex	SL	1 % V/V			
11 AMS	WG	17 LB/100 GAL			
12 BAS 80003H	1 EC	4.34 FL OZ/A	97	100	100
12 Roundup Org.	3 SL	32 FL OZ/A			
12 Agridex	SL	1 % V/V			
12 AMS	WG	17 LB/100 GAL			
13 BAS 80003H	1 EC	5.7 FL OZ/A	86	96	100
13 Roundup Org.	3 SL	32 FL OZ/A			
13 Agridex	SL	1 % V/V			
13 AMS	WG	17 LB/100 GAL			
14 Fallow Master	SL	44 FL OZ/A	15	25	59
14 AMS	WG	17 LB/100 GAL			
LSD (P=.05)			11	11	12
Replicate F			0.625	1.569	1.102
Replicate Prob(F)			0.6029	0.2123	0.3601
Treatment F			63.312	67.343	43.765
Treatment Prob(F)			0.0001	0.0001	0.0001

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## Russian thistle control in chemical fallow with BAS 800

Trial ID: 07-350

Location: Morrow county

Pest Name			Rthistle Weed	Plettuce Weed
Part Rated			Jun-15-07	Jun-15-07
Rating Date			Control	Control
Rating Data Type			%	%
Rating Unit				
Trt No.	Treatment Name	Form Conc Type	Rate Prod/A	
1	Untreated control		0	0
2	BAS 80003H	1 EC	2.85 FL OZ/A	100
2	Roundup Org.	3 SL	32 FL OZ/A	100
2	Agridex	100 SL	1 % V/V	
2	AMS	WG	17 LB/100 GAL	
3	BAS 80003H	1 EC	2.85 FL OZ/A	100
3	Roundup Org.	3 SL	32 FL OZ/A	100
3	Silwett L-77	SL	0.25 % V/V	
3	AMS	WG	17 LB/100 GAL	
4	BAS 80003H	1 EC	2.85 FL OZ/A	100
4	Roundup Org.	3 SL	32 FL OZ/A	100
4	Kinetic	SL	0.25 % V/V	
4	AMS	WG	17 LB/100 GAL	
5	BAS 80003H	1 EC	2.85 FL OZ/A	100
5	Roundup Org.	3 SL	32 FL OZ/A	100
5	R-11	SL	0.25 % V/V	
5	AMS	WG	17 LB/100 GAL	
6	BAS 80003H	1 EC	2.85 FL OZ/A	96
6	Roundup Org.	3 SL	32 FL OZ/A	100
6	Spreader 90	SL	0.25 % V/V	
6	AMS	WG	17 LB/100 GAL	
7	BAS 80003H	1 EC	2.85 FL OZ/A	100
7	Roundup Org.	3 SL	32 FL OZ/A	100
7	Clarity	4 SL	64 FL OZ/A	
7	Agridex	SL	1 % V/V	
7	AMS	WG	17 LB/100 GAL	
8	BAS 800ADH	2.85 SC	1 FL OZ/A	99
8	Roundup Org.	3 SL	32 FL OZ/A	100
8	Agridex	SL	1 % V/V	
8	AMS	WG	17 LB/100 GAL	
9	BAS 80003H	1 EC	2.85 FL OZ/A	100
9	Agridex	SL	1 % V/V	98
9	AMS	WG	17 LB/100 GAL	
10	Roundup Org.	3 SL	32 FL OZ/A	85
10	Agridex	SL	1 % V/V	73
10	AMS	WG	17 LB/100 GAL	

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Pest Name			Rthistle	Plettuce
Part Rated			Weed	Weed
Rating Date			Jun-15-07	Jun-15-07
Rating Data Type			Control	Control
Rating Unit			%	%
Trt Treatment	Form	Rate		
No. Name	Conc Type	Prod/A		
11 BAS 80003H	1 EC	2.85 FL OZ/A	100	100
11 Roundup Org.	3 SL	32 FL OZ/A		
11 Agridex	SL	1 % V/V		
11 AMS	WG	17 LB/100 GAL		
12 BAS 80003H	1 EC	4.34 FL OZ/A	100	100
12 Roundup Org.	3 SL	32 FL OZ/A		
12 Agridex	SL	1 % V/V		
12 AMS	WG	17 LB/100 GAL		
13 BAS 80003H	1 EC	5.7 FL OZ/A	100	100
13 Roundup Org.	3 SL	32 FL OZ/A		
13 Agridex	SL	1 % V/V		
13 AMS	WG	17 LB/100 GAL		
14 Fallow Master	SL	44 FL OZ/A	80	90
14 AMS	WG	17 LB/100 GAL		
LSD (P=.05)			12	11
Replicate F			2.406	0.976
Replicate Prob(F)			0.0819	0.4145
Treatment F			39.478	45.588
Treatment Prob(F)			0.0001	0.0001

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### Trial Comments

This study was initiated to evaluate BAS 800 at different rates and adjuvant systems for control of Russian thistle in chemical fallow. This trial was located on Starvation farms north of Lexington, OR. The plots were treated 5/15/07 in a chemical fallow field that had a moderate population of Russian thistle at a 2-4 inch rosette size at the time of treatment. Three days after treatment (DAT), all treatments, with the exception of Roundup alone or Fallow Master, were giving 79-97% control. A new formulation of BAS 800 (BAS 800ADH) appeared to be less effective than the same rate of an older formulation, 79% compared to 95%. By 6 DAT, this difference was less and by 16 DAT, all of the BAS 800 treatments were giving 100% control of Russian thistle regardless of formulation. Agridex, Silwett L-77, and Kinetic appeared to increase control with BAS 800 over R-11, a non-ionic surfactant. These differences were only observed 3 and 6 DAT, but not at later ratings. Roundup and Fallow Master were less effective than the BAS 800 treatments, averaging 85% and 80% control at 31 DAT respectively. Prickly lettuce control was rated 31 DAT. The BAS 800 treatments averaged 98-100% control, while Roundup and Fallow Master averaged 73% and 90% respectively. From the results of this study, it appears that BAS 800 is a very effective product for control of Russian thistle in a chemical fallow system. It was more effective than Roundup or Fallow Master, which are commonly used for this purpose.