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Wheat, ryegrass, and henbit response to Axiom and Osprey.

Trial ID: Wheat5-10 Study Dir.: Stanley Culpepper
Location: TyTy Annex Investigator: Stanley Culpepper

Use 1.5 liters(s) per treatment mixture to spray 14.8 gal/ac
Plots: 6 by 30 feet

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
1	Non-treated								101	206	301	408
2	Axiom	68	WG	6	oz/a	Spike	A	4.554 g/mx	102	204	303	406
3	Axiom	68	WG	8	oz/a	Spike	A	6.072 g/mx	103	205	302	404
4	Osprey	4.5	WDG	4.76	oz/a	2-T	B	3.613 g/mx	104	207	305	407
	NIS		L	0.5	% v/v	2-T	B	7.499 ml/mx				
	UAN		L	4	pt/a	2-T	B	50.67 ml/mx				
5	Axiom	68	WG	6	oz/a	Spike	A	4.554 g/mx	105	201	308	405
	Osprey	4.5	WDG	4.76	oz/a	2-T	B	3.613 g/mx				
	NIS		L	0.5	% v/v	2-T	B	7.499 ml/mx				
	UAN		L	4	pt/a	2-T	B	50.67 ml/mx				
6	Axiom	68	WG	6	oz/a	2-T	B	4.554 g/mx	106	208	304	403
	Osprey	4.5	WDG	4.76	oz/a	2-T	B	3.613 g/mx				
	NIS		L	0.5	% v/v	2-T	B	7.499 ml/mx				
	UAN		L	4	pt/a	2-T	B	50.67 ml/mx				
7	PowerFlex	7.5	WG	3.5	oz/a	2-T	B	2.657 g/mx	107	203	306	401
	COC		L	1	% v/v	2-T	B	15.0 ml/mx				
8	Axial XL	0.42	EC	16.4	oz/a	2-T	B	12.98 ml/mx	108	202	307	402

Sort Order: Treatment

Trial Comments

OBJECTIVE: Determine wheat and ryegrass response to Axiom and Osprey systems.

Wheat Injury:
1. Spike applications were made when wheat was just emerging; injury was 14 to 31% at 19 DAT.
2. No other herbicide treatment injured wheat.
3. Wheat was injured more by Axiom at spike followed by Osprey when compared to Axiom at spike applied alone.

Ryegrass Response:
1. Axiom was applied to emerging ryegrass; control was excellent throughout the season. Although a few escapes were detectable at harvest.
2. POST applications of Osprey, PowerFlex, and Axial XL provided excellent late-season control.

Henbit Response:
1. Axiom at spike provided only 43 and 76% control during mid-season at 6 and 8 oz/A, respectively.
2. Osprey and PowerFlex provided excellent control.
3. Axial XL provided no control.
4. Ratings at harvest could not be made as the wheat and ryegrass out competed the henbit.

Wheat Yield:
1. Lowest yields were noted in the no herbicide control.
2. Yields from all systems including an herbicide were similar.

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Trial ID: Wheat5-10 Study Dir.: Stanley Culpepper
Location: TyTy Annex Investigator: Stanley Culpepper

Weed Code																			LOLMU	
Crop Code				TRZAW		TRZAW		TRZAW		TRZAW		TRZAW		TRZAW		TRZAW				
Rating Data Type				injury		injury		injury		injury		injury		injury		injury			control	
Rating Unit				%		%		%		%		%		%		%			%	
Rating Date				11/22/2010		12/3/2010		12/13/2010		12/30/2010		1/19/2011		2/18/2011		5/5/2011			12/13/2010	
Trt-Eval Interval				8 DA-A		19 DA-A		29 DA-A		9 DA-B		29 DA-B		59 DA-B		135 DA-B			29 DA-A	
ARM Action Codes																				
# Subsamples, Dec.																				
Trt No.	Treatment Name	Rate	Rate Unit	1		2		3		4		5		6		7		8	9	
1	Non-treated			0.0	a	0.0	c	0.0	d	0.0	b	0.0	d	0.0	a	0.0	a		0.0	b
2	Axiom	6	oz/a	0.0	a	14.3	b	10.5	c	7.5	b	15.0	c	2.8	a	0.0	a		93.8	a
3	Axiom	8	oz/a	0.0	a	31.3	a	23.3	a	25.5	a	25.5	b	4.8	a	0.0	a		95.0	a
4	Osprey	4.76	oz/a	0.0	a	0.0	c	0.0	d	0.0	b	0.0	d	0.0	a	0.0	a		0.0	b
	NIS	0.5	% v/v																	
	UAN	4	pt/a																	
5	Axiom	6	oz/a	0.0	a	16.3	b	17.8	b	25.8	a	32.5	a	5.3	a	0.0	a		93.8	a
	Osprey	4.76	oz/a																	
	NIS	0.5	% v/v																	
	UAN	4	pt/a																	
6	Axiom	6	oz/a	0.0	a	0.0	c	0.0	d	0.0	b	0.0	d	1.8	a	0.0	a		0.0	b
	Osprey	4.76	oz/a																	
	NIS	0.5	% v/v																	
	UAN	4	pt/a																	
7	PowerFlex	3.5	oz/a	0.0	a	0.0	c	0.0	d	0.0	b	0.0	d	0.0	a	0.0	a		0.0	b
	COC	1	% v/v																	
8	Axial XL	16.4	oz/a	0.0	a	0.0	c	0.0	d	0.0	b	0.0	d	0.0	a	0.0	a		0.0	b
LSD (P=.05)				0.00		3.74		3.92		7.95		6.14		5.07		0.00		.	1.88	
Standard Deviation				0.00		2.54		2.67		5.41		4.17		3.45		0.00		.	1.28	
CV				0.0		32.96		41.43		73.62		45.74		190.12		0.0		.	3.62	
Bartlett's X2				0.0		1.211		10.198		1.191		1.405		1.788		0.0		.	0.0	
P(Bartlett's X2)				.		0.546		0.006*		0.551		0.495		0.618		.		.	1.00	
Replicate F				0.000		0.430		0.896		0.580		0.426		0.775		0.000			0.636	
Replicate Prob(F)				1.0000		0.7338		0.4595		0.6348		0.7365		0.5207		1.0000			0.5999	
Treatment F				0.000		85.387		50.960		18.337		41.516		1.659		0.000			5804.455	
Treatment Prob(F)				1.0000		0.0001		0.0001		0.0001		0.0001		0.1739		1.0000			0.0001	

