

University of Georgia

PECAN RESPONSE TO SIMULATED 2,4-D CHOLINE/DICAMBA-BAPMA DRIFT TEST 2 - YEAR 1			
Trial ID:	PECAN-01-16	Study Dir.:	LENNY WELLS
Location:	PONDER FARM	Investigator:	Eric P. Prostko

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

Trt No.	Treatment Name	Form Conc	Form Type	Amt Product to Measure	Rep 1	Rep 2	Rep 3
1	ENGENIA 1% V/V	5	SL		101	204	307
2	ENGENIA 0.1% V/V	5	SL		102	207	306
3	ENGENIA 0.01% V/V	5	SL		103	205	301
4	2,4-D CHOLINE 1% V/V	3.8	SL		104	203	302
5	2,4-D CHOLINE 0.1% V/V	3.8	SL		105	206	304
6	2,4-D CHOLINE 0.01% V/V	3.8	SL		106	202	303
7	NTC				107	201	305

Sort Order: Treatment

Trial Comments

1% V/V OF 1500 MLS = 15 MLS
 0.1% V/V OF 1500 MLS = 1.5 MLS (1500 MICROLITERS)
 0.01% V/V OF 1500 MLS = 0.15 MLS (150 MICROLITERS)

BASED UPON 15 GPA AND ENGENIA @ 12.5 OZ/A AND 2,4-D CHOLINE @ 24 OZ/A, THESE RATES WOULD BE EQUIVALENT TO THE FOLLOWING FIELD APPLICATION RATES:

ENGENIA
 1% V/V = 1.5X
 0.1% V/V = 0.15X (1/6.7TH RATE)
 0.01% V/V = 0.015X (1/67TH RATE)

2,4-D CHOLINE
 1% V/V = 0.8X (1/1.25X)
 0.1% V/V = 0.08X (1/12.5TH RATE)
 0.01% V/V = 0.008X (1/125TH RATE)

MAY 31, 2016
 7:30 AM
 20-25 FT PECAN TREES (DESIRABLE)
 8 YEARS OLD
 BEGINNING NUT SIZING STAGE OF GROWTH

40 PSI
 11002DG SPRAY TIP, 20" NOZZLE SPACING, VERTICAL ORIENTATION

SUMMARY:

- 1) ON AUGUST 1, THE FOLLOWING OBSERVATIONS WERE MADE.
 - A) AT 1% AND 0.1% V/V, 2,4-D CHOLINE WAS MORE INJURIOUS TO PECAN THAN DICAMBA.
 - B) NO DIFFERENCE IN PECAN INJURY BETWEEN 2,4-D AND DICAMBA WAS OBSERVED AT 0.01% V/V.
 - C) PECAN CHLOROPHYLL RATINGS WERE LOWEST WITH ENGENIA AND 2,4-D CHOLINE APPLIED AT 1% V/V.
- 3) ON OCTOBER 27, 2,4-D CHOLINE AT 1% V/V WAS STILL MORE INJURIOUS THAN ENGENIA AT THE SAME RATE.
- 4) PECAN YIELDS WERE NOT REDUCED BY ANY TREATMENT (P = 0.2525, CV = 22.53)

