

LSU Northeast Research Station

EVANGELINE AND BEAUREGARD TOLERANCE TO SWEET POTATO HERBICIDES

Trial ID: Study Dir.:
 Location: Investigator: Donnie Miller

CROP AND WEED DESCRIPTION

Crop 1: IPOBA POTATO, SWEET Variety: EVANGELINE & BEAUGREGARD
 Planting Date: 28/Jun/2007

SITE AND DESIGN

Plot Width, Unit: 3.5 FT Plot Length, Unit: 25 FT Reps: 4
 Study Design: RANDOMIZED COMPLETE BLOCK

APPLICATION DESCRIPTION

	A	B	C
Application Date:	28/Jun/2007	28/Jun/2007	1/Aug/2007
Time of Day:	11:30 AM	3:35 PM	11:00 AM
Application Method:	SPRAY	SPRAY	SPRAY
Application Timing:	PREPRE	POSPRE	POSPOS
Applic. Placement:	BROSIO	BROSIO	BROFOL
Air Temp., Unit:	86 F	90 F	90 F
% Relative Humidity:	81	70	75
Wind Velocity, Unit:	5.7 MPH	5.1 MPH	2.2 MPH
Dew Presence (Y/N):	N	N	N
Water Hardness:	N	N	N
Soil Temp., Unit:	80 F	82 F	80 F
Soil Moisture:	MOIST	MOIST	MOIST
% Cloud Cover:	45	45	0

APPLICATION EQUIPMENT

	A	B	C
Appl. Equipment:	CO2 BCPCCK	CO2 BCPCCK	CO2 BCPCCK
Operating Pressure:	32 psi	32 psi	32 psi
Nozzle Type:	DG	DG	DG
Nozzle Size:	11002	11002	11002
Nozzle Spacing, Unit:	20 IN	20 IN	20 IN
Nozzles/Row:	2	2	2
Band Width, Unit:			
Boom Length, Unit:			
Boom Height, Unit:			
Ground Speed, Unit:	3.2 MPH	3.2 MPH	3.2 MPH
Incorporation Equip.:			
Hours to Incorp.:			
Incorp. Depth, Unit:			
Carrier:	WATER	WATER	WATER
Spray Volume, Unit:	15 GPA	15 GPA	15 GPA
Spray pH:			
Propellant:			
Tank Mix (Y/N):			

