

# Washington State University

## WHEAT/BEYOND/EFFICACY/CROP RESPONSE/SEQUENTIAL TIMING

Trial ID: ICB3811      Protocol ID: ICB3811  
 Location: LIND DRYLAND STATION      Study Director:  
 Project ID:      Investigator: Dr. Ian C. Burke  
    Sponsor Contact: CHUCK RICE

### General Trial Information

Investigator: Dr. Ian C. Burke

**Trial Location**  
 City: Lind      Latitude of LL Corner °: 47.00123 N  
 State/Prov.: Washington      Longitude of LL Corner °: 118.34534 W  
 Altitude of LL Corner, Unit: 1606.00 FT

### Personnel

Investigator: Dr. Ian C. Burke

### Crop Description

Winter Wheat  
 Variety: Clearfield 103  
 Planting Date: Aug-26-2010  
 Planting Method: JD H2      Rate, Unit: 40 LB/A  
 Depth, Unit: 5 IN  
 Row Spacing, Unit: 16 IN  
 Seed Bed: FALLOW  
 Harvest Date: Aug-4-2011      Harvest Equipment: KINCAID 8-XP  
 Harvested Width, Unit: 5 FT      Harvested Length, Unit: 28 FT

### Pest Description

Pest 1 Type: W      Code: SSYAL *Sisymbrium altissimum*  
 Common Name: Tumble mustard

Pest 2 Type: W      Code: DESSO *Descurainia sophia*  
 Common Name: Flixweed

### Site and Design

Plot Width, Unit: 8 FT  
 Plot Length, Unit: 30 FT  
 Plot Area, Unit: 240 FT<sup>2</sup>  
 Replications: 4      Study Design: RACOBL Randomized Complete Block (RCB)

### Soil Description

Description Name: Silt Loam Lind  
 % Sand: 33.8      % OM: 1.24  
 % Silt: 57.4      pH: 6.1  
 % Clay: 8.8      CEC: 20.3  
 Analyzed By:  
 Northwest Agricultural Consultants

### Application Description

	A	B	C	D	E	F
Application Date:	Apr-8-2011	Apr-20-2011	Apr-27-2011	May-6-2011	May-18-2011	Jun-1-2011
Time of Day:	1100	1000	1000	0845	1130	1100
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY	CO2 BP	CO2 BP
Application Timing:	POST	POSPOS	POSPOS	POSPOS	POSPOS	POSPOS
Application Placement:	FOLIAR	FOLIAR	FOLIAR	FOLIAR	FOLIAR	FOLIAR
Applied By:	RR	DP	DP	RR	AR	RR
Air Temperature, Unit:	49.6 F	51.5 F	48 F	51.1 F	70 F	63.3 F
% Relative Humidity:	32	23	62	52	60	57
Wind Velocity, Unit:	5.6 MPH	2.2 MPH	6.5 MPH	5.5 MPH	4.6 MPH	0.8 MPH
Wind Direction:	NE	ENE	SW	SW	N	SW
Dew Presence (Y/N):				N no	N no	Y yes
Soil Temperature, Unit:	2 C	3 C	46 F	5 C	13.5 C	10 C
Soil Moisture:	DRY	DRY	DRY	DRY	FC	FC
% Cloud Cover:	0	80			10	90

# Washington State University

## Crop Stage At Each Application

	A	B	C	D	E	F
<b>Stage Scale Used:</b>	DESC	DESC	DESC	DESC	BBCH	BBCH
<b>Stage Majority, Percent:</b>	Tillered 100	Tillered 100	Tillered 100	Tillered 100	34	24
<b>Stage Minimum, Percent:</b>					32	20
<b>Stage Maximum, Percent:</b>					39	80
<b>Height, Unit:</b>	7 IN	7 IN	7 IN	7 IN	36 cm	20 IN
<b>Height Minimum, Maximum:</b>	6 8	6 8	6 8	6 8	30 40	10 20
<b>Plant Foliage Height, Unit:</b>					36 cm	20 IN
<b>Crop coverage (%):</b>					70	80