Means followed by same letter do not significantly differ (P=.05, LSD)
Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Weed Code				LOLMU	LOLMU	LOLMU	LOLMU		LAMAM	LAMAM	LAMAM	LAMAM	
Crop Code													
Rating Data Type				control	control	control	control		control	control	control	control	
Rating Unit				%	%	%	%		%	%	%	%	
Rating Date				12/30/2010	1/19/2011	2/18/2011	5/5/2011		12/13/2010	12/30/2010	1/19/2011	2/18/2011	
Trt-Eval Interval				9 DA-B	29 DA-B	59 DA-B	135 DA-B		29 DA-A	9 DA-B	29 DA-B	59 DA-B	
ARM Action Codes													
# Subsamples, Dec.													
Trt No.	Treatment Name	Rate	Rate Unit	10	11	12	13	14	15	16	17	18	19
1	Non-treated			0.0 c	0.0 c	0.0 d	0.0 b		0.0 c	0.0 c	0.0 c	0.0 d	
2	Axiom	6	oz/a	99.0 a	98.0 a	90.3 c	92.5 a		87.0 b	85.0 b	89.5 a	42.5 c	
3	Axiom	8	oz/a	99.0 a	98.0 a	93.0 bc	93.0 a		91.3 ab	95.8 a	92.8 a	76.8 b	
4	Osprey	4.76	oz/a	20.0 b	73.8 b	97.8 a	99.0 a		0.0 c	0.0 c	76.3 b	96.3 a	
	NIS	0.5	% v/v										
	UAN	4	pt/a										
5	Axiom	6	oz/a	99.0 a	98.3 a	98.8 a	99.0 a		92.0 a	82.5 b	95.3 a	98.5 a	
	Osprey	4.76	oz/a										
	NIS	0.5	% v/v										
	UAN	4	pt/a										
6	Axiom	6	oz/a	20.0 b	79.8 b	97.5 ab	99.0 a		0.0 c	0.0 c	89.0 a	98.8 a	
	Osprey	4.76	oz/a										
	NIS	0.5	% v/v										
	UAN	4	pt/a										
7	PowerFlex	3.5	oz/a	20.0 b	73.8 b	98.5 a	99.0 a		0.0 c	0.0 c	76.3 b	95.3 a	
	COC	1	% v/v										
8	Axial XL	16.4	oz/a	20.0 b	75.0 b	98.8 a	99.0 a		0.0 c	0.0 c	0.0 c	0.0 d	
LSD (P=.05)				0.00	6.24	4.51	7.96	.	4.39	2.62	9.21	4.65	.
Standard Deviation				0.00	4.24	3.07	5.41	.	2.98	1.78	6.26	3.16	.
CV				0.0	5.69	3.64	6.36	.	8.83	5.41	9.66	4.98	.
Bartlett's X2				0.0	11.719	32.922	0.168	.	0.503	0.44	17.286	17.734	.
P(Bartlett's X2)				.	0.02*	0.001*	0.681	.	0.778	0.507	0.004*	0.003*	.
Replicate F				0.000	0.752	0.696	0.961		0.294	1.375	1.849	0.509	
Replicate Prob(F)				1.0000	0.5337	0.5648	0.4295		0.8294	0.2778	0.1692	0.6804	
Treatment F				0.000	229.858	498.055	162.542		977.828	2617.023	168.362	756.858	
Treatment Prob(F)				1.0000	0.0001	0.0001	0.0001		0.0001	0.0001	0.0001	0.0001	