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Trial ID:		Study Dir.:									
Location:		Investigator: Donnie Miller									
Weed Code		MOLVE	PHYAN	AMASP	CYPIR	CYPRO					
Crop Code	IPOBA	IPOBA	IPOBA	IPOBA	IPOBA	IPOBA	IPOBA	IPOBA	IPOBA		
Rating Data Type	INJURY	INJURY	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	INJURY	INJURY		
Rating Unit	%	%	%	%	%	%	%	%	%		
Rating Date	11/Jul/2007	11/Jul/2007	1/Aug/2007	1/Aug/2007	1/Aug/2007	1/Aug/2007	1/Aug/2007	15/Aug/2007	15/Aug/2007		
Crop Stage	EVANG.	BEAURG.						EVANG	BEAURG		
Crop Stage Scale											
Trt-Eval Interval	13 DAT	13 DAT	34 DAA&B	34 DAA&B	34 DAA&B	34 DAA&B	34 DAA&B	14 DA-C	14 DA-C		
ARM Action Codes											
# Subsamples, Dec.											
Trt Treatment	Rate	Appl									
No. Name	Rate Unit	Code	1	2	3	4	5	6	7	8	9
1 COMMAND	1.3 pt/a	B	0.00 a	0.00 a	36.25 ef	78.75 ab	70.00 cde	40.00 e	40.00 f		
2 COMMAND	2.0 pt/a	B	0.00 a	0.00 a	53.75 de	62.50 bc	75.00 b-e	42.50 de	42.50 ef		
3 COMMAND	2.5 pt/a	B	0.00 a	0.00 a	41.25 def	55.00 bc	63.75 e	51.25 cde	42.50 ef		
4 COMMAND	3.0 pt/a	B	0.00 a	0.00 a	28.75 f	45.00 c	68.75 de	46.25 de	46.25 def		
5 VALOR	2.0 oz/a	A	0.00 a	0.00 a	81.25 ab	95.00 a	91.25 a-d	53.75 cde	50.00 c-f		
6 VALOR	2.5 oz/a	A	0.00 a	0.00 a	86.25 ab	100.00 a	97.50 ab	76.25 abc	72.50 bc		
7 DUAL MAGNUM	1.0 pt/a	B	0.00 a	0.00 a	60.00 cd	96.25 a	88.75 a-d	85.00 ab	82.50 ab		
8 VALOR	2 oz/a	A	0.00 a	0.00 a	77.50 bc	100.00 a	95.00 ab	67.50 bcd	63.75 b-e		
COMMAND	2 pt/a	B									
9 VALOR	2 oz/a	A	0.00 a	0.00 a	78.75 bc	97.50 a	93.75 abc	53.75 cde	47.50 def		
COMMAND	2.5 pt/a	B									
10 VALOR	2 oz/a	A	0.00 a	0.00 a	90.00 ab	100.00 a	95.00 ab	67.50 bcd	66.25 bcd		
DUAL MAGNUM	1 pt/a	B									
11 VALOR	2 oz/a	A	0.00 a	0.00 a	78.75 bc	98.75 a	97.50 ab	61.25 b-e	56.25 c-f	0.00 a	0.00 a
COMMAND	2 pt/a	B									
PERMIT	0.6 oz/a	C									
NIS	0.25 % v/v	C									
12 WEED FREE			0.00 a	0.00 a	100.00 a	100.00 a	100.00 a	100.00 a	100.00 a	0.00 a	0.00 a
LSD (P=.05)			0.000	0.000	19.715	31.369	24.836	25.104	22.859	0.000	0.000
Standard Deviation			0.000	0.000	13.654	21.725	17.200	17.386	15.831	0.000	0.000
CV			0.0	0.0	20.17	25.34	19.92	28.0	26.76	0.0	0.0
Grand Mean			0.0	0.0	67.71	85.73	86.35	62.08	59.17	0.0	0.0
Bartlett's X2			0.0	0.0	14.082	31.747	20.212	9.226	5.853	0.0	0.0
P(Bartlett's X2)			.	.	0.169	0.001*	0.027*	0.511	0.827	.	.
Replicate F			0.000	0.000	3.617	2.564	1.161	2.991	4.627	0.000	0.000
Replicate Prob(F)			1.0000	1.0000	0.0231	0.0714	0.3392	0.0449	0.0083	1.0000	1.0000
Treatment F			0.000	0.000	11.446	3.475	2.318	4.332	5.483	0.000	0.000
Treatment Prob(F)			1.0000	1.0000	0.0001	0.0027	0.0307	0.0005	0.0001	1.0000	1.0000