## Pest Stage At Each Application

	A	B	C	D	E	F
<b>Pest 1 Code, Type, Scale:</b>	SSYAL W	SSYAL W	SSYAL W	SSYAL W	SSYAL W	SSYAL W
<b>Stage Majority, Percent:</b>	Rosett 100	Rosett 100	Rosett 100	Rose 100	6-20lf	Flower 100
<b>Diameter, Unit:</b>	1.5 IN	4 IN	4 IN	10 IN	6 IN	
<b>Height, Unit:</b>					12 IN	
<b>Height Minimum, Maximum:</b>					12 36	
<b>Density, Unit:</b>	40 PLTS	34 Plants	34 Plants	7 Plants	4 Plants	
<b>Coverage, Unit:</b>	1 M2	1 M2	1 M2	1 M2	1 M2	
<b>Pest 2 Code, Type, Scale:</b>	DESSO W	DESSO W	DESSO W	DESSO W	DESSO W	DESSO W
<b>Stage Majority, Percent:</b>	Rosett 100	Rosett 100	Rosett 100	Rose 100	6-20lf	
<b>Diameter, Unit:</b>	2 IN	3.5 In	3.5 IN	5 IN	6 IN	
<b>Height, Unit:</b>					12 IN	1.5 FT
<b>Height Minimum, Maximum:</b>		3 4	3 4	4 9	12 36	1 2
<b>Density, Unit:</b>	4 PLTS	5 Plants	5 Plants	8 Plants	4 Plants	4 Plants
<b>Coverage, Unit:</b>	1 M2	1 M2	1 M2	1 M2	1 M2	1 M2

## Application Equipment

	A	B	C	D	E	F
<b>Appl. Equipment:</b>	CO2 BP	CO2 BP	CO2 BP	CO2 BP	CO2 BP	CO2 BP
<b>Equipment Type:</b>	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY	SPRAY
<b>Operation Pressure, Unit:</b>	35 PSI	35 PSI	35 PSI	35 PSI	24 PSI	24 PSI
<b>Nozzle Type:</b>	FLAT FAN	FLAT FAN	FLAT FAN	FLAT FAN	XR	XR
<b>Nozzle Size:</b>	8015	8015	8015	8015	11002VS	11002VS
<b>Nozzle Spacing, Unit:</b>	18 IN	18 IN	18 IN	18 IN	20 IN	20 IN
<b>Nozzles/Row:</b>	4	4	4	4	4	4
<b>Boom Length, Unit:</b>	6 FT	6 FT	6 FT	6 FT	80 IN	80 IN
<b>Boom Height, Unit:</b>	24 IN	24 IN	24 IN	24 IN	12 IN	12 IN
<b>Ground Speed, Unit:</b>	3 MPH	3 MPH	3 MPH	3 MPH	3 MPH	3 MPH
<b>Carrier:</b>	WATER	WATER	WATER	WATER	WATER	WATER
<b>Spray Volume, Unit:</b>	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac	15 gal/ac
<b>Mix Size, Unit:</b>	1.5 liters	1.5 liters	1.5 liters	1.5 liters	1.5 liters	1.5 liters
<b>Propellant:</b>	CO2	CO2	CO2	CO2	CO2	CO2

# Washington State University

## WHEAT/BEYOND/EFFICACY/CROP RESPONSE/SEQUENTIAL TIMING

Trial ID: ICB3811      Protocol ID: ICB3811  
 Location: LIND DRYLAND STATION      Study Director:  
 Project ID:      Investigator: Dr. Ian C. Burke  
    Sponsor Contact: CHUCK RICE

