

University of Georgia

Ryegrass and Wheat Response to Osprey mixed with various adjuvants and Sencor.

Trial ID: wheat2-05

Study Dir.: Stanley Culpepper

Location: Plains

Investigator: Stanley Culpepper

Reps: 3

Plots: 6 by 25 feet

Spray vol: 14.8 gal/ac

Mix size: 1 liters (min .57876)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Form Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Plot No. By Rep		
										1	2	3
1	Osprey	4.5	DF	DG	4.75	oz/a	POST	A	2.404 g/mx	101	204	305
2	Osprey Induce	4.5	DF	DG L	4.75 0.25	oz/a % v/v	POST POST	A A	2.404 g/mx 2.5 ml/mx	102	209	303
3	Osprey Induce UAN	4.5	DF	DG L L	4.75 0.25 2	oz/a % v/v qt/a	POST POST POST	A A A	2.404 g/mx 2.5 ml/mx 33.78 ml/mx	103	206	302
4	Osprey Induce	4.5	DF	DG L	4.75 0.50	oz/a % v/v	POST POST	A A	2.404 g/mx 4.999 ml/mx	104	212	309
5	Osprey Induce UAN	4.5	DF	DG L L	4.75 0.50 2	oz/a % v/v qt/a	POST POST POST	A A A	2.404 g/mx 4.999 ml/mx 33.78 ml/mx	105	202	307
6	Check									106	208	311
7	Osprey Destiny	4.5	DF	DG L	4.75 1.5	oz/a pt/a	POST POST	A A	2.404 g/mx 12.67 ml/mx	107	210	308
8	Osprey Destiny UAN	4.5	DF	DG L L	4.75 1.5 2	oz/a pt/a qt/a	POST POST POST	A A A	2.404 g/mx 12.67 ml/mx 33.78 ml/mx	108	207	310
9	Osprey Induce UAN Sencor	4.5 75	DF	DG L L DG	4.75 0.25 2 0.167	oz/a % v/v qt/a lb/a	POST POST POST POST	A A A A	2.404 g/mx 2.5 ml/mx 33.78 ml/mx 1.352 g/mx	109	203	312
10	Osprey Induce UAN Sencor	4.5 75	DF	DG L L DG	4.75 0.25 2 0.33	oz/a % v/v qt/a lb/a	POST POST POST POST	A A A A	2.404 g/mx 2.5 ml/mx 33.78 ml/mx 2.672 g/mx	110	201	304
11	Osprey Induce UAN	4.5	DF	DG L L	3.56 0.25 2	oz/a % v/v qt/a	POST POST POST	A A A	1.801 g/mx 2.5 ml/mx 33.78 ml/mx	111	205	301
12	Osprey Induce UAN	4.5	DF	DG L L	2.375 0.25 2	oz/a % v/v qt/a	POST POST POST	A A A	1.202 g/mx 2.5 ml/mx 33.78 ml/mx	112	211	306

Sort Order: Treatment

Product quantities required for listed treatments and applications in one trial:

Amount*	Unit	Treatment Name	Lot Code
30.795	g	Osprey 4.5 DG	
31.247	ml	Induce L	
295.577	ml	UAN L	
31.669	ml	Destiny L	
5.030	g	Sencor 75 DG	

* 'Per area' calculations based on spray volume= 14.8 gal/ac, mix size= 1 liters (mix size basis).

* Product amount calculations increased 25 % for overage adjustment.

* 'Per volume' calculations use spray volume= 14.8 gal/ac, mix size= 1 liters.

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Trial Comments

OBJECTIVE: Evaluate ryegrass response to Osprey using several adjuvants and mixed with Sencor.

Wheat Response:

1. Osprey alone or with adjuvants did not injure wheat. Mixing Sencor with Osprey and adjuvants caused 8 to 11% leaf burn at 13 d after treatment.