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											
Crop Code	IPOBA	IPOBA	IPOBA	IPOBA	IPOBA	IPOBA	IPOBA	IPOBA	IPOBA	IPOBA	
Rating Data Type	INJURY	INJURY	YIELD	YIELD	YIELD	YIELD	YIELD	YIELD	YIELD	YIELD	
Rating Unit	%	%	LB	BU/A	LB	BU/A	LB	BU/A	LB	BU/A	
Rating Date	30/Aug/2007	30/Aug/2007	18/Oct/2007	18/Oct/2007	18/Oct/2007	18/Oct/2007	18/Oct/2007	18/Oct/2007	18/Oct/2007	18/Oct/2007	
Crop Stage	EVANG	BEAURG	EVGN	EVGN	EVGN	EVGN	EVGN	EVGN	EVGN	EVGN	
Crop Stage Scale			ONES	ONES	CANNER	CANNER	JUMBO	JUMBO	TOTAL		
Trt-Eval Interval	28 DA-C	28 DA-C									
ARM Action Codes					TY3				TY4		
# Subsamples, Dec.					1				1		
Trt Treatment	Rate	Appl									
No. Name	Rate Unit	Code	10	11	12	13	14	15	16	17	18
1 COMMAND	1.3 pt/a	B			10.48 d	104.3 d	20.50 a	204.1 a	0.00 a	0.0 a	30.98 cd
2 COMMAND	2.0 pt/a	B			8.85 d	88.1 d	19.65 a	195.6 a	0.00 a	0.0 a	28.50 cd
3 COMMAND	2.5 pt/a	B			10.10 d	100.6 d	12.10 a	120.5 a	1.18 a	11.7 a	23.38 d
4 COMMAND	3.0 pt/a	B			10.78 d	107.3 d	16.78 a	167.0 a	1.18 a	11.7 a	28.73 cd
5 VALOR	2.0 oz/a	A			17.60 cd	175.2 cd	26.03 a	259.1 a	0.63 a	6.2 a	44.25 bc
6 VALOR	2.5 oz/a	A			32.25 ab	321.1 ab	21.93 a	218.3 a	2.05 a	20.4 a	56.23 ab
7 DUAL MAGNUM	1.0 pt/a	B			30.35 abc	302.2 abc	28.60 a	284.8 a	2.80 a	27.9 a	61.75 ab
8 VALOR	2 oz/a	A			29.96 abc	298.3 abc	23.60 a	235.0 a	0.50 a	5.0 a	53.36 ab
COMMAND	2 pt/a	B									
9 VALOR	2 oz/a	A			21.85 bcd	217.6 bcd	19.73 a	196.4 a	2.55 a	25.4 a	44.13 bc
COMMAND	2.5 pt/a	B									
10 VALOR	2 oz/a	A			20.35 bcd	202.6 bcd	25.18 a	250.7 a	2.10 a	20.9 a	47.63 abc
DUAL MAGNUM	1 pt/a	B									
11 VALOR	2 oz/a	A	0.00 a	0.00 a	27.05 abc	269.3 abc	25.48 a	253.6 a	0.00 a	0.0 a	52.53 ab
COMMAND	2 pt/a	B									
PERMIT	0.6 oz/a	C									
NIS	0.25 % v/v	C									
12 WEED FREE			0.00 a	0.00 a	37.98 a	378.1 a	24.98 a	248.7 a	2.80 a	27.9 a	65.75 a
LSD (P=.05)			0.000	0.000	13.497	134.39	9.304	92.63	3.086	30.72	20.628
Standard Deviation			0.000	0.000	9.348	93.07	6.444	64.15	2.137	21.28	14.286
CV			0.0	0.0	43.55	43.55	29.23	29.23	162.57	162.57	31.91
Grand Mean			0.0	0.0	21.47	213.72	22.04	219.48	1.31	13.09	44.77
Bartlett's X2			0.0	0.0	11.981	11.981	11.374	11.374	8.572	8.572	6.454
P(Bartlett's X2)			.	.	0.365	0.365	0.412	0.412	0.38	0.38	0.841
Replicate F			0.000	0.000	1.002	1.002	1.508	1.509	0.114	0.114	1.615
Replicate Prob(F)			1.0000	1.0000	0.4046	0.4046	0.2305	0.2305	0.9514	0.9514	0.2053
Treatment F			0.000	0.000	4.623	4.623	2.028	2.028	1.072	1.072	3.871
Treatment Prob(F)			1.0000	1.0000	0.0003	0.0003	0.0576	0.0576	0.4121	0.4121	0.0013

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.
 Column 13: TY3 = 9.956572*[12]
 Column 15: TY4 = 9.956572*[14]
 Column 17: TY5 = 9.956572*[16]
 Column 18: T1 = ([C12]+[C14]+[C16])