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PECAN RESPONSE TO SIMULATED 2,4-D CHOLINE/DICAMBA-BAPMA DRIFT TEST 2 - YEAR 1										
Trial ID: PECAN-01-16		Study Dir.: LENNY WELLS								
Location: PONDER FARM		Investigator: Eric P. Prostko								
Weed Code	----	PECAN	----	PECAN	----	PECAN	----	PECAN	----	PECAN
Crop Code	PECAN		TREE -		PECAN		PECAN		PECAN	WGT -
Part Rated	INJURY	CHLORPHY	INJURY	NUTS	NUTS	NUTS	NUTS	NUTS	NUTS	50/NUTS
Rating Data Type	PERCENT	INDEX	PERCENT	N/0.01	S/0.01	E/0.01	W/0.01	0.04/TR		GRAMS
Rating Unit	Aug-1-16	Aug-1-16	Oct-27-16	Oct-31-16	Oct-31-16	Oct-31-16	Oct-31-16	Oct-31-16	Oct-31-16	Oct-31-16
Rating Date	60 DA-A	60 DA-A	147 DA-A	151 DA-A	151 DA-A	151 DA-A	151 DA-A	151 DA-A	151 DA-A	151 DA-A
Trt-Eval Interval										
PRM Data Type										
# Subsamples, Dec.										
Trt Treatment	Form	Form								
No. Name	Conc	Type								
	1	2	3	4	5	6	7	8	9	
1 ENGENTIA 1% V/V	5 SL	21.7 b	33.73 bc	10.0 b	19.7 a	16.0 a	17.7 a	17.0 b	70.3 cd	491.7 a
2 ENGENTIA 0.1% V/V	5 SL	0.3 d	43.77 a	0.0 c	18.0 a	18.7 a	15.7 a	13.3 b	65.7 d	516.7 a
3 ENGENTIA 0.01% V/V	5 SL	0.0 d	40.37 a	0.0 c	22.7 a	28.7 a	26.0 a	18.7 b	96.0 abc	480.3 a
4 2,4-D CHOLINE 1% V/V	3.8 SL	30.0 a	28.70 c	25.0 a	14.7 a	30.7 a	23.3 a	13.3 b	82.0 bcd	479.0 a
5 2,4-D CHOLINE 0.1% V/V	3.8 SL	3.0 c	39.23 ab	0.0 c	25.0 a	27.3 a	24.7 a	18.0 b	95.0 abc	419.3 b
6 2,4-D CHOLINE 0.01% V/V	3.8 SL	0.0 d	42.70 a	0.0 c	32.7 a	32.0 a	22.3 a	20.0 ab	107.0 ab	483.3 a
7 NTC		0.0 d	41.07 a	0.0 c	23.7 a	32.0 a	28.7 a	26.0 a	110.3 a	431.0 b
LSD P=.10		1.98	5.602	2.75	11.97	11.14	7.89	6.66	25.41	35.71
Standard Deviation		1.36	3.850	1.89	8.23	7.65	5.42	4.57	17.46	24.54
CV		17.31	10.0	37.8	36.84	28.91	23.98	25.34	19.51	5.2
Grand Mean		7.86	38.510	5.00	22.33	26.48	22.62	18.05	89.48	471.62
Bartlett's X2		3.675	4.801	0.0	1.643	1.134	1.631	6.29	0.781	4.725
P(Bartlett's X2)		0.159	0.57	.	0.949	0.98	0.95	0.392	0.993	0.58
Replicate F		0.309	0.634	1.000	2.681	13.025	12.015	1.313	13.326	0.236
Replicate Prob(F)		0.7398	0.5473	0.3966	0.1090	0.0010	0.0014	0.3049	0.0009	0.7930
Treatment F		255.897	5.896	77.000	1.480	2.176	2.135	2.700	2.960	5.882
Treatment Prob(F)		0.0001	0.0045	0.0001	0.2647	0.1187	0.1241	0.0675	0.0518	0.0046

Means followed by same letter or symbol 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		PECAN	PECAN
Part Rated		WGT -	YIELD -
Rating Data Type		TREE	LOSS
Rating Unit		POUNDS	TREE
Rating Date		Oct-31-16	Oct-31-16
Trt-Eval Interval		151 DA-A	151 DA-A
PRM Data Type			
# Subsamples, Dec.		- 1	
Trt Treatment	Form Form		
No. Name	Conc Type	10	11
1 ENGENIA	5 SL	37.6 a	30.7 a
1% V/V			
2 ENGENIA	5 SL	37.8 a	30.3 a
0.1% V/V			
3 ENGENIA	5 SL	50.9 a	4.7 a
0.01% V/V			
4 2,4-D CHOLINE	3.8 SL	43.5 a	18.0 a
1% V/V			
5 2,4-D CHOLINE	3.8 SL	44.2 a	23.7 a
0.1% V/V			
6 2,4-D CHOLINE	3.8 SL	56.8 a	8.0 a
0.01% V/V			
7 NTC		52.5 a	0.0 a
LSD P=.10		15.14	23.71
Standard Deviation		10.40	16.29
CV		22.53	98.89
Grand Mean		46.19	16.48
Bartlett's X2		0.429	4.446
P(Bartlett's X2)		0.999	0.487
Replicate F		9.911	5.234
Replicate Prob(F)		0.0029	0.0232
Treatment F		1.520	1.752
Treatment Prob(F)		0.2525	0.1923

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PECAN RESPONSE TO SIMULATED 2,4-D CHOLINE/DICAMBA-BAPMA DRIFT			
TEST 2 - YEAR 1			
Trial ID:	PECAN-01-16	Study Dir.:	LENNY WELLS
Location:	PONDER FARM	Investigator:	Eric P. Prostko
PRM Data Type			