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Wheat and ryegrass response to Prowl, Axiom, Osprey, Hoelon, and Axial.

Trial ID: SmallGrains2-07 Study Dir.: Andrew MacRae
Location: Plains Investigator: Stanley Culpepper

Reps: 5 Plots: 6 by 30 feet
Spray vol: 10 gal/ac Mix size: 1.5 liters (min .78211)

Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Grow Stg	Appl Code	Amt Product to Measure	Plot No. By Rep 1	2	3	4	5
1	None									101	212	308	413	508
2	Prowl H20	3.8		L	42	OZ/A	PRE	A	49.22 ml/mx	102	206	304	411	504
3	Prowl H20	3.8		L	42	OZ/A	Spike	B	49.22 ml/mx	103	208	311	409	512
4	Axiom	68		DF	8	OZ/A	Spike	B	8.987 g/mx	104	211	312	408	509
5	Osprey	4.5		WG	4.75	OZ/A	1-2 lf W	C	5.336 g/mx	105	209	313	407	511
	UAN			L	1.5	QT/A	1-2 lf W	C	56.24 ml/mx					
	NIS			L	0.25	% V/V	1-2 lf W	C	3.75 ml/mx					
6	Hoelon	3		EC	2	PT/A	1-2 lf W	C	37.5 ml/mx	106	207	309	406	513
7	Axial	0.83		EC	8.2	OZ/A	1-2 lf W	C	9.609 ml/mx	107	214	310	412	503
	ADIGOR			L	9.6	OZ/A	1-2 lf W	C	11.25 ml/mx					
8	Osprey	4.5		WG	4.75	OZ/A	2 T whea	D	5.336 g/mx	108	203	306	404	507
	UAN			L	1.5	QT/A	2 T whea	D	56.24 ml/mx					
	NIS			L	0.25	% V/V	2 T whea	D	3.75 ml/mx					
9	Hoelon	3		EC	2	PT/A	2 T whea	D	37.5 ml/mx	109	210	305	401	505
10	Axial	0.83		EC	8.2	OZ/A	2 T whea	D	9.609 ml/mx	110	213	307	414	506
	ADIGOR			L	9.6	OZ/A	2 T whea	D	11.25 ml/mx					
11	Prowl H20	3.8		L	42	OZ/A	Spike	B	49.22 ml/mx	111	205	301	405	501
	Osprey	4.5		WG	4.75	OZ/A	2 T whea	D	5.336 g/mx					
	UAN			L	1.5	QT/A	2 T whea	D	56.24 ml/mx					
	NIS			L	0.25	% V/V	2 T whea	D	3.75 ml/mx					
12	Prowl H20	3.8		L	42	OZ/A	Spike	B	49.22 ml/mx	112	202	303	402	510
	Hoelon	3		EC	2	PT/A	2 T whea	D	37.5 ml/mx					
13	Prowl H20	3.8		L	42	OZ/A	Spike	B	49.22 ml/mx	113	201	314	403	502
	Axial	0.83		EC	8.2	OZ/A	2 T whea	D	9.609 ml/mx					
	ADIGOR			L	9.6	OZ/A	2 T whea	D	11.25 ml/mx					
14	Non-treated									114	204	302	410	514

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
307.618	ml	Prowl H20	3.8	L	
11.234	g	Axiom	68	DF	
20.010	g	Osprey	4.5	WG	
210.915	ml	UAN		L	
14.061	ml	NIS		L	
140.610	ml	Hoelon	3	EC	
36.035	ml	Axial	0.83	EC	
42.188	ml	ADIGOR		L	

* 'Per area' calculations based on spray volume= 10 gal/ac, mix size= 1.5 liters (mix size basis).
* Product amount calculations increased 25 % for overage adjustment.
* 'Per volume' calculations use spray volume= 10 gal/ac, mix size= 1.5 liters.

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Wheat and ryegrass response to Prowl, Axiom, Osprey, Hoelon, and Axial.

Trial ID: SmallGrains2-07 Study Dir.: Andrew MacRae
Location: Plains Investigator: Stanley Culpepper

Trial Comments

OBJECTIVE: Determine wheat and ryegrass response to Prowl, Axiom, Osprey, Hoelon, and Axial.

