

University of Georgia

Barley and Rye response to Axiom, Osprey, and Hoelon.

Trial ID: Wheat3-06

Study Dir.: Andrew MacRae

Location: Plains

Investigator: Stanley Culpepper

Reps: 4

Plots: 6 by 30 feet

Spray vol: 14.8 gal/ac

Mix size: 2 liters (min .92602)

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Grow Unit	Appl Stg	Code	Amt Product to Measure	Plot No. By Rep			
									1	2	3	4
1	Prowl H20 Barley	3.8 L	L	42 OZ/A	PRE	A		44.34 ml/mx	101	207	317	409
2	Prowl H20 Rye	3.8 L	L	42 OZ/A	PRE	A		44.34 ml/mx	102	208	318	410
3	Axiom Barley	68 DF		8 OZ/A	PRE	A		8.096 g/mx	103	205	313	401
4	Axiom Rye	68 DF		8 OZ/A	PRE	A		8.096 g/mx	104	206	314	402
5	Axiom Barley	68 DF		8 OZ/A	spike	B		8.096 g/mx	105	217	301	411
6	Axiom Rye	68 DF		8 OZ/A	spike	B		8.096 g/mx	106	218	302	412
7	Osprey NIS UAN Barley	4.75 DG L L		3.5 OZ/A 0.5 % V/V 1.5 QT/A	2-4 lf 2-4 lf 2-4 lf	C C C		3.542 g/mx 9.999 ml/mx 50.67 ml/mx	107	215	307	415
8	Osprey NIS UAN Rye	4.75 DG L L		3.5 OZ/A 0.5 % V/V 1.5 QT/A	2-4 lf 2-4 lf 2-4 lf	C C C		3.542 g/mx 9.999 ml/mx 50.67 ml/mx	108	216	308	416
9	Osprey NIS UAN Barley	4.75 DG L L		4.75 OZ/A 0.5 % V/V 1.5 QT/A	2-4 lf 2-4 lf 2-4 lf	C C C		4.807 g/mx 9.999 ml/mx 50.67 ml/mx	109	203	309	413
10	Osprey NIS UAN Rye	4.75 DG L L		4.75 OZ/A 0.5 % V/V 1.5 QT/A	2-4 lf 2-4 lf 2-4 lf	C C C		4.807 g/mx 9.999 ml/mx 50.67 ml/mx	110	204	310	414
11	Hoelon Barley	3 L		2 PT/A	2-4 lf	C		33.78 ml/mx	111	211	319	403
12	Hoelon Rye	3 L		2 PT/A	2-4 lf	C		33.78 ml/mx	112	212	320	404
13	Osprey NIS UAN Barley	4.75 DG L L		3.5 OZ/A 0.5 % V/V 1.5 QT/A	3-5 T 3-5 T 3-5 T	D D D		3.542 g/mx 9.999 ml/mx 50.67 ml/mx	113	213	305	407
14	Osprey NIS UAN Rye	4.75 DG L L		3.5 OZ/A 0.5 % V/V 1.5 QT/A	3-5 T 3-5 T 3-5 T	D D D		3.542 g/mx 9.999 ml/mx 50.67 ml/mx	114	214	306	408
15	Osprey NIS UAN Barley	4.75 DG L L		4.75 OZ/A 0.5 % V/V 1.5 QT/A	3-5 T 3-5 T 3-5 T	D D D		4.807 g/mx 9.999 ml/mx 50.67 ml/mx	115	219	303	405
16	Osprey NIS UAN Rye	4.75 DG L L		4.75 OZ/A 0.5 % V/V 1.5 QT/A	3-5 T 3-5 T 3-5 T	D D D		4.807 g/mx 9.999 ml/mx 50.67 ml/mx	116	220	304	406
17	Hoelon Barley	3 L		2 PT/A	3-5 T	D		33.78 ml/mx	117	209	311	419