Ryegrass Response:

1. As usual it took forever for the ryegrass to start dying.
2. Osprey at the full rate applied with no adjuvant provided only 35% control at time of harvest.
3. Adding Induce or Induce + UAN with Osprey improved control at least 34% compared to Osprey alone.
4. When applying Osprey and Induce (with or without UAN) control was at least 18% greater when using 0.5% v/v as compared to 0.25% v/v.
5. Osprey plus Destiny plus UAN was as effective as Osprey plus Induce at 0.5% v/v.
6. Mixing Sencor with Osprey reduced ryegrass control 44 to 51% at harvest.
7. Osprey at 4.75 oz/A + NIS at 0.25% + UAN provided similar control to Osprey at 3.56 oz/A when mixed with the same adjuvant program.

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Study Dir.: Stanley Culpepper

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Weed Code						LOLMU	LOLMU	LOLMU			
Crop Code		wheat	wheat	wheat	wheat						
Rating Data Type		injury	injury	injury	injury	control	control	control			
Rating Unit		percent	percent	percent	percent	percent	percent	percent			
Rating Date		Dec-30-04	Jan-12-05	Jan-27-05	Feb-21-05	Dec-30-04	Jan-12-05	Jan-27-05			
Trt-Eval Interval		13 DA-A	26 DA-A	41 DA-A	66 DA-A	13 DA-A	26 DA-A	41 DA-A			
Trt No.	Treatment Name	Rate	Unit	1	2	3	4	5	6	7	8
1	Osprey	4.75 oz/a		0	0	0	0	0	5	33	63
2	Osprey Induce	4.75 oz/a 0.25 % v/v		0	0	0	2	0	5	30	72
3	Osprey Induce UAN	4.75 oz/a 0.25 % v/v 2 qt/a		0	0	0	0	0	7	30	74
4	Osprey Induce	4.75 oz/a 0.50 % v/v		0	0	0	0	0	5	35	73
5	Osprey Induce UAN	4.75 oz/a 0.50 % v/v 2 qt/a		0	0	0	0	0	7	42	70
6	Check			0	0	0	0	0	0	0	0
7	Osprey Destiny	4.75 oz/a 1.5 pt/a		0	0	0	0	0	5	30	68
8	Osprey Destiny UAN	4.75 oz/a 1.5 pt/a 2 qt/a		0	0	0	0	0	3	33	67
9	Osprey Induce UAN Sencor	4.75 oz/a 0.25 % v/v 2 qt/a 0.167 lb/a		8	0	0	0	0	23	29	60
10	Osprey Induce UAN Sencor	4.75 oz/a 0.25 % v/v 2 qt/a 0.33 lb/a		11	0	0	0	0	24	42	63
11	Osprey Induce UAN	3.56 oz/a 0.25 % v/v 2 qt/a		1	0	0	0	0	8	33	68
12	Osprey Induce UAN	2.375 oz/a 0.25 % v/v 2 qt/a		0	0	0	0	0	8	30	50
LSD (P=.05)				3.6	0.0	0.0	2.0	0.0	5.7	11.5	10.6
Standard Deviation				2.1	0.0	0.0	1.2	0.0	3.4	6.8	6.3
CV				130.52	0.0	0.0	600.0	0.0	40.07	22.16	10.32

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

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Weed Code			LOLMU	LOLMU
Crop Code				
Rating Data Type			control	control
Rating Unit			percent	percent
Rating Date			Feb-21-05	May-27-05
Trt-Eval Interval			66 DA-A	161 DA-A
Trt No.	Treatment Name	Rate	9	10
1	Osprey	4.75 oz/a	68	35
2	Osprey Induce	4.75 oz/a 0.25 % v/v	78	79
3	Osprey Induce UAN	4.75 oz/a 0.25 % v/v 2 qt/a	82	81
4	Osprey Induce	4.75 oz/a 0.50 % v/v	83	97
5	Osprey Induce UAN	4.75 oz/a 0.50 % v/v 2 qt/a	87	97
6	Check		0	0
7	Osprey Destiny	4.75 oz/a 1.5 pt/a	81	84
8	Osprey Destiny UAN	4.75 oz/a 1.5 pt/a 2 qt/a	80	93
9	Osprey Induce UAN Sencor	4.75 oz/a 0.25 % v/v 2 qt/a 0.167 lb/a	53	37
10	Osprey Induce UAN Sencor	4.75 oz/a 0.25 % v/v 2 qt/a 0.33 lb/a	55	30
11	Osprey Induce UAN	3.56 oz/a 0.25 % v/v 2 qt/a	75	75
12	Osprey Induce UAN	2.375 oz/a 0.25 % v/v 2 qt/a	53	30
LSD (P=.05)			13.7	11.5
Standard Deviation			8.1	6.8
CV			12.16	11.01