Wheat Injury:
1. Prowl H2O at any timing did not cause injury to wheat.
2. Axiom applied at spike caused 10% injury to wheat, 10 days after treatment (DAT).
3. Osprey applied at the 2-leaf stage of wheat caused 12% injury, 20 DAT
4. Osprey applied at the 2-tiller stage of wheat caused 11% injury, 16 DAT
5. Axial applied at the 2-leaf stage of wheat caused 5% injury, 20 DAT
6. Axial applied at the 2-tiller stage of wheat caused 4% injury, 16 DAT
7. Hoelon applied at the 2-leaf stage of wheat caused 3% injury, 20 DAT
8. Hoelon applied at the 2-tiller stage of wheat caused 1% injury, 16 DAT

Ryegrass control at harvest:
1. Prowl H2O PRE provided 91% control.
2. Prowl H2O applied at spike provided 59% control.
3. Axiom applied at spike provided 85% control.
4. Osprey applied at the 2-leaf and 2-tiller stage of wheat provided 87 to 90% control. The addition of Prowl H2O applied at spike to the 2-tiller application of Osprey provided 98% control.
5. Axial applied at the 2-leaf and 2-tiller stage of wheat provided 97 to 98% control. There was no benefit observed with the addition of Prowl H2O applied at spike.
6. Hoelon applied at the 2-leaf and 2-tiller stage of wheat provided 98 to 99% control. There was no benefit observed with the addition of Prowl H2O applied at spike.

Wheat Yield:
1. No difference in yield was observed among all treatments.

Conclusions:
1. All products tested are safe on wheat.
2. The addition of Prowl H2O at spike to an application of Osprey may increase ryegrass control.
3. Hoelon and Axial provided similar control of ryegrass with limited injury to wheat.

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Wheat and ryegrass response to Prowl, Axiom, Osprey, Hoelon, and Axial.

Trial ID: SmallGrains2-07 Study Dir.: Andrew MacRae
Location: Plains Investigator: Stanley Culpepper

Trt No.	Treatment Name	Rate	Rate Unit	1	2	3	4	5	6	7	8
Weed Code					LOLMG		LOLMG		LOLMG		LOLMG
Crop Code				TRZAW		TRZAW		TRZAW		TRZAW	
Rating Data Type				Injury	Control	Injury	Control	Injury	Control	Injury	Control
Rating Unit				%	%	%	%	%	%	%	%
Rating Date				Nov-23-06	Nov-23-06	Dec-11-06	Dec-11-06	Dec-18-06	Dec-18-06	Jan-03-07	Jan-03-07
Crop Stage				1 leaf		1 tiller		2 tiller		5 tiller	
Weed Stage					early1lf		3 leaf		1 tiller		2 tiller
Assessed By				AWM	AWM	AWM	AWM	AWM	AWM	AWM	AWM
Trt-Eval Interval				10 DA-B	10 DA-B	13 DA-C	13 DA-C	20 DA-C	20 DA-C	16 DA-D	16 DA-D
ARM Action Codes											
1	None			0 a	0 c	0 d	0 e	0 e	0 d	0 e	0 h
2	Prowl H20	42	OZ/A	0 a	95 a	0 d	98 a	0 e	81 a	0 e	98 a
3	Prowl H20	42	OZ/A	0 a	10 b	0 d	37 c	0 e	37 bc	0 e	52 ef
4	Axiom	8	OZ/A	0 a	10 b	9 b	73 b	14 a	81 a	4 bc	92 a
5	Osprey	4.75	OZ/A	0 a	0 c	11 a	19 d	12 b	36 c	1 de	71 bc
	UAN	1.5	QT/A								
	NIS	0.25	% V/V								
6	Hoelon	2	PT/A	0 a	0 c	0 d	22 d	3 d	46 bc	0 e	89 a
7	Axial	8.2	OZ/A	0 a	0 c	3 c	26 d	5 c	54 b	1 de	89 a
	ADIGOR	9.6	OZ/A								
8	Osprey	4.75	OZ/A	0 a	0 c	0 d	0 e	0 e	0 d	12 a	38 g
	UAN	1.5	QT/A								
	NIS	0.25	% V/V								
9	Hoelon	2	PT/A	0 a	0 c	0 d	0 e	0 e	0 d	1 de	32 g
10	Axial	8.2	OZ/A	0 a	0 c	0 d	0 e	0 e	0 d	3 cd	49 f
	ADIGOR	9.6	OZ/A								
11	Prowl H20	42	OZ/A	0 a	12 b	0 d	40 c	0 e	43 bc	11 a	60 de
	Osprey	4.75	OZ/A								
	UAN	1.5	QT/A								
	NIS	0.25	% V/V								
12	Prowl H20	42	OZ/A	0 a	12 b	0 d	43 c	0 e	42 bc	1 de	66 cd
	Hoelon	2	PT/A								
13	Prowl H20	42	OZ/A	0 a	14 b	0 d	46 c	1 e	49 bc	6 b	78 b
	Axial	8.2	OZ/A								
	ADIGOR	9.6	OZ/A								
14	Non-treated			0 a	0 c	0 d	0 e	0 e	0 d	0 e	0 h
LSD (P=.05)				0.0	3.8	1.4	8.5	1.9	15.2	2.3	9.6
Standard Deviation				0.0	3.0	1.1	6.7	1.5	12.0	1.8	7.6
CV				0.0	27.71	70.13	23.33	62.32	35.86	68.65	13.1
Bartlett's X2				0.0	5.141	1.29	15.383	4.962	40.672	8.481	26.673
P(Bartlett's X2)				.	0.399	0.525	0.052	0.291	0.001*	0.388	0.005*

