

University of Georgia

CLEARFIELD CANOLA RESPONSE TO SIMULATED HERBICIDE RESIDUES									
Trial ID: CAN-02-14		Study Dir.: JUSTIN BALLEW							
Location: PONDER FARM		Investigator: Eric P. Prostko							

Reps: 3 Plots: 6 by 25 feet
 Spray vol: 15 GAL/AC Mix Size: 1.5 liters (calculated mix size .58658)

Trt No.	Treatment Name	Form Conc	Form Type	Rate	Grow Unit	Appl Stg	Code	Amt Product to Measure	Rep 1	Rep 2	Rep 3
1	NTC								101	204	308
2	REFLEX	2 SL		8.0 oz/a	PRE	A		6.249 ml/mx	102	206	307
3	REFLEX	2 SL		4.0 oz/a	PRE	A		3.125 ml/mx	103	208	310
4	REFLEX	2 SL		2.0 oz/a	PRE	A		1.562 ml/mx	104	210	303
5	CADRE	2 AS		2.0 oz/a	PRE	A		1.562 ml/mx	105	203	304
6	STRONGARM	84 WG		0.225 oz/a	PRE	A		0.1685 g/mx	106	205	309
7	POWERFLEX HL	13.1 WG		1.0 oz/a	PRE	A		0.7489 g/mx	107	201	302
8	STAPLE LX	3.2 SL		1.5 oz/a	PRE	A		1.172 ml/mx	108	209	305
9	STEADFAST Q	37.7 DG		0.75 oz/a	PRE	A		0.5617 g/mx	109	207	306
10	CLASSIC	25 DG		0.25 oz/a	PRE	A		0.1872 g/mx	110	202	301

Sort Order: Treatment

Trial Comments

DUAL MAGNUM 7.62EC @ 3.5 OZ/A WITH ALL TRTS INCLUDING NTC (2.734 MLS/1500 MLS)

STEADFAST Q = NICOSULFURON (25.2%)+ RIMSULFURON (12.5%) + ISOXADIFEN (SAFENER)

125,501 SEEDS/LB

9.6 SEED/FT = 139,392 SEED/A OR 1.1 LBS/A

PROSPER EVERGOL SEED TRT

22.3% CLOTHIANIDIN

0.82% PENFLUFEN

0.55% TRIFLOXYSTROBIN

0.55% METALAXYL

400 LB/A 10-10-10 - PREPLANT

40 LB/A NITROGEN - DECEMBER 1

YIELDS ADJUSTED TO 10% MOISTURE.

SUMMARY:

1) CANOLA PLANT STAND WAS SIGNIFICANTLY REDUCED BY REFLEX @ 4 AND 8 OZ/A. NO OTHER TREATMENT REDUCED CANOLA STAND.

2) ALL TREATMENTS CAUSED SIGNIFICANT CANOLA STUNTING. REFLEX AT 4 AND 8 OZ/A WAS PARTICULARLY INJURIOUS.

3) GENERALLY, 1/2X RATES OF STRONGARM AND CLASSIC WERE MORE INJURIOUS THAN OTHER ALS-INHIBITING HERBICIDES.

4) CANOLA YIELDS WERE SIGNIFICANTLY REDUCED BY REFLEX AT 4 AND 8 OZ/A. NO OTHER TREATMENT REDUCED CANOLA YIELDS.

5) CANOLA YIELDS WERE LOWER THAN DESIRED DUE TO A MISSED SPRING APPLICATION OF NITROGEN, WHITE MOLD (NO FUNGICIDE WAS APPLIED), AND SEED SHATTERING.

