

University of Georgia

Wheat, ryegrass, and radish response to BAS 94461H.

Trial ID: Wheat2-10
Location: TyTy

Study Dir.: Stanley Culpepper
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	208	306	405		
2	BAS 94461H	85	WG	1	oz/a	PRE	A	0.759 g/mx	102	207	305	408		
3	BAS 94461H	85	WG	1.25	oz/a	PRE	A	0.9488 g/mx	103	205	309	402		
4	BAS 94461H	85	WG	1.5	oz/a	PRE	A	1.139 g/mx	104	211	301	409		
5	BAS 94461H	85	WG	1.75	oz/a	PRE	A	1.328 g/mx	105	201	304	401		
6	BAS 94461H	85	WG	2.0	oz/a	PRE	A	1.518 g/mx	106	209	302	407		
7	Axial XL	0.42	EC	16.4	oz/a	POST	B	12.98 ml/mx	107	204	308	410		
8	BAS 94461H Sharpen	85 2.85	WG SC	1 2	oz/a oz/a	PRE PRE	A A	0.759 g/mx 1.583 ml/mx	108	206	303	406		
9	BAS 94461H Axial XL	85 0.42	WG EC	1 16.4	oz/a oz/a	PRE POST	A B	0.759 g/mx 12.98 ml/mx	109	210	307	404		
10	BAS 94461H Axial XL	85 0.42	WG EC	1.25 16.4	oz/a oz/a	PRE POST	A B	0.9488 g/mx 12.98 ml/mx	110	203	310	411		
11	BAS 94461H Axial XL	85 0.42	WG EC	2 16.4	oz/a oz/a	PRE POST	A B	1.518 g/mx 12.98 ml/mx	111	202	311	403		

Sort Order: Treatment

Trial Comments

OBJECTIVE: Determine wheat, radish, and ryegrass response to BAS 94461H.

VISUAL WHEAT RESPONSE:

- Significant injury was noted with all rates of BAS 94461H. At 8 DAT, injury from 18 to 58% was noted with increasing rates. By 25 DAT, injury still ranged from 6 to 31% injury.
- Applying Sharpen or Axial in BAS systems did not appear to increase wheat injury.

WHEAT STAND:

- Stand was taken by counting 2 rows the entire length of the plot. Stands were reduced with BAS94461H at rates of 1.5 oz/A and greater.

WHEAT HEIGHTS:

- Heights were taken on 20 plants per plot 15 DAP. All treatments except for Axial (not yet applied) statistically reduced plant heights when compared to the non-treated control.

WILD RADISH RESPONSE:

- A severe natural infestation was present.
- A rate affect was noted but control was only greater than 80% for a very short period with BAS94461H at 2 oz/A.
- The addition of Sharpen with BAS94461H improved control but again by late season control was poor.

RYEGRASS RESPONSE:

- Greater than 92% control was noted with all herbicide systems at harvest.

GENERAL COMMENTS:

- Trial could not be harvested because wild radish control was so poor.
- On Nov 10, a gun was used to irrigate study with 0.5 inch of water. On Nov 16, 1.83 inches of rain was measured.

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Weed Code	TRZAW	TRZAW	TRZAW	TRZAW	TRZAW	TRZAW	RAPRA	RAPRA
Crop Code	injury	injury	injury	injury	injury	injury	control	control
Rating Data Type	%	%	%	%	%	%	%	%
Rating Unit								
Rating Date	11/16/2010	11/22/2010	12/3/2010	12/10/2010	12/30/2010	2/12/2011	12/3/2010	12/10/2010
Trt-Eval Interval	8 DA-A	14 DA-A	25 DA-A	32 DA-A	9 DA-B	53 DA-B	25 DA-A	32 DA-A

