University of Georgia

Wild radish and wheat tolerance to pyroxsuluam.

Trial ID: Wheat3-08(NA08C2B004) Study Dir.: Stanley Culpepper
Location: Ponder farm Investigator: Stanley Culpepper

Reps: 4 Plots: 6 by 30 feet
Spray vol: 14.8 gal/ac Mix size: 1 liters (min .92602)

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
1	PYROXSULAM	75	g ai/kg	WG	5.3	G A/A	6 TO 12	A	1.261 g/mx	101	206	304	405
	AGRI-DEX COC			L	1.25	% V/V	6 TO 12	A	12.5 ml/mx				
2	PYROXSULAM	75	g ai/kg	WG	6.4	G A/A	6 TO 12	A	1.523 g/mx	102	209	303	409
	AGRI-DEX COC			L	1.25	% V/V	6 TO 12	A	12.5 ml/mx				
3	PYROXSULAM	75	g ai/kg	WG	7.5	G A/A	6 TO 12	A	1.785 g/mx	103	204	306	408
	AGRI-DEX COC			L	1.25	% V/V	6 TO 12	A	12.5 ml/mx				
4	HARMONY EXTRA	75	g ai/kg	WG	0.5	OZ/A	6 TO 12	A	0.253 g/mx	104	208	309	407
	NONIONIC SURFACTANT			L	0.50	% V/V	6 TO 12	A	4.999 ml/mx				
5	2,4-D	4	g ae/l	EC	1	PT/A	6 TO 12	A	8.445 ml/mx	105	202	310	406
6	UNTREATED							A		106	201	308	402
7	GRASP SC	240	g ai/l	SC	14	G A/A	6 TO 12	A	1.043 ml/mx	107	205	301	410
	MSO			L	2.5	% V/V	6 TO 12	A	25.0 ml/mx				
8	GRASP SC	240	g ai/l	SC	20	G A/A	6 TO 12	A	1.49 ml/mx	108	203	305	404
	MSO			L	2.5	% V/V	6 TO 12	A	25.0 ml/mx				
9	OSPREY	4.5	g ai/kg	WG	4.75	OZ/A	6 TO 12	A	2.404 g/mx	109	210	307	401
	UAN			L	1.5	QT/A	6 TO 12	A	25.34 ml/mx				
	NIS			L	0.25	% V/V	6 TO 12	A	2.5 ml/mx				
10	HARMONY EXTRA	75	g ai/kg	WG	0.4	OZ/A	6 TO 12	A	0.2024 g/mx	110	207	302	403
	BANVEL	4	g ae/l	SL	3	OZ/A	6 TO 12	A	1.584 ml/mx				
	NONIONIC SURFACTANT			L	0.50	% V/V	6 TO 12	A	4.999 ml/mx				

Sort Order: Treatment

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

Amount*	Unit	Treatment Name	Form Conc	Form Type	Lot Code
5.712	g	PYROXSULAM	75	WG	
46.870	ml	AGRI-DEX COC		L	
0.569	g	HARMONY EXTRA	75	WG	
12.499	ml	NONIONIC SURFACTANT		L	
10.556	ml	2,4-D	4	EC	
3.165	ml	GRASP SC	240	SC	
62.493	ml	MSO		L	
3.005	g	OSPREY	4.5	WG	
31.669	ml	UAN		L	
3.125	ml	NIS		L	
1.980	ml	BANVEL	4	SL	

* '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: Determine wheat and radish response to pyroxsulam.

Note: Rates for grasp were incorrect in this trial. The trail was repeated with correct rates of Grasp in Wheat5-08.

Wheat response:
1. No treatment visually injured wheat.

Wild radish response:
1. At 10 DAT, control was poor with all treatments.
2. At 16 to 25 DAT, control was fair with all rates of pyroxsulam, Harmony alone, and 2,4-D.
3. By 32 DAT, regrowth was significant in plots treated with the Harmony mixtures.
4. By 60 DAT, greater than 90% control was noted with pyroxsulam at 6.4 or 7.5 g ai/A and 2,4-D. Osprey and pyroxsulam at 5.3 g provided good control (84-85%).

Cotton response:
1. Cotton was planted over the entire trial on May 20. No injury was noted throughout the cotton season.

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Trt No.	Treatment Name	Rate	Rate Unit	1	2	3	4	5	6	7
	Weed Code								RAPRA	RAPRA
	Crop Code			TRZAW	TRZAW	TRZAW	TRZAW	TRZAW		
	Rating Data Type			injury	injury	injury	injury	injury	control	control
	Rating Unit			%	%	%	%	%	%	%
	Rating Date			Feb-26-08	Mar-03-08	Mar-12-08	Mar-19-08	Apr-16-08	Feb-26-08	Mar-03-08
	Assessed By			SC	KF			KF	SC	KF
	Trt-Eval Interval			10 DA-A	16 DA-A	25 DA-A	32 DA-A	60 DA-A	10 DA-A	16 DA-A
1	PYROXSULAM	5.3	G A/A	0 a	0 a	0 a	0 a	0 a	58 a	85 a
	AGRI-DEX COC	1.25	% V/V							
2	PYROXSULAM	6.4	G A/A	0 a	0 a	0 a	0 a	0 a	58 a	84 a
	AGRI-DEX COC	1.25	% V/V							
3	PYROXSULAM	7.5	G A/A	0 a	0 a	0 a	0 a	0 a	60 a	85 a
	AGRI-DEX COC	1.25	% V/V							
4	HARMONY EXTRA	0.5	OZ/A	0 a	0 a	0 a	0 a	0 a	60 a	84 a
	NONIONIC SURFACTANT	0.50	% V/V							
5	2,4-D	1	PT/A	0 a	0 a	0 a	0 a	0 a	56 a	81 a
6	UNTREATED			0 a	0 a	0 a	0 a	0 a	0 d	0 c
7	GRASP SC	14	G A/A	0 a	0 a	0 a	0 a	0 a	10 c	0 c
	MSO	2.5	% V/V							
8	GRASP SC	20	G A/A	0 a	0 a	0 a	0 a	0 a	20 b	0 c
	MSO	2.5	% V/V							
9	OSPREY	4.75	OZ/A	0 a	0 a	0 a	0 a	0 a	61 a	84 a
	UAN	1.5	QT/A							
	NIS	0.25	% V/V							
10	HARMONY EXTRA	0.4	OZ/A	0 a	0 a	0 a	0 a	0 a	63 a	58 b
	BANVEL	3	OZ/A							
	NONIONIC SURFACTANT	0.50	% V/V							
	LSD (P=.05)			0.0	0.0	0.0	0.0	0.0	7.7	3.5
	Standard Deviation			0.0	0.0	0.0	0.0	0.0	5.3	2.4
	CV			0.0	0.0	0.0	0.0	0.0	11.9	4.35
	Bartlett's X2			0.0	0.0	0.0	0.0	0.0	6.644	3.141
	P(Bartlett's X2)			.	.	.	.	.	0.249	0.535

