University of Georgia

Wild radish and wheat tolerance to pyroxsuluam.

Trial ID: Wheat5-08(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	13.1	G A/HA	6 TO 12	A	1.262 g/mx	101	206	304	405
	AGRI-DEX COC	0		L	1.25	% V/V	6 TO 12	A	12.5 ml/mx				
2	PYROXSULAM	75	g ai/kg	WG	15.8	G A/HA	6 TO 12	A	1.522 g/mx	102	209	303	409
	AGRI-DEX COC	0		L	1.25	% V/V	6 TO 12	A	12.5 ml/mx				
3	PYROXSULAM	75	g ai/kg	WG	18.5	G A/HA	6 TO 12	A	1.782 g/mx	103	204	306	408
	AGRI-DEX COC	0		L	1.25	% V/V	6 TO 12	A	12.5 ml/mx				
4	HARMONY EXTRA	750	g ai/kg	WG	28.9	G A/HA	6 TO 12	A	0.2784 g/mx	104	208	309	407
	NONIONIC SURFACTANT	0		L	0.5	% V/V	6 TO 12	A	5.0 ml/mx				
5	2,4-D	480	g ae/l	EC	1120	G A/HA	6 TO 12	A	16.86 ml/mx	105	202	310	406
6	UNTREATED							A		106	201	308	402
7	GRASP SC	240	g ai/l	SC	34.6	G A/HA	6 TO 12	A	1.041 ml/mx	107	205	301	410
	MSO	0		L	2.5	% V/V	6 TO 12	A	25.0 ml/mx				
8	GRASP SC	240	g ai/l	SC	49.4	G A/HA	6 TO 12	A	1.487 ml/mx	108	203	305	404
	MSO	0		L	2.5	% V/V	6 TO 12	A	25.0 ml/mx				
9	OSPREY	45	g ai/kg	WG	15	G A/HA	6 TO 12	A	2.408 g/mx	109	210	307	401
	UAN	0		L	3.5	L/HA	6 TO 12	A	25.28 ml/mx				
	NIS	0		L	0.25	% V/V	6 TO 12	A	2.5 ml/mx				
10	HARMONY EXTRA	750	g ai/kg	WG	23.6	G A/HA	6 TO 12	A	0.2273 g/mx	110	207	302	403
	BANVEL	480	g ae/l	SL	105	G A/HA	6 TO 12	A	1.58 ml/mx				
	NONIONIC SURFACTANT	0		L	0.5	% V/V	6 TO 12	A	5.0 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
5.707	g	PYROXSULAM	75	WG	
46.875	ml	AGRI-DEX COC	0	L	
0.632	g	HARMONY EXTRA	750	WG	
12.500	ml	NONIONIC SURFACTANT	0	L	
21.071	ml	2,4-D	480	EC	
3.161	ml	GRASP SC	240	SC	
62.500	ml	MSO	0	L	
3.010	g	OSPREY	45	WG	
31.606	ml	UAN	0	L	
3.125	ml	NIS	0	L	
1.975	ml	BANVEL	480	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.

Wheat response:
1. No treatment visually injured wheat.

Wild radish response:
1. At 8, 13, and 20 DAT, control was poor with all treatments.
2. At 23 DAT, control was good with all treatments.
3. By 36 to 50 DAT, pyroxsulam and 2,4-D (94 to 99% control) were more effective than Harmony mixtures, Osprey or Grasp.