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Reps: 4 Plots: 6 by 30 feet
 Spray vol: 14.8 gal/ac Mix size: 2 liters (min .92602)

Trt No.	Treatment Name	Form Conc	Form Type	Rate Rate	Unit	Grow Stg	Appl Code	Amt Product to Measure	Plot No. By Rep			
									1	2	3	4
18	Hoelon Rye	3	L	2	PT/A	3-5	T D	33.78 ml/mx	118	210	312	420
19	No herbicide Barley								119	201	315	417
20	No herbicide Rye								120	202	316	418

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
110.853	ml	Prowl H2O	3.8	L	
40.482	g	Axiom	68	DF	
41.747	g	Osprey	4.75	DG	
99.989	ml	NIS		L	
506.703	ml	UAN		L	
168.901	ml	Hoelon	3	L	

- * 'Per area' calculations based on spray volume= 14.8 gal/ac, mix size= 2 liters (mix size basis).
- * Product amount calculations increased 25 % for overage adjustment.
- * 'Per volume' calculations use spray volume= 14.8 gal/ac, mix size= 2 liters.

Trial Comments

OBJECTIVE: Determine Rye and Barley Tolerance to Axiom, Prowl, Osprey, and Hoelon.

VISUAL INJURY:

1. Axiom PRE caused over 20% injury at 9 DAT; however, injury was less than 10% by 21 DAT.
2. Prowl PRE caused less than 2% injury.
3. Axiom applied at spike caused less than 2% injury.
4. The normal use rate of Osprey at 4.75 oz/A caused as much as 24% barley and 20% rye injury. However, the crop recovered very quickly. Lower rates of Osprey was slightly less injurious.
5. Applying Hoelon or Osprey to 3-5 tiller crops caused less than 10% injury.

CROP YIELDS:

1. Barley: There was no hint for yield impact by Prowl, Axiom, Hoelon or even Osprey when applied to 3-5 tiller barley. Osprey did reduce yield when applied to 2-3 leaf Barley.
2. Rye: There was no hint for yield impact by any treatment.

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Trial ID: Wheat3-06

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Weed Code	Crop Code	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	Crop stunting percent	Crop stunting percent	Crop stunting percent	Crop stunting percent	Crop stunting percent	Crop stunting percent	Crop stunting percent	Yield Crop plot wt/lb
						Nov-18-05	Nov-30-05	Dec-11-05	Dec-20-05	Jan-12-06	Jan-27-06	Mar-04-06	May-22-06
						9 DA-A	21 DA-A	32 DA-A	41 DA-A	64 DA-A	79 DA-A	115 DA-A	194 DA-A
Trt No.	Treatment Name	Rate	Rate Unit			1	2	3	4	5	6	7	8
1	Prowl H20 Barley	42	OZ/A			0 c	0 c	0 d	0 d	0 e	1 c	0 a	15 bcd
2	Prowl H20 Rye	42	OZ/A			0 c	0 c	0 d	0 d	0 e	1 c	0 a	12 f
3	Axiom Barley	8	OZ/A			28 a	9 a	4 bc	4 c	6 c	2 c	0 a	17 ab
4	Axiom Rye	8	OZ/A			23 b	4 b	3 c	6 c	5 cd	4 bc	0 a	12 f
5	Axiom Barley	8	OZ/A			0 c	0 c	0 d	0 d	1 de	2 c	0 a	18 a
6	Axiom Rye	8	OZ/A			0 c	0 c	0 d	0 d	1 de	1 c	0 a	12 f
7	Osprey NIS UAN Barley	3.5 0.5 1.5	OZ/A % V/V QT/A			0 c	0 c	8 a	13 b	23 a	3 c	0 a	13 def
8	Osprey NIS UAN Rye	3.5 0.5 1.5	OZ/A % V/V QT/A			0 c	0 c	5 b	18 a	9 bc	2 c	0 a	14 def
9	Osprey NIS UAN Barley	4.75 0.5 1.5	OZ/A % V/V QT/A			0 c	0 c	9 a	14 b	24 a	0 c	0 a	14 def
10	Osprey NIS UAN Rye	4.75 0.5 1.5	OZ/A % V/V QT/A			0 c	0 c	9 a	20 a	13 b	0 c	0 a	14 def
11	Hoelon Barley	2	PT/A			0 c	0 c	0 d	0 d	6 c	2 c	0 a	18 a
12	Hoelon Rye	2	PT/A			0 c	0 c	0 d	0 d	6 c	2 c	0 a	13 ef
13	Osprey NIS UAN Barley	3.5 0.5 1.5	OZ/A % V/V QT/A			0 c	0 c	0 d	0 d	0 e	6 ab	0 a	15 bcd
14	Osprey NIS UAN Rye	3.5 0.5 1.5	OZ/A % V/V QT/A			0 c	0 c	0 d	0 d	0 e	6 ab	0 a	13 def
15	Osprey NIS UAN Barley	4.75 0.5 1.5	OZ/A % V/V QT/A			0 c	0 c	0 d	0 d	0 e	10 a	0 a	15 cde