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CLEARFIELD CANOLA RESPONSE TO SIMULATED HERBICIDE RESIDUES Trial ID: CAN-02-14 Study Dir.: JUSTIN BALLEW Location: PONDER FARM Investigator: Eric P. Prostko					
GENERAL TRIAL INFORMATION					
Study Director: JUSTIN BALLEW		Title: _____		Postal Code: _____	
Affiliation: _____					
Investigator: Eric P. Prostko		Title: _____		Postal Code: _____	
Affiliation: _____					
Trial Status: _____		Initiation Date: _____		Country: _____	
City: _____		State/Prov.: _____		Postal Code: _____	
Conducted Under GLP (Y/N): N		Conducted Under GEP (Y/N): N			
Objective: _____					
Conclusions: _____					
CROP AND PEST DESCRIPTION					
Weed 1. _____ 2. _____					
Crop 1: BRNS		Variety: RUBISCO 5525CL		Planting Date: Oct-17-14	
Planting Method: MONOSEM		Rate: 9.6		SEED/FT Depth: 0.5 IN	
Perennial Age: _____		Row Spacing: 36 IN		Seed Bed: CLODDY	
Soil Temperature: _____		Soil Moisture: SLIGHTLY WET		Emergence Date: _____	
Plot Width, Unit: 6 FT		Plot Length, Unit: 25 FT		Reps: 3	
Site Type: _____					
Tillage Type: CONVENTIONAL			Study Design: RACOB		
Trial Initiation Comments: PROSPER EVERGOL SEED TREATMENT					
Previous: Crops Pesticides Year					
1. FALLOW 2013-2014 _____					
MAINTENANCE					
Field Prep./Maintenance: _____					
No.	Date	Treatment Name	Form	Form	Form
			Conc	Unit	Rate
1.	_____	_____	_____	_____	_____
SOIL DESCRIPTION					
Texture: LOAMY SAND		% OM: 1.06		% Sand: 84	
pH: 6.9		CEC: _____		% Silt: 8	
Soil Name: ORANGEBURG		Fertility Level: GOOD		% Clay: 8	
MOISTURE CONDITIONS					
On: Date	Time	Amount	Unit	Type	Interval Unit
1. Oct-17-14	_____	0.4	IN	SPRINKLER - CENTER PIVOT	_____
2. Oct-20-14	_____	0.4	IN	SPRINKLER - CENTER PIVOT	_____
3. Oct-23-14	_____	0.4	IN	SPRINKLER - CENTER PIVOT	_____
Overall Moisture Conditions: _____					
Closest Weather Station: _____ Distance: _____ Unit: _____					
APPLICATION DESCRIPTION					
		A	B	C	D
Application Date: Oct-17-14		_____	_____	_____	_____
Time of Day: 10:30 AM		_____	_____	_____	_____
Application Method: BROADCAST		_____	_____	_____	_____
Application Timing: PRE		_____	_____	_____	_____
Applic. Placement: SOIL		_____	_____	_____	_____
Air Temp., Unit: 77 F		_____	_____	_____	_____
% Relative Humidity: 47		_____	_____	_____	_____
Wind Velocity, Unit: 0 MPH		_____	_____	_____	_____
Dew Presence (Y/N): N		_____	_____	_____	_____
Water Hardness: --		_____	_____	_____	_____
Soil Temp., Unit: 63 F		_____	_____	_____	_____
Soil Moisture: WET-OPT		_____	_____	_____	_____
% Cloud Cover: 0		_____	_____	_____	_____
CROP STAGE AT EACH APPLICATION					
		A	B	C	D
Crop 1 Stage: BRNS		_____	_____	_____	_____
Stage Scale: _____		_____	_____	_____	_____
Height, Unit: _____		_____	_____	_____	_____

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		WEED STAGE AT EACH APPLICATION					
		A	B	C	D	E	F
Weed 1	Stage: _____	_____	_____	_____	_____	_____	_____
	Stage Scale: _____	_____	_____	_____	_____	_____	_____
	Density, Unit: _____	_____	_____	_____	_____	_____	_____