Pest Type	W Weed	W Weed		
Pest Code	SSYAL	SSYAL		
Pest Scientific Name	Sisymbrium alt>	Sisymbrium alt>		
Pest Name	Tumble mustard	Tumble mustard		
Crop Name	Winter Wheat	Winter Wheat	Winter Wheat	Winter Wheat
Crop Variety	Cifld 103	Cifld 103	Cifld 103	Cifld 103
Part Rated	Foliag -	Foliag -		
Rating Date	Jun-13-2011	Jul-18-2011	Aug-4-2011	Aug-4-2011
Rating Type	CONTROL	CONTROL	Test Wt.	YIELD
Rating Unit	%	%	Lbs/bu	BU/A
Number of Subsamples	1	1	1	1
Assessed By	Nevin L.	Nevin L.		
Days After First/Last Applic.	66 12	101 47	118 64	118 64
Plant-Eval Interval	291 DP-1	326 DP-1	343 DP-1	343 DP-1
ARM Action Codes				TY1
Number of Decimals				1
Trt No.	Treatment Name	Rate	Appl Code	
		Rate Unit		
1	CHECK	0.0		1.0
2	BEYOND	3 fl oz/a A		35.4
	UAN	2.5 % v/v A		
	NIS	0.25 % v/v A		
	BEYOND	3 fl oz/a D		
	UAN	10 % v/v D		
	NIS	0.25 % v/v D		
3	BEYOND	3 fl oz/a B		30.5
	UAN	2.5 % v/v B		
	NIS	0.25 % v/v B		
	BEYOND	3 fl oz/a E		
	UAN	10 % v/v E		
	NIS	0.25 % v/v E		
4	BEYOND	3 fl oz/a C		21.9
	UAN	2.5 % v/v C		
	NIS	0.25 % v/v C		
	BEYOND	3 fl oz/a F		
	UAN	10 % v/v F		
	NIS	0.25 % v/v F		
5	BEYOND	5 fl oz/a B		28.5
	UAN	10 % v/v B		
	NIS	0.25 % v/v B		
6	BEYOND	5 fl oz/a C		41.2
	UAN	10 % v/v C		
	NIS	0.25 % v/v C		
7	BEYOND	5 fl oz/a D		39.0
	UAN	10 % v/v D		
	NIS	0.25 % v/v D		
8	BEYOND	5 fl oz/a E		21.4
	UAN	10 % v/v E		
	NIS	0.25 % v/v E		
9	BEYOND	5 fl oz/a B		41.2
	UAN	10 % v/v B		
	NIS	0.25 % v/v B		
	MCPA/Rhomeme	1 pt/a B		
10	BEYOND	5 fl oz/a C		35.2
	UAN	10 % v/v C		
	NIS	0.25 % v/v C		
	MCPA/Rhomeme	1 pt/a C		
11	BEYOND	5 fl oz/a D		36.8
	UAN	10 % v/v D		
	NIS	0.25 % v/v D		
	MCPA/Rhomene	1 pt/a D		

## Washington State University

Pest Type	W Weed	W Weed		
Pest Code	SSYAL	SSYAL		
Pest Scientific Name	Sisymbrium alt>	Sisymbrium alt>		
Pest Name	Tumble mustard	Tumble mustard		
Crop Name	Winter Wheat	Winter Wheat	Winter Wheat	Winter Wheat
Crop Variety	Cifld 103	Cifld 103	Cifld 103	Cifld 103
Part Rated	Foliag -	Foliag -		
Rating Date	Jun-13-2011	Jul-18-2011	Aug-4-2011	Aug-4-2011
Rating Type	CONTROL	CONTROL	Test Wt.	YIELD
Rating Unit	%	%	Lbs/bu	BU/A
Number of Subsamples	1	1	1	1
Assessed By	Nevin L.	Nevin L.		
Days After First/Last Applic.	66 12	101 47	118 64	118 64
Plant-Eval Interval	291 DP-1	326 DP-1	343 DP-1	343 DP-1
ARM Action Codes				TY1
Number of Decimals				1
Trt No.	1	2	9	10
Treatment Name				
Rate	48.3	70.0	38.6578370	19.0
Unit				
Appl Code				
12 BEYOND	5 fl oz/a E			
UAN	10 % v/v E			
NIS	0.25 % v/v E			
MCPA/Rhomene	1 pt/a E			
LSD (P=.05)	24.70	19.65	19.66323477	13.64
Standard Deviation	17.11	13.61	13.61802714	9.45
CV	31.31	19.33	28.81	32.3