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

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Location: Plains Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Stanley Culpepper	Title: Ext. Weed Science
Affiliation: Univ. of Georgia	
Postal Code: 31794	
 Investigator: Stanley Culpepper	 Title: Ext. Weed Science
Affiliation: Univ. of Georgia	
Postal Code: 31794	

TRIAL LOCATION

City: Plains	Trial Status: completed
State/Prov.: GA	Trial Reliability: good
Postal Code: _____	Initiation Date: Nov-02-04
Country: USA	Planned Completion Date: _____
E-Longitude of LL Corner °: _____	N-Latitude of LL Corner °: _____
Altitude of LL Corner: _____ Unit: _____	Angle y-axis to North °: _____

Directions:

COOPERATOR/LANDOWNER

Cooperator: _____	Country: _____
Org: _____	Phone No: _____
Address 1: _____	Fax No: _____
Address 2: _____	
City: _____	
State/Prov: _____	
Postal Code: _____	

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N
Guidelines: _____ **Guideline Description:** _____

Objective:

Conclusions:

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	LOLMU	Annual ryegrass	

Crop 1: wheat winter wheat	Variety: Pioneer 26 R 61
Planting Date: Nov-02-04	Planting Method: conventional
Rate: 1.35 bu/A	Depth: 0.5 in
Row Spacing: 7.5 inch	Perennial Age: _____
Spacing Within Row: _____	Seed Bed: flat
Soil Temperature: 78 F	Soil Moisture: dry
	Emergence Date: Nov-09-04

SITE AND DESIGN

Plot Width, Unit: 6 FT	Plot Length, Unit: 25 FT	Reps: 3
Site Type: research station		
Tillage Type: conventional	Study Design: RANDOMIZED COMPLETE BLOCK	

Trial Initiation Comments:

	Previous Crops	Previous Pesticides	Year
1.			

MAINTENANCE

Field Prep./Maintenance:

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No.	Date	Maintenance Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit
1.							

SOIL DESCRIPTION

% Sand: 80 % OM: 1.6 Texture: loamy sand
 % Silt: 10 pH: 5.9 Soil Name: _____
 % Clay: 10 CEC: _____ Fert. Level: _____

ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

No.	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: .

Closest Weather Station: _____ Distance: _____ Unit: ____

APPLICATION DESCRIPTION

	A
Application Date:	Dec-17-04
Time of Day:	10 am
Application Method:	broadcast
Application Timing:	POST
Applic. Placement:	overtop
Air Temp., Unit:	62 F
% Relative Humidity:	29
Wind Velocity, Unit:	1 mph
Dew Presence (Y/N):	n
Water Hardness:	
Soil Temp., Unit:	51 F
Soil Moisture:	moist
% Cloud Cover:	20

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	wheat POST
Stage Scale:	2tiller
Height, Unit:	3 inch

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	LOLMU POST
Stage Scale:	1-2tiller
Density, Unit:	5 inch

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APPLICATION EQUIPMENT

	A
Appl. Equipment:	backpack
Operating Pressure:	23
Nozzle Type:	flat fan
Nozzle Size:	11002
Nozzle Spacing, Unit:	18 inch
Nozzles/Row:	
Band Width, Unit:	
Boom Length, Unit:	4.5 feet
Boom Height, Unit:	15 inch
Ground Speed, Unit:	3 mph
Incorporation Equip.:	
Hours to Incorp.:	
Incorp. Depth, Unit:	
Carrier:	water
Spray Volume, Unit:	14.8 GPA
Spray pH:	
Propellant:	CO2
Tank Mix (Y/N):	Y

Trt No	Treatment Application Comment