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						Nov-18-05	Nov-30-05	Dec-11-05	Dec-20-05	Jan-12-06	Jan-27-06	Mar-04-06	May-22-06
						9 DA-A	21 DA-A	32 DA-A	41 DA-A	64 DA-A	79 DA-A	115 DA-A	194 DA-A
Trt No.	Treatment Name	Rate	Unit	1	2	3	4	5	6	7	8		
16	Osprey NIS UAN Rye	4.75	OZ/A 0.5 % V/V 1.5 QT/A	0 c	0 c	0 d	0 d	0 e	10 a	0 a		13 def	
17	Hoelon Barley	2	PT/A	0 c	0 c	0 d	0 d	0 e	0 c	0 a		16 abc	
18	Hoelon Rye	2	PT/A	0 c	0 c	0 d	0 d	0 e	0 c	0 a		13 ef	
19	No herbicide Barley			0 c	0 c	0 d	0 d	0 e	0 c	0 a		17 ab	
20	No herbicide Rye			0 c	0 c	0 d	0 d	0 e	0 c	0 a		12 f	
LSD (P=.05)				1.3	1.1	1.9	2.6	4.0	3.3	0.0		1.8	
Standard Deviation				0.9	0.8	1.3	1.8	2.8	2.3	0.0		1.2	
CV				36.51	127.6	72.27	49.55	60.46	91.95	0.0		8.75	
Bartlett's X2				0.0	0.0	0.147	2.27	7.975	13.209	0.0		24.467	
P(Bartlett's X2)				1.00	1.00	0.997	0.811	0.537	0.432	.		0.179	

Means followed by same letter do not significantly differ (P=.05, Duncan's New MRT)

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Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Stanley Culpepper
Affiliation: Univ. of Georgia
Postal Code: 31794

Title: Ext. Weed Science

Investigator: Andrew MacRae
Affiliation: Univ. of Georgia
Postal Code: 31794

Title: Ext. Weed Science

TRIAL LOCATION

City: Plains
State/Prov.: GA
Postal Code: _____
Country: USA
E-Longitude of LL Corner °: _____
Altitude of LL Corner: _____ Unit: _____
Directions:

Trial Status: completed
Trial Reliability: excellent
Initiation Date: Nov-09-05
Planned Completion Date: _____
N-Latitude of LL Corner °: _____
Angle y-axis to North °: _____

COOPERATOR/LANDOWNER

Cooperator: _____
Org: _____
Address 1: _____
Address 2: _____
City: _____
State/Prov: _____
Postal Code: _____

Country: _____
Phone No: _____
Fax No: _____

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.	.		