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	8	9	10
	Weed Code			RAPRA	RAPRA	RAPRA
	Crop Code					
	Rating Data Type			control	control	control
	Rating Unit			%	%	%
	Rating Date			Mar-12-08	Mar-19-08	Apr-16-08
	Assessed By					SC
	Trt-Eval Interval			25 DA-A	32 DA-A	60 DA-A
1	PYROXSULAM	5.3	G A/A	81 a	85 a	84 b
	AGRI-DEX COC	1.25	% V/V			
2	PYROXSULAM	6.4	G A/A	84 a	85 a	92 a
	AGRI-DEX COC	1.25	% V/V			
3	PYROXSULAM	7.5	G A/A	84 a	83 a	96 a
	AGRI-DEX COC	1.25	% V/V			
4	HARMONY EXTRA	0.5	OZ/A	83 a	49 c	15 d
	NONIONIC SURFACTANT	0.50	% V/V			
5	2,4-D	1	PT/A	83 a	83 a	97 a
6	UNTREATED			0 c	0 d	0 e
7	GRASP SC	14	G A/A	0 c	0 d	0 e
	MSO	2.5	% V/V			
8	GRASP SC	20	G A/A	0 c	0 d	0 e
	MSO	2.5	% V/V			
9	OSPREY	4.75	OZ/A	81 a	61 b	85 b
	UAN	1.5	QT/A			
	NIS	0.25	% V/V			
10	HARMONY EXTRA	0.4	OZ/A	75 b	65 b	66 c
	BANVEL	3	OZ/A			
	NONIONIC SURFACTANT	0.50	% V/V			
	LSD (P=.05)			4.2	7.3	5.8
	Standard Deviation			2.9	5.0	4.0
	CV			5.12	9.89	7.5
	Bartlett's X2			5.609	9.515	7.925
	P(Bartlett's X2)			0.468	0.049*	0.244

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

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Location: Ponder farm Investigator: Stanley Culpepper

GENERAL TRIAL INFORMATION

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

Investigator: Stanley Culpepper **Title:** Ext. Weed Science
Affiliation: University Of Georgia
Postal Code: 31794

TRIAL LOCATION

City: TyTy **Trial Status:** completed
State/Prov.: GA **Trial Reliability:** good
Postal Code: 31795 **Initiation Date:** Dec-05-07
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.	RAPRA	Wild Radish	Raphanus

Crop 1: TRZAW WHEAT, WINTER **Variety:** AGS-2000
Planting Date: Dec-05-08 **Planting Method:** Drilled
Rate: 20 ft **Depth:** 0.5 in **Perennial Age:** ____ _____
Row Spacing: 7.5 inch **Spacing Within Row:** 1 inch **Seed Bed:** bareground
Soil Temperature: 60 f **Soil Moisture:** moist **Emergence Date:** _____

SITE AND DESIGN

Plot Width, Unit: 6 FT **Plot Length, Unit:** 30 FT **Reps:** 4
Site Type: Ponder Farm
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: 90 **% OM:** 1.3 **Texture:** sandy loam
% Silt: 2 **pH:** 6.0 **Soil Name:** Tifton sandy loam
% Clay: 8 **CEC:** _____ **Fert. Level:** _____

ADDITIONAL MEASURED ELEMENTS

Element	Quantity	Unit

MOISTURE CONDITIONS

	Date	Time	Amount	Unit	Type	Interval	Unit
1.							

Overall Moisture Conditions: _____
Closest Weather Station: _____ **Distance:** _____ **Unit:** __

APPLICATION DESCRIPTION

	A
Application Date:	Feb-16-08
Time of Day:	12:00pm
Application Method:	broadcast
Application Timing:	POST
Applic. Placement:	overtop
Air Temp., Unit:	73 f
% Relative Humidity:	47
Wind Velocity, Unit:	2 mph
Dew Presence (Y/N):	n
Water Hardness:	
Soil Temp., Unit:	70 f
Soil Moisture:	moist
% Cloud Cover:	0

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	TRZAW A
Stage Scale:	3 tiller
Height, Unit:	4 in

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	RAPRA A
Stage Scale:	6 inch
Density, Unit:	5 ydsq

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APPLICATION EQUIPMENT

	A
Appl. Equipment:	backpack
Operating Pressure:	24
Nozzle Type:	flat fan
Nozzle Size:	11002
Nozzle Spacing, Unit:	18 inch
Nozzles/Row:	
Band Width, Unit:	
Boom Length, Unit:	4.5 ft
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