		APPLICATION EQUIPMENT					
		A	B	C	D	E	F
Appl. Equipment:	BACKPACK	_____	_____	_____	_____	_____	_____
Operating Pressure:	40	_____	_____	_____	_____	_____	_____
Nozzle Type:	AIXR	_____	_____	_____	_____	_____	_____
Nozzle Size:	11002	_____	_____	_____	_____	_____	_____
Nozzle Spacing, Unit:	20	IN	_____	_____	_____	_____	_____
Nozzles/Row:	_____	_____	_____	_____	_____	_____	_____
Band Width, Unit:	_____	_____	_____	_____	_____	_____	_____
Boom Length, Unit:	60	IN	_____	_____	_____	_____	_____
Boom Height, Unit:	20	IN	_____	_____	_____	_____	_____
Ground Speed, Unit:	3.5	MPH	_____	_____	_____	_____	_____
Incorporation Equip.:	_____	_____	_____	_____	_____	_____	_____
Hours to Incorp.:	_____	_____	_____	_____	_____	_____	_____
Incorp. Depth, Unit:	_____	_____	_____	_____	_____	_____	_____
Carrier:	WATER	_____	_____	_____	_____	_____	_____
Spray Volume, Unit:	15	GPA	_____	_____	_____	_____	_____
Spray pH:	_____	_____	_____	_____	_____	_____	_____
Propellant:	CO2	_____	_____	_____	_____	_____	_____
Tank Mix (Y/N):	_____	_____	_____	_____	_____	_____	_____

Trt No	Treatment Application Comment
_____	_____

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CLEARFIELD CANOLA RESPONSE TO SIMULATED HERBICIDE RESIDUES																	
Trial ID: CAN-02-14				Study Dir.: JUSTIN BALLEW													
Location: PONDER FARM				Investigator: Eric P. Prostko													
Weed Code				----- BRSNS PLANT - STUNTING PERCENT Oct-27-14 10 DA-A		----- BRSNS PLANT - STAND #/3 FT Oct-27-14 10 DA-A		----- BRSNS PLANT - STUNTING PERCENT Nov-7-14 21 DA-A		----- BRSNS STAND - LOSS PERCENT Nov-7-14 21 DA-A		----- BRSNS PLANT - STUNTING PERCENT Nov-21-14 35 DA-A		----- BRSNS STAND - LOSS PERCENT Nov-21-14 35 DA-A		----- BRSNS PLANT - STUNTING PERCENT Dec-5-14 49 DA-A	
Crop Code																	
Part Rated																	
Rating Data Type																	
Rating Unit																	
Rating Date																	
Trt-Eval Interval																	
PRM Data Type																	
# Subsamples, Dec.																	
Trt		Treatment		Form Form		Rate Grow		Appl									
No.		Name		Conc Type		Unit Stg		Code		1		2		3		4	
5		NTC								0.0 d		29.0 a		0.0 e		0.0 d	
6		REFLEX		2 SL		8.0 oz/a		PRE A		100.0 a		0.0 b		66.7 a		95.0 a	
7		REFLEX		2 SL		4.0 oz/a		PRE A		75.0 b		4.0 b		50.0 ab		60.0 b	
8		REFLEX		2 SL		2.0 oz/a		PRE A		6.7 c		22.0 a		23.3 cd		5.0 cd	
9		CADRE		2 AS		2.0 oz/a		PRE A		10.0 c		27.3 a		21.7 d		5.0 cd	
10		STRONGARM		84 WG		0.225 oz/a		PRE A		10.0 c		24.3 a		66.7 a		6.7 c	
11		POWERFLEX HL		13.1 WG		1.0 oz/a		PRE A		6.7 c		26.0 a		35.0 bcd		5.0 cd	
12		STAPLE LX		3.2 SL		1.5 oz/a		PRE A		10.0 c		29.3 a		31.7 cd		3.3 cd	
13		STEADFAST Q		37.7 DG		0.75 oz/a		PRE A		10.0 c		24.0 a		40.0 bc		5.0 cd	
14		CLASSIC		25 DG		0.25 oz/a		PRE A		10.0 c		28.3 a		58.3 a		5.0 cd	
LSD P=.10				5.84		6.52		16.31		5.76		18.29		6.12		12.87	
Standard Deviation				4.13		4.60		11.52		4.07		12.92		4.32		9.09	
CV				17.32		21.48		29.29		21.43		37.63		27.03		44.0	
Grand Mean				23.83		21.43		39.33		19.00		34.33		16.00		20.67	
Bartlett's X2				0.831		6.13		7.861		4.165		12.412		9.264		5.834	
P(Bartlett's X2)				0.66		0.633		0.447		0.384		0.134		0.055		0.559	
Replicate F				0.783		1.399		0.232		1.056		1.383		2.139		0.373	
Replicate Prob(F)				0.4722		0.2725		0.7950		0.3685		0.2763		0.1468		0.6939	
Treatment F				206.092		15.756		10.456		184.939		12.626		169.624		24.439	
Treatment Prob(F)				0.0001		0.0001		0.0001		0.0001		0.0001		0.0001		0.0001	

Means followed by same letter do not significantly differ (P=.10, Duncan's New MRT)

Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.