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				Mar-19-08	Mar-24-08	Mar-31-08	Apr-03-08	Apr-16-08	Mar-19-08	Mar-24-08
Assessed By				KF	KF	SC	KF	KF	KF	KF
Trt-Eval Interval				8 DA-A	13 DA-A	20 DA-A	23 DA-A	23 DA-A	8 DA-A	13 DA-A
1	PYROXSULAM	13.1	G A/HA	0 a	0 a	0 a	0 a	0 a	14 bc	71 a
	AGRI-DEX COC	1.25	% V/V							
2	PYROXSULAM	15.8	G A/HA	0 a	0 a	0 a	0 a	0 a	14 bc	69 ab
	AGRI-DEX COC	1.25	% V/V							
3	PYROXSULAM	18.5	G A/HA	0 a	0 a	0 a	0 a	0 a	20 ab	71 a
	AGRI-DEX COC	1.25	% V/V							
4	HARMONY EXTRA	28.9	G A/HA	0 a	0 a	0 a	0 a	0 a	19 ab	66 ab
	NONIONIC SURFACTANT	0.5	% V/V							
5	2,4-D	1120	G A/HA	0 a	0 a	0 a	0 a	0 a	6 d	69 ab
6	UNTREATED			0 a	0 a	0 a	0 a	0 a	0 e	0 d
7	GRASP SC	34.6	G A/HA	0 a	0 a	0 a	0 a	0 a	24 a	71 a
	MSO	2.5	% V/V							
8	GRASP SC	49.4	G A/HA	0 a	0 a	0 a	0 a	0 a	19 ab	69 ab
	MSO	2.5	% V/V							
9	OSPREY	15	G A/HA	0 a	0 a	0 a	0 a	0 a	10 cd	40 c
	UAN	3.5	L/HA							
	NIS	0.25	% V/V							
10	HARMONY EXTRA	23.6	G A/HA	0 a	0 a	0 a	0 a	0 a	10 cd	65 b
	BANVEL	105	G A/HA							
	NONIONIC SURFACTANT	0.5	% V/V							
LSD (P=.05)				0.0	0.0	0.0	0.0	0.0	6.1	5.4
Standard Deviation				0.0	0.0	0.0	0.0	0.0	4.2	3.7
CV				0.0	0.0	0.0	0.0	0.0	31.15	6.3
Bartlett's X2				0.0	0.0	0.0	0.0	0.0	4.377	5.65
P(Bartlett's X2)				.	.	.	.	.	0.822	0.686

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

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Trt No.	Treatment Name	Rate	Unit	8	9	10	11
Weed Code				RAPRA	RAPRA	RAPRA	RAPRA
Crop Code							
Rating Data Type				control	control	control	control
Rating Unit				%	%	%	%
Rating Date				Mar-31-08	Apr-03-08	Apr-16-08	Apr-30-08
Assessed By				SC	KF	SC	SC
Trt-Eval Interval				20 DA-A	23 DA-A	36 DA-A	50 DA-A
1	PYROXSULAM	13.1	G A/HA	69 bc	89 a	97 a	94 a
	AGRI-DEX COC	1.25	% V/V				
2	PYROXSULAM	15.8	G A/HA	69 bc	86 a	97 a	94 a
	AGRI-DEX COC	1.25	% V/V				
3	PYROXSULAM	18.5	G A/HA	71 abc	91 a	97 a	96 a
	AGRI-DEX COC	1.25	% V/V				
4	HARMONY EXTRA	28.9	G A/HA	66 c	88 a	88 b	74 b
	NONIONIC SURFACTANT	0.5	% V/V				
5	2,4-D	1120	G A/HA	76 a	89 a	97 a	99 a
6	UNTREATED			0 d	0 b	0 c	0 d
7	GRASP SC	34.6	G A/HA	75 ab	83 a	89 b	78 b
	MSO	2.5	% V/V				
8	GRASP SC	49.4	G A/HA	75 ab	90 a	87 b	74 b
	MSO	2.5	% V/V				
9	OSPREY	15	G A/HA	71 abc	85 a	89 b	82 b
	UAN	3.5	L/HA				
	NIS	0.25	% V/V				
10	HARMONY EXTRA	23.6	G A/HA	71 abc	86 a	89 b	63 c
	BANVEL	105	G A/HA				
	NONIONIC SURFACTANT	0.5	% V/V				
LSD (P=.05)				6.5	7.9	6.5	10.3
Standard Deviation				4.5	5.4	4.5	7.1
CV				6.98	6.91	5.44	9.42
Bartlett's X2				9.379	7.525	33.384	19.541
P(Bartlett's X2)				0.311	0.481	0.001*	0.012*

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-05-07 **Planting Method:** drilled
Rate: 20 ydsq **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:** Dec-10-07

SITE AND DESIGN

Plot Width, Unit: 6 FT **Plot Length, Unit:** 30 FT **Reps:** 4
Site Type: Ponder Research 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: fair
Closest Weather Station: _____ **Distance:** _____ **Unit:** __

APPLICATION DESCRIPTION

	A
Application Date:	Mar-11-08
Time of Day:	9:00am
Application Method:	broadcast
Application Timing:	POST
Applic. Placement:	overtop
Air Temp., Unit:	60 F
% Relative Humidity:	70
Wind Velocity, Unit:	0 mph
Dew Presence (Y/N):	y
Water Hardness:	
Soil Temp., Unit:	54 F
Soil Moisture:	moist
% Cloud Cover:	100

CROP STAGE AT EACH APPLICATION

	A
Crop 1 Code, Stage:	TRZAW A
Stage Scale:	5 tiller
Height, Unit:	6 in

WEED STAGE AT EACH APPLICATION

	A
Weed 1 Code, Stage:	RAPRA A
Stage Scale:	10-14"
Density, Unit:	3 yd sq

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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:	2
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