Crop 1: HORVW BARLEY, WINTER Variety: Nomini
Planting Date: Nov-09-05 Planting Method: drilled
Rate: 2 bu/A Depth: 0.75 in Perennial Age: _____
Row Spacing: 7.5 inch Spacing Within Row: _____ Seed Bed: flat
Soil Temperature: 83 F Soil Moisture: fair/irrigat Emergence Date: Nov-14-05

Crop 2: LOLMG RYEGRASS, ANNUAL Variety: Wrens Abruzzi
Planting Date: Nov-09-05 Planting Method: drilled
Rate: 2 bu/A Depth: 0.75 in Perennial Age: _____
Row Spacing: 7.5 inch Spacing Within Row: _____ Seed Bed: flat
Soil Temperature: 83 F Soil Moisture: fair/irrigat Emergence Date: Nov-16-05

SITE AND DESIGN

Plot Width, Unit: 6 FT Plot Length, Unit: 30 FT Reps: 4
Site Type: Plains Research Station
Tillage Type: Conventional Study Design: FACTORIAL

Trial Initiation Comments:

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	Previous Crops	Previous Pesticides	Year
1.			

MAINTENANCE

Field Prep./Maintenance:

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: 6.0	Soil Name: _____
% Clay: 10	CEC: _____	Fert. Level: _____

ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: irrigated

Closest Weather Station: _____ Distance: _____ Unit: ____

APPLICATION DESCRIPTION

	A	B	C	D
Application Date:	Nov-09-05	Nov-18-05	Nov-30-05	Jan-12-06
Time of Day:	11 am	11 am	5 pm	9 am
Application Method:	broadcast	broadcast	broadcast	broadcast
Application Timing:	PRE	Spike	2-4 lf	3-5tiller
Applic. Placement:	on soil	overtop	overtop	overtop
Air Temp., Unit:	83 F	52 F	48 F	60 F
% Relative Humidity:	41	20	46	63
Wind Velocity, Unit:	4 mph	3 mph	2 mph	0 mph
Dew Presence (Y/N):	n	n	n	n
Water Hardness:				
Soil Temp., Unit:	83 F	62 F	47 F	64 F
Soil Moisture:	fair/irri	moist	moist	moist
% Cloud Cover:	0	0	0	70

CROP STAGE AT EACH APPLICATION

	A	B	C	D
Crop 1 Code, Stage:	HORVW .	HORVW .	HORVW .	HORVW .
Stage Scale:	PRE	spike	2-3 leaf	3 tiller
Height, Unit:	0 inch	0.5 inch	3 inch	5 inch
Crop 2 Code, Stage:	LOLMG .	LOLMG .	LOLMG .	LOLMG .
Stage Scale:	PRE	spike	2-3 leaf	3+ tiller
Height, Unit:	0 inch	1 inch	3 inch	7 inch

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WEED STAGE AT EACH APPLICATION

	A	B	C	D
Weed 1 Code, Stage:	.			
Stage Scale:	.			
Density, Unit:	.	.		

APPLICATION EQUIPMENT

	A	B	C	D
Appl. Equipment:	backpack	backpack	backpack	backpack
Operating Pressure:	24	24	24	24
Nozzle Type:	flat fan	flat fan	flat fan	flat fan
Nozzle Size:	11002	11002	11002	11002
Nozzle Spacing, Unit:	18 in	18 in	18 in	18 in
Nozzles/Row:	1	1	1	1
Band Width, Unit:				
Boom Length, Unit:	4.5 feet	4.5 feet	4.5 feet	4.5 feet
Boom Height, Unit:	15 inch	15 inch	15 inch	15 inch
Ground Speed, Unit:	3 mph	3 mph	3 mph	3 mph
Incorporation Equip.:				
Hours to Incorp.:				
Incorp. Depth, Unit:				
Carrier:	water	water	water	water
Spray Volume, Unit:	14.8 GPA	14.8 GPA	14.8 GPA	14.8 GPA
Spray pH:				
Propellant:	CO2	CO2	CO2	CO2
Tank Mix (Y/N):	y	y	y	y

Trt No	Treatment Application Comment