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Weed Code						
Crop Code						
Part Rated						
Rating Data Type						
Rating Unit						
Rating Date						
Trt-Eval Interval						
PRM Data Type						
# Subsamples, Dec.						
Trt Treatment	Form Form	Rate Grow Appl				
No. Name	Conc Type Rate Unit Stg Code					
1 NTC						
2 REFLEX	2 SL	8.0 oz/a PRE A				
3 REFLEX	2 SL	4.0 oz/a PRE A				
4 REFLEX	2 SL	2.0 oz/a PRE A				
5 CADRE	2 AS	2.0 oz/a PRE A				
6 STRONGARM	84 WG	0.225 oz/a PRE A				
7 POWERFLEX HL	13.1 WG	1.0 oz/a PRE A				
8 STAPLE LX	3.2 SL	1.5 oz/a PRE A				
9 STEADFAST Q	37.7 DG	0.75 oz/a PRE A				
10 CLASSIC	25 DG	0.25 oz/a PRE A				
LSD P=, 10						
Standard Deviation						
CV						
Grand Mean						
Bartlett's X2						
P(Bartlett's X2)						
Replicate F						
Replicate Prob(F)						
Treatment F						
Treatment Prob(F)						

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CLEARFIELD CANOLA RESPONSE TO SIMULATED HERBICIDE RESIDUES	
Trial ID: CAN-02-14	Study Dir.: JUSTIN BALLEW
Location: PONDER FARM	Investigator: Eric P. Prostko
<u>Crop Code</u> BRSNS = CANOLA, SPRING / BRASSICA NAPUS L. SSP. NAPUS	
<u>Part Rated</u> PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)	
<u>PRM Data Type</u> TY1 = 5.808*[11]*(100-[12])/90	

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CLEARFIELD CANOLA RESPONSE TO SIMULATED HERBICIDE RESIDUES										
Trial ID: CAN-02-14		Study Dir.: JUSTIN BALLEW								
Location: PONDER FARM		Investigator: Eric P. Prostko								
Weed Code	Crop Code	Part Rated	Rating Data Type	Rating Unit	Rating Date	Trt-Eval Interval	PRM Data Type	# Subsamples, Dec.	----- BRSNS PLANT - STUNTING PERCENT Oct-27-14 10 DA-A	----- BRSNS PLANT - STAND #/3 FT Oct-27-14 10 DA-A
									----- BRSNS PLANT - STUNTING PERCENT Nov-7-14 21 DA-A	----- BRSNS STAND - LOSS PERCENT Nov-7-14 21 DA-A
									----- BRSNS PLANT - STUNTING PERCENT Nov-21-14 35 DA-A	----- BRSNS STAND - LOSS PERCENT Nov-21-14 35 DA-A
Trt	Treatment	Form	Form	Rate	Grow	Appl				
No.	Name	Conc	Type	Rate	Unit	Stg	Code	Plot	1	2
1	NTC						101		0.0	27.0
							204		0.0	31.0
							308		0.0	29.0
							Mean =		0.0	29.0
2	REFLEX	2 SL		8.0 oz/a	PRE	A	102		100.0	0.0
							206		100.0	0.0
							307		100.0	0.0
							Mean =		100.0	0.0
3	REFLEX	2 SL		4.0 oz/a	PRE	A	103		65.0	10.0
							208		85.0	0.0
							310		75.0	2.0
							Mean =		75.0	4.0
4	REFLEX	2 SL		2.0 oz/a	PRE	A	104		0.0	31.0
							210		10.0	18.0
							303		10.0	17.0
							Mean =		6.7	22.0
5	CADRE	2 AS		2.0 oz/a	PRE	A	105		10.0	27.0
							203		10.0	21.0
							304		10.0	34.0
							Mean =		10.0	27.3
6	STRONGARM	84 WG		0.225 oz/a	PRE	A	106		10.0	21.0
							205		10.0	26.0
							309		10.0	26.0
							Mean =		10.0	24.3
7	POWERFLEX HL	13.1 WG		1.0 oz/a	PRE	A	107		10.0	28.0
							201		0.0	26.0
							302		10.0	24.0
							Mean =		6.7	26.0
8	STAPLE LX	3.2 SL		1.5 oz/a	PRE	A	108		10.0	36.0
							209		10.0	29.0
							305		10.0	23.0
							Mean =		10.0	29.3
9	STEADFAST Q	37.7 DG		0.75 oz/a	PRE	A	109		10.0	24.0
							207		10.0	20.0
							306		10.0	28.0
							Mean =		10.0	24.0
10	CLASSIC	25 DG		0.25 oz/a	PRE	A	110		10.0	30.0
							202		10.0	31.0
							301		10.0	24.0
							Mean =		10.0	28.3