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Weed Code			IPOBA	IPOBA	IPOBA	IPOBA	IPOBA	IPOBA	IPOBA	IPOBA	IPOBA
Crop Code			YIELD	YIELD	YIELD	YIELD	YIELD	YIELD	YIELD	YIELD	YIELD
Rating Data Type			YIELD	YIELD	YIELD	YIELD	YIELD	YIELD	YIELD	YIELD	YIELD
Rating Unit			BU/A	LB	BU/A	LB	BU/A	LB	BU/A	LB	BU/A
Rating Date			18/Oct/2007	18/Oct/2007	18/Oct/2007	18/Oct/2007	18/Oct/2007	18/Oct/2007	18/Oct/2007	18/Oct/2007	18/Oct/2007
Crop Stage			EVGN	BX	BX	BX	BX	BX	BX	BX	BX
Crop Stage Scale			TOTAL	ONES	ONES	CANNER	CANNER	JUMBO	JUMBO	TOTAL	TOTAL
Trt-Eval Interval											
ARM Action Codes			TY6		TY7		TY8		TY9	T2	TY10
# Subsamples, Dec.			1		1		1		1		1
Trt Treatment	Rate	Appl									
No. Name	Rate Unit	Code	19	20	21	22	23	24	25	26	27
1 COMMAND	1.3 pt/a	B	308.4 cd	12.05 b	120.0 b	23.83 b-e	237.2 b-e	0.00 a	0.0 a	35.88 bc	357.2 bc
2 COMMAND	2.0 pt/a	B	283.8 cd	13.63 b	135.7 b	22.13 b-e	220.3 b-e	0.63 a	6.2 a	36.38 bc	362.2 bc
3 COMMAND	2.5 pt/a	B	232.7 d	13.25 b	131.9 b	16.88 e	168.0 e	0.55 a	5.5 a	30.68 c	305.4 c
4 COMMAND	3.0 pt/a	B	286.0 cd	13.18 b	131.2 b	21.18 cde	210.8 cde	0.50 a	5.0 a	34.85 bc	347.0 bc
5 VALOR	2.0 oz/a	A	440.6 bc	31.50 a	313.6 a	26.68 a-d	265.6 a-d	2.00 a	19.9 a	60.18 a	599.1 a
6 VALOR	2.5 oz/a	A	559.8 ab	32.50 a	323.6 a	30.88 ab	307.4 ab	4.38 a	43.6 a	67.75 a	674.6 a
7 DUAL MAGNUM	1.0 pt/a	B	614.8 ab	28.25 a	281.3 a	33.25 a	331.1 a	6.00 a	59.7 a	67.50 a	672.1 a
8 VALOR	2 oz/a	A	531.3 ab	29.63 a	295.0 a	28.63 a-d	285.0 a-d	3.25 a	32.4 a	61.50 a	612.3 a
COMMAND	2 pt/a	B									
9 VALOR	2 oz/a	A	439.3 bc	22.63 ab	225.3 ab	25.00 a-e	248.9 a-e	4.50 a	44.8 a	52.13 ab	519.0 ab
COMMAND	2.5 pt/a	B									
10 VALOR	2 oz/a	A	474.2 abc	26.63 a	265.1 a	29.75 abc	296.2 abc	5.38 a	53.5 a	61.75 a	614.8 a
DUAL MAGNUM	1 pt/a	B									
11 VALOR	2 oz/a	A	523.0 ab	32.88 a	327.3 a	27.38 a-d	272.6 a-d	3.50 a	34.8 a	63.75 a	634.7 a
COMMAND	2 pt/a	B									
PERMIT	0.6 oz/a	C									
NIS	0.25 % v/v	C									
12 WEED FREE			654.6 a	29.25 a	291.2 a	19.38 de	192.9 de	4.25 a	42.3 a	52.88 ab	526.5 ab
LSD (P=.05)			205.38	11.696	116.45	9.314	92.73	4.654	46.34	18.380	183.01
Standard Deviation			142.24	8.100	80.65	6.450	64.22	3.223	32.09	12.730	126.74
CV			31.91	34.06	34.06	25.39	25.39	110.75	110.75	24.43	24.43
Grand Mean			445.71	23.78	236.76	25.41	253.0	2.91	28.98	52.1	518.74
Bartlett's X2			6.454	8.316	8.316	13.837	13.837	18.379	18.379	24.534	24.535
P(Bartlett's X2)			0.841	0.685	0.685	0.242	0.242	0.049*	0.049*	0.011*	0.011*
Replicate F			1.615	0.337	0.337	1.913	1.913	0.653	0.653	0.746	0.745
Replicate Prob(F)			0.2054	0.7989	0.7989	0.1467	0.1467	0.5865	0.5865	0.5326	0.5327
Treatment F			3.871	4.300	4.300	2.330	2.330	1.696	1.696	4.785	4.785
Treatment Prob(F)			0.0013	0.0005	0.0005	0.0299	0.0299	0.1180	0.1180	0.0002	0.0002

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.

Column 19: TY6 = 9.956572*[18]

Column 21: TY7 = 9.956572*[20]

Column 23: TY8 = 9.956572*[22]

Column 25: TY9 = 9.956572*[24]

Column 26: T2 = ([C20]+[C22]+[C24])

Column 27: TY10 = 9.956572*[26]