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				20		21	
Weed Code							
Crop Code				TRZAW		TRZAW	
Rating Data Type				yield		YIELD	
Rating Unit				lb/plot		bu/A	
Rating Date				5/25/2011		5/25/2011	
Trt-Eval Interval				192 DA-A		192 DA-A	
ARM Action Codes						TY1	
# Subsamples, Dec.						1	
Trt No.	**Treatment Name**	**Rate**	**Rate Unit**	**20**		**21**	
1	Non-treated			8.73	b	50.7	b
2	Axiom	6	oz/a	11.60	a	67.4	a
3	Axiom	8	oz/a	12.35	a	71.7	a
4	Osprey	4.76	oz/a	12.20	a	70.9	a
	NIS	0.5	% v/v				
	UAN	4	pt/a				
5	Axiom	6	oz/a	11.65	a	67.7	a
	Osprey	4.76	oz/a				
	NIS	0.5	% v/v				
	UAN	4	pt/a				
6	Axiom	6	oz/a	11.75	a	68.2	a
	Osprey	4.76	oz/a				
	NIS	0.5	% v/v				
	UAN	4	pt/a				
7	PowerFlex	3.5	oz/a	12.05	a	70.0	a
	COC	1	% v/v				
8	Axial XL	16.4	oz/a	11.68	a	67.8	a
LSD (P=.05)				1.262		7.33	
Standard Deviation				0.858		4.98	
CV				7.46		7.46	
Bartlett's X2				2.957		2.956	
P(Bartlett's X2)				0.889		0.889	
Replicate F				0.335		0.335	
Replicate Prob(F)				0.8003		0.8002	
Treatment F				7.253		7.253	
Treatment Prob(F)				0.0002		0.0002	

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Wheat, ryegrass, and henbit response to Axiom and Osprey.

Trial ID: Wheat5-10 Study Dir.: Stanley Culpepper
Location: TyTy Annex Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

Study Director: Stanley Culpepper **Title:** Ext. Weed Science
Affiliation: University of Georgia
Postal Code: 31793
Investigator: Stanley Culpepper **Title:** Ext. Weed Science
Affiliation: University of Georgia
Postal Code: 31793

TRIAL LOCATION

City: TyTy Annex **Trial Status:** completed
State/Prov.: Georgia **Trial Reliability:** good
Initiation Date: 11/7/2010
Country: USA

Conducted Under GLP (Y/N): N **Conducted Under GEP (Y/N):** N

CROP AND WEED DESCRIPTION

Weed	Code	Common Name	Scientific Name
1.	LAMAM	Henbit	Lamium amplexicaule
2.	LOLMG	Annual ryegrass	Lolium multiflorum gaudini

Crop 1: TRZAW WHEAT, WINTER **Variety:** A6S 2060
Planting Date: 11/7/2010 **Planting Method:** drilled
Rate: 21 foot **Depth:** 0.5 in
Row Spacing: 7.5 in **Seed Bed:** flat, tilled
Soil Temperature: 48 F **Soil Moisture:** moist **Emergence Date:** 11/14/2010

SITE AND DESIGN

Plot Width, Unit: 6 FT **Plot Length, Unit:** 30 FT **Reps:** 4
Site Type: On Farm
Tillage Type: Conventional **Study Design:** RANDOMIZED COMPLETE BLOCK

SOIL DESCRIPTION

% Sand: 82 **% OM:** 1.4 **Texture:** loamy sand
% Silt: 12 **pH:** 6.1
% Clay: 6

Overall Moisture Conditions: dry
Closest Weather Station: UGA Ponder Farm **Distance:** 2 **Unit:** mi

APPLICATION DESCRIPTION

	A	B
Application Date:	11/14/2010	12/21/2010
Time of Day:	4:00 pm	10:30 am
Application Method:	broadcast	broadcast
Application Timing:	spike	POST
Applic. Placement:	overtop	overtop
Air Temp., Unit:	76 F	52 F
% Relative Humidity:	48	74
Wind Velocity, Unit:	0 mph	3 mph
Dew Presence (Y/N):	N	Y
Soil Temp., Unit:	57 F	49 F
Soil Moisture:	fair	moist
% Cloud Cover:	40	0

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	TRZAW	TRZAW
Stage Scale:	spike	2 tiller
Height, Unit:	0.2 in	5 in

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	LAMAM	LAMAM 1 in
Stage Scale:	none	3 lf
Density, Unit:		50 yd sq
Weed 2 Code, Stage:	LOLMG	LOLMG 3-4 in
Stage Scale:	none	3lf-2 til
Density, Unit:		30 yd sq

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APPLICATION EQUIPMENT

	A	B
Appl. Equipment:	backpack	backpack
Operating Pressure:	24	24
Nozzle Type:	flat fan	flat fan
Nozzle Size:	11002	11002
Nozzle Spacing, Unit:	18 in	18 in
Nozzles/Row:	2	2
Boom Length, Unit:	4.5 ft	4.5 ft
Boom Height, Unit:	15 in	15 in
Ground Speed, Unit:	3 mph	3 mph
Carrier:	water	water
Spray Volume, Unit:	15 GPA	15 GPA
Propellant:	CO2	CO2
Tank Mix (Y/N):	Y	Y