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Weed Code							----- BRSNS PLANT -	----- BRSNS STAND -	----- BRSNS PLANT -	----- BRSNS STAND -	----- BRSNS PLOT -	----- BRSNS PLOT -
Crop Code							STUNTING	LOSS	STUNTING	LOSS	YIELD	MOSITURE
Part Rated							PERCENT	PERCENT	PERCENT	PERCENT	POUNDS	PERCENT
Rating Data Type							Dec-5-14	Dec-5-14	Mar-5-15	Mar-5-15	Jun-2-15	Jun-2-15
Rating Unit							49 DA-A	49 DA-A	139 DA-A	139 DA-A	229 DA-A	228 DA-A
Rating Date												
Trt-Eval Interval												
PRM Data Type												
# Subsamples, Dec.											- 2	- 2
Trt Treatment	Form Form	Rate Grow	Appl									
No. Name	Conc Type	Rate Unit	Stg	Code	Plot	7	8	9	10	11	12	
1 NTC					101	0.0	0.0	0.0	0.0	3.61	21.12	
					204	0.0	0.0	0.0	0.0	4.05	15.34	
					308	0.0	0.0	0.0	0.0	5.19	18.58	
					Mean =	0.0	0.0	0.0	0.0	4.28	18.35	
2 REFLEX	2 SL	8.0 oz/a	PRE	A	102	75.0	95.0	15.0	90.0	0.59	18.52	
					206	50.0	95.0	5.0	95.0	0.00	0.00	
					307	75.0	95.0	20.0	70.0	1.15	19.91	
					Mean =	66.7	95.0	13.3	85.0	0.58	12.81	
3 REFLEX	2 SL	4.0 oz/a	PRE	A	103	50.0	20.0	15.0	5.0	3.37	15.48	
					208	60.0	60.0	20.0	50.0	2.19	17.98	
					310	60.0	50.0	20.0	30.0	2.46	17.64	
					Mean =	56.7	43.3	18.3	28.3	2.67	17.03	
4 REFLEX	2 SL	2.0 oz/a	PRE	A	104	0.0	0.0	0.0	0.0	3.70	17.10	
					210	5.0	0.0	10.0	0.0	3.51	19.04	
					303	15.0	0.0	10.0	0.0	3.47	19.93	
					Mean =	6.7	0.0	6.7	0.0	3.56	18.69	
5 CADRE	2 AS	2.0 oz/a	PRE	A	105	0.0	0.0	0.0	0.0	3.89	19.09	
					203	15.0	0.0	15.0	0.0	4.06	18.77	
					304	0.0	0.0	0.0	0.0	4.20	18.41	
					Mean =	5.0	0.0	5.0	0.0	4.05	18.76	
6 STRONGARM	84 WG	0.225 oz/a	PRE	A	106	60.0	0.0	10.0	0.0	3.83	19.37	
					205	55.0	0.0	25.0	0.0	3.65	18.67	
					309	30.0	0.0	10.0	0.0	3.44	18.23	
					Mean =	48.3	0.0	15.0	0.0	3.64	18.76	
7 POWERFLEX HL	13.1 WG	1.0 oz/a	PRE	A	107	0.0	0.0	5.0	0.0	3.63	17.66	
					201	0.0	0.0	0.0	0.0	3.89	18.59	
					302	0.0	0.0	10.0	0.0	3.26	19.04	
					Mean =	0.0	0.0	5.0	0.0	3.59	18.43	
8 STAPLE LX	3.2 SL	1.5 oz/a	PRE	A	108	5.0	0.0	0.0	0.0	3.41	17.67	
					209	0.0	0.0	0.0	0.0	3.87	17.14	
					305	0.0	0.0	10.0	0.0	3.73	17.35	
					Mean =	1.7	0.0	3.3	0.0	3.67	17.39	
9 STEADFAST Q	37.7 DG	0.75 oz/a	PRE	A	109	5.0	0.0	0.0	0.0	3.06	17.69	
					207	15.0	0.0	5.0	0.0	4.71	15.09	
					306	0.0	0.0	0.0	0.0	4.28	17.81	
					Mean =	6.7	0.0	1.7	0.0	4.02	16.86	
10 CLASSIC	25 DG	0.25 oz/a	PRE	A	110	10.0	0.0	0.0	0.0	3.85	16.12	
					202	25.0	0.0	15.0	0.0	3.68	16.09	
					301	10.0	0.0	0.0	0.0	3.93	15.71	
					Mean =	15.0	0.0	5.0	0.0	3.82	15.97	