ARM Action Codes

Trt No.	Treatment Name	Rate	Rate Unit	1	2	3	4	5	6	7	8	9							
1	Non-treated			0.0	e	0.0	e	0.0	d	0.0	c	0.0	e	0.0	g	0.0	c		
2	BAS 94461H	1	oz/a	18.3	d	7.5	de	6.5	d	2.5	cd	0.0	c	0.0	e	17.5	fg	3.8	c
3	BAS 94461H	1.25	oz/a	33.8	b	15.0	cd	11.3	cd	11.8	bc	5.3	c	4.3	d	41.3	de	50.0	b
4	BAS 94461H	1.5	oz/a	32.5	b	23.8	bc	21.8	b	21.0	ab	14.3	b	8.5	bc	60.0	abc	72.5	a
5	BAS 94461H	1.75	oz/a	52.5	a	22.5	bc	28.8	a	18.0	b	21.5	ab	5.5	cd	68.8	ab	79.3	a
6	BAS 94461H	2.0	oz/a	52.8	a	31.3	ab	31.3	a	29.5	a	22.8	a	11.5	ab	66.3	ab	84.3	a
7	Axial XL	16.4	oz/a	0.0	e	3.3	e	0.0	e	0.0	d	0.0	c	0.0	e	0.0	g	0.0	c
8	BAS 94461H	1.25	oz/a	26.0	bcd	7.5	de	11.5	cd	7.5	cd	4.5	c	2.8	de	76.3	a	80.0	a
	Sharpen	2	oz/a																
9	BAS 94461H	1	oz/a	21.5	cd	7.8	de	8.0	cd	5.0	cd	0.0	c	0.0	e	26.3	ef	15.0	c
	Axial XL	16.4	oz/a																
10	BAS 94461H	1.25	oz/a	30.0	bc	16.8	cd	13.0	c	7.5	cd	2.5	c	6.3	cd	45.0	cd	51.3	b
	Axial XL	16.4	oz/a																
11	BAS 94461H	2	oz/a	57.5	a	37.5	a	28.0	ab	29.3	a	23.8	a	13.0	a	57.5	bcd	77.5	a
	Axial XL	16.4	oz/a																
LSD (P=.05)				9.69		9.53		6.33		9.45		7.34		4.03	.	18.42		19.12	
Standard Deviation				6.71		6.60		4.39		6.55		5.09		2.79	.	12.76		13.25	
CV				22.74		42.03		30.16		54.57		59.2		59.33	.	30.59		28.37	
Bartlett's X2				6.097		27.996		26.543		14.638		4.827		5.363	.	15.821		23.695	
P(Bartlett's X2)				0.636		0.001*		0.001*		0.041*		0.566		0.498	.	0.045*		0.003*	
Replicate F				0.474		0.237		2.800		2.373		3.349		1.178		0.636		0.832	
Replicate Prob(F)				0.7028		0.8698		0.0569		0.0900		0.0320		0.3348		0.5974		0.4868	
Treatment F				33.938		13.121		26.333		11.089		15.294		11.551		18.249		28.354	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		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	RAPRA	RAPRA	RAPRA	LOLMG	LOLMG	LOLMG	LOLMG	LOLMG
Crop Code								
Rating Data Type	control	control	control	control	control	control	control	control
Rating Unit	%	%	%	%	%	%	%	%
Rating Date	12/30/2010	2/12/2011	4/26/2011	12/3/2010	12/10/2010	12/30/2010	2/12/2011	4/26/2011
Trt-Eval Interval	52 DA-A	53 DA-B	169 DA-A	25 DA-A	32 DA-A	52 DA-A	53 DA-B	126 DA-B
ARM Action Codes								

Trt No.	Treatment Name	Rate	Unit	10	11	12	13	14	15	16	17	18							
1	Non-treated			0.0	e	0.0	c	0.0	d	0.0	c	0.0	d	0.0	d	0.0	c		
2	BAS 94461H	1	oz/a	0.0	e	0.0	c	0.0	d	88.8	b	98.5	a	95.0	b	92.0	c	79.5	b
3	BAS 94461H	1.25	oz/a	41.3	d	28.8	b	13.8	c	93.5	ab	98.0	a	99.0	a	97.5	a	97.3	a
4	BAS 94461H	1.5	oz/a	61.3	c	67.5	a	37.5	b	93.8	a	98.3	a	99.0	a	92.8	bc	98.0	a
5	BAS 94461H	1.75	oz/a	71.3	bc	73.8	a	47.5	ab	93.8	a	99.0	a	99.0	a	95.8	ab	99.0	a
6	BAS 94461H	2.0	oz/a	76.5	ab	85.8	a	47.5	ab	95.0	a	98.8	a	99.0	a	96.3	a	91.8	a
7	Axial XL	16.4	oz/a	0.0	e	0.0	c	0.0	d	0.0	c	0.0	b	55.0	c	98.0	a	96.8	a
8	BAS 94461H	1.25	oz/a	83.8	a	84.3	a	57.3	a	93.8	a	98.8	a	99.0	a	95.0	abc	95.5	a
9	Sharpen	2	oz/a																
	BAS 94461H	1	oz/a	0.0	e	2.5	c	0.0	d	91.3	ab	97.5	a	97.8	ab	97.5	a	99.0	a
10	Axial XL	16.4	oz/a																
	BAS 94461H	1.25	oz/a	50.8	d	31.3	b	17.5	c	92.5	ab	97.3	a	99.0	a	98.0	a	99.0	a
11	Axial XL	16.4	oz/a																
	BAS 94461H	2	oz/a	68.3	bc	85.0	a	55.0	a	94.8	a	98.8	a	99.0	a	98.0	a	99.0	a
	Axial XL	16.4	oz/a																
LSD (P=.05)				10.24	18.34	12.48	.	4.97	2.06	3.36	3.09	9.52							
Standard Deviation				7.09	12.70	8.64	.	3.44	1.43	2.33	2.14	6.59							
CV				17.22	30.45	34.45	.	4.53	1.78	2.72	2.45	7.6							
Bartlett's X2				19.997	29.582	14.655	.	6.408	22.366	1.855	20.108	15.234							
P(Bartlett's X2)				0.003*	0.001*	0.023*	.	0.493	0.002*	0.395	0.005*	0.009*							
Replicate F				0.835	0.884	0.122		3.112	1.375	1.369	1.528	1.256							
Replicate Prob(F)				0.4854	0.4603	0.9461		0.0409	0.2693	0.2711	0.2274	0.3070							
Treatment F				95.191	35.591	30.998		478.394	3095.349	720.484	737.400	79.273							
Treatment Prob(F)				0.0001	0.0001	0.0001		0.0001	0.0001	0.0001	0.0001	0.0001							