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

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Trt No.	Treatment Name	Rate	Rate Unit	9	10	11	12	13	14
Weed Code					LOLMG		LOLMG		
Crop Code				TRZAW		TRZAW		TRZAW	TRZAW
Rating Data Type				Injury	Control	Injury	Control	Harvest	Harvest
Rating Unit				%	%	%	%	kg/plot	ton/A
Rating Date				Feb-12-07	Feb-12-07	May-17-07	May-17-07	May-25-07	May-25-07
Crop Stage				tiller		harvest			
Weed Stage					tiller		harvest		
Assessed By				AWM	AWM	AWM	AWM	AWM	AWM
Trt-Eval Interval				56 DA-D	56 DA-D	150 DA-D	150 DA-D	201 DA-A	201 DA-A
ARM Action Codes									T1
1	None			0 d	0 f	0 a	0 d	9 c	92 c
2	Prowl H20	42	OZ/A	0 d	97 ab	0 a	91 ab	9 abc	98 abc
3	Prowl H20	42	OZ/A	0 d	58 e	0 a	59 c	9 abc	100 abc
4	Axiom	8	OZ/A	2 a-d	86 c	0 a	85 b	9 abc	98 abc
5	Osprey	4.75	OZ/A	1 cd	87 c	0 a	87 b	9 abc	98 abc
	UAN	1.5	QT/A						
	NIS	0.25	% V/V						
6	Hoelon	2	PT/A	0 d	98 a	0 a	98 a	9 bc	95 bc
7	Axial	8.2	OZ/A	1 bcd	99 a	0 a	98 a	9 abc	100 abc
	ADIGOR	9.6	OZ/A						
8	Osprey	4.75	OZ/A	4 a	74 d	0 a	90 ab	9 c	93 c
	UAN	1.5	QT/A						
	NIS	0.25	% V/V						
9	Hoelon	2	PT/A	0 d	94 abc	0 a	99 a	9 abc	98 abc
10	Axial	8.2	OZ/A	3 abc	90 bc	0 a	97 a	9 abc	99 abc
	ADIGOR	9.6	OZ/A						
11	Prowl H20	42	OZ/A	1 bcd	89 bc	0 a	98 a	10 a	105 a
	Osprey	4.75	OZ/A						
	UAN	1.5	QT/A						
	NIS	0.25	% V/V						
12	Prowl H20	42	OZ/A	0 d	99 a	0 a	98 a	10 ab	103 ab
	Hoelon	2	PT/A						
13	Prowl H20	42	OZ/A	3 ab	97 ab	0 a	99 a	10 ab	102 ab
	Axial	8.2	OZ/A						
	ADIGOR	9.6	OZ/A						
14	Non-treated			0 d	0 f	0 a	0 d	9 abc	98 abc
LSD (P=.05)				2.0	7.1	0.0	9.3	0.7	7.7
Standard Deviation				1.6	5.6	0.0	7.3	0.6	6.1
CV				141.55	7.32	0.0	9.32	6.15	6.15
Bartlett's X2				10.266	50.926	0.0	95.218	10.232	10.232
P(Bartlett's X2)				0.247	0.001*	.	0.001*	0.675	0.675

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

Column 14: T1 = [13]/1000*454/2000/6/20*43560

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Wheat and ryegrass response to Prowl, Axiom, Osprey, Hoelon, and Axial.