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Weed Code							-----
Crop Code							BRSNS
Part Rated							PLOT -
Rating Data Type							YIELD
Rating Unit							BU/A
Rating Date							Jun-2-15
Trt-Eval Interval							229 DA-A
PRM Data Type							TY1
# Subsamples, Dec.							- 0
Trt Treatment	Form Form	Rate	Grow	Appl			
No. Name	Conc Type	Rate	Unit	Stg	Code	Plot	13
1 NTC					101	18	
					204	22	
					308	27	
					Mean =	23	
2 REFLEX	2 SL	8.0 oz/a	PRE	A	102	3	
					206	0	
					307	6	
					Mean =	3	
3 REFLEX	2 SL	4.0 oz/a	PRE	A	103	18	
					208	12	
					310	13	
					Mean =	14	
4 REFLEX	2 SL	2.0 oz/a	PRE	A	104	20	
					210	18	
					303	18	
					Mean =	19	
5 CADRE	2 AS	2.0 oz/a	PRE	A	105	20	
					203	21	
					304	22	
					Mean =	21	
6 STRONGARM	84 WG	0.225 oz/a	PRE	A	106	20	
					205	19	
					309	18	
					Mean =	19	
7 POWERFLEX HL	13.1 WG	1.0 oz/a	PRE	A	107	19	
					201	20	
					302	17	
					Mean =	19	
8 STAPLE LX	3.2 SL	1.5 oz/a	PRE	A	108	18	
					209	21	
					305	20	
					Mean =	20	
9 STEADFAST Q	37.7 DG	0.75 oz/a	PRE	A	109	16	
					207	26	
					306	23	
					Mean =	22	
10 CLASSIC	25 DG	0.25 oz/a	PRE	A	110	21	
					202	20	
					301	21	
					Mean =	21	

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CLEARFIELD CANOLA RESPONSE TO SIMULATED
HERBICIDE RESIDUES

Trial ID: CAN-02-14 Study Dir.: JUSTIN BALLEW
Location: PONDER FARM Investigator: Eric P. Prostko

Crop Code

BRSNS = CANOLA, SPRING / BRASSICA NAPUS L. SSP. NAPUS

Part Rated

PLANT = PLANT / PLANT BIOMASS (includes Shrub, Tree, Turf)

PRM Data Type

TY1 = $5.808 \times [11] \times (100 - [12]) / 90$