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Weed Code	AVG2ROW	AVG20PLA
Crop Code	TRZAW	TRZAW
Rating Data Type	stnd cts	hts
Rating Unit	#/2rows	cm
Rating Date	11/23/2010	11/23/2010
Trt-Eval Interval		15 DA-A
ARM Action Codes	T1	T2

Trt No.	Treatment Name	Rate	Unit	22	44
1	Non-treated			36.88	ab 12.9833358 a
2	BAS 94461H	1	oz/a	34.63	ab 11.0833332 b
3	BAS 94461H	1.25	oz/a	34.88	ab 10.4999991 bc
4	BAS 94461H	1.5	oz/a	27.38	cd 9.4166689 cde
5	BAS 94461H	1.75	oz/a	23.88	d 8.7833337 de
6	BAS 94461H	2.0	oz/a	23.00	d 8.7500009 de
7	Axial XL	16.4	oz/a	40.38	a 13.1000017 a
8	BAS 94461H	1.25	oz/a	31.38	bc 10.3500014 bc
	Sharpen	2	oz/a		
9	BAS 94461H	1	oz/a	33.25	bc 11.0666687 b
	Axial XL	16.4	oz/a		
10	BAS 94461H	1.25	oz/a	32.63	bc 9.6166678 cd
	Axial XL	16.4	oz/a		
11	BAS 94461H	2	oz/a	23.25	d 8.1666678 e
	Axial XL	16.4	oz/a		
LSD (P=.05)				6.935	1.28372777
Standard Deviation				4.803	0.88906226
CV				15.47	8.59
Bartlett's X2				6.196	12.663
P(Bartlett's X2)				0.799	0.243
Replicate F				1.582	9.201
Replicate Prob(F)				0.2142	0.0002
Treatment F				6.006	13.543
Treatment Prob(F)				0.0001	0.0001

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Trial ID: Wheat2-10
Location: TyTy

Study Dir.: Stanley Culpepper
Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

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

City: TyTy State/Prov.: Georgia Country: USA	Trial Status: completed Trial Reliability: good Initiation Date: 11/7/2010
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Conducted Under GLP (Y/N): N

Conducted Under GEP (Y/N): N

CROP AND WEED DESCRIPTION

Weed Code	Common Name	Scientific Name
1. LOLMG	Annual ryegrass	Lolium multiflorum gaudini
2. RAPRA	Wild radish	Raphanus sp.

Crop 1: TRZAW WHEAT, WINTER Planting Date: 11/7/2010 Rate: 21 foot Row Spacing: 7.5 inch Soil Temperature: 48 F	Variety: A6S 2060 Planting Method: drilled Seed Bed: flat Emergence Date: 11/7/2010 Soil Moisture: moist
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SITE AND DESIGN

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

Field Prep./Maintenance: Field was prepared using tillage.

SOIL DESCRIPTION

% Sand: 87 % Silt: 5 % Clay: 8	% OM: 1.3 pH: 6.4	Texture: loamy sand
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Overall Moisture Conditions: wet early, dry late

Closest Weather Station: on site

Distance: 250 **Unit:** yd

APPLICATION DESCRIPTION

	A	B
Application Date:	11/8/2010	12/21/2010
Time of Day:	9:30 am	9:00 am
Application Method:	broadcast	broadcast
Application Timing:	PRE	POST
Applic. Placement:	on soil	overtop
Air Temp., Unit:	44 F	46 F
% Relative Humidity:	68	78
Wind Velocity, Unit:	3 mph	3 mph
Dew Presence (Y/N):	Y	Y
Soil Temp., Unit:	50 F	47 F
Soil Moisture:	fair	moist
% Cloud Cover:	0	0

CROP STAGE AT EACH APPLICATION

	A	B
Crop 1 Code, Stage:	TRZAW PRE	TRZAW POST
Stage Scale:	not emerg	2 tiller
Height, Unit:	0 in	4 in

WEED STAGE AT EACH APPLICATION

	A	B
Weed 1 Code, Stage:	LOLMG PRE	LOLMG 3-4 in
Stage Scale:	not emerg	3lf-1till
Density, Unit:	0 ydsq	30 yd sq
Weed 2 Code, Stage:	RAPRA PRE	RAPRA 2-4 in di
Stage Scale:	not emerg	4-5 lf
Density, Unit:	0 ydsq	30 ys 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