Trial ID: SmallGrains2-07 Study Dir.: Andrew MacRae
Location: Plains Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

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

Investigator: Andrew MacRae **Title:** Ext. Weed Science
Affiliation: University of Georgia
Postal Code: 31794

TRIAL LOCATION

City: Plains **Trial Status:** completed
State/Prov.: GA **Trial Reliability:** excellent
Postal Code: _____ **Initiation Date:** Nov-02-06
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: Determine Wheat and ryegrass response to Prowl, Axiom, Osprey, Hoelon, and Axial.

Conclusions:

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	LOLMG	Annual ryegrass	Lolium multiflorum gaudini

Crop 1: TRZAW WHEAT **Variety:** AGS 2000
Planting Date: Nov-02-06 **Planting Method:** Drilled
Rate: 118 lbs/A **Depth:** 1.25 IN **Perennial Age:** ____ _____
Row Spacing: 7.5 IN **Spacing Within Row:** ____ _____ **Seed Bed:** flat
Soil Temperature: 59 F **Soil Moisture:** Moist **Emergence Date:** Nov-07-06

SITE AND DESIGN

Plot Width, Unit: 6 FT **Plot Length, Unit:** 30 FT **Reps:** 5
Site Type: Plains Research Farm
Tillage Type: Conventional **Study Design:** RANDOMIZED COMPLETE BLOCK

Trial Initiation Comments:

	Previous Crops	Previous Pesticides	Year
1.			

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MAINTENANCE

Field Prep./Maintenance: Field was conventionally prepared and beds formed. Grain was drilled and irrigation applied within 4 hours of planting.

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-05-06	Nov-13-06	Nov-28-06	Dec-18-06
Time of Day:	17:45	08:00	09:15	10:00
Application Method:	SPRAY	SPRAY	SPRAY	SPRAY
Application Timing:	PRE	Spike	2 leaf	2 tiller
Applic. Placement:	Soil	Soil	2 inch	3 inch
Air Temp., Unit:	56 F	43 F	67 F	72 F
% Relative Humidity:	61	85	80	74
Wind Velocity, Unit:	2 mph	3 mph	4 mph	1 mph
Dew Presence (Y/N):	N	Y	Y	Y
Water Hardness:				
Soil Temp., Unit:	59 F	45 F	65 F	71 F
Soil Moisture:	Moist	Moist	Slight	Moist
% Cloud Cover:	0	0	95	0

CROP STAGE AT EACH APPLICATION

	A	B	C	D
Crop 1 Code, Stage:	TRZAW PRE	TRZAW Spike	TRZAW 2 leaf	TRZAW 2-3tiller
Stage Scale:	PRE	Spike	2 leaf	2 tiller
Height, Unit:	0 inch	3 inch	4 inch	5 inch

WEED STAGE AT EACH APPLICATION

	A	B	C	D
Weed 1 Code, Stage:	LOLMG PRE	LOLMG Spike	LOLMG 1 leaf	LOLMG 1 tiller
Stage Scale:	Not emerg	Spike	1 leaf	1 tiller
Density, Unit:		2 sqft	3 sqft	3 sqft

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APPLICATION EQUIPMENT

	A	B	C	D
Appl. Equipment:	CO2 Spray	CO2 Spray	CO2 Spray	CO2 Spray
Operating Pressure:	22 psi	22 psi	22 psi	23 psi
Nozzle Type:	TeeJet	TeeJet	TeeJet	TeeJet
Nozzle Size:	110015XR	110015XR	110015XR	11002XR
Nozzle Spacing, Unit:	18 in	18 in	18 in	18 in
Nozzles/Row:	2	2	2	2
Band Width, Unit:	6 ft	6 ft	6 ft	6 ft
Boom Length, Unit:	54 in	54 in	54 in	54 in
Boom Height, Unit:	15 in	15 in	15 in	15 in
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:	10 gpa	10 gpa	10 gpa	14.8 gpa
Spray pH:				
Propellant:	CO2	CO2	CO2	CO2
Tank Mix (Y/N):	N	N	N	N

Trt No	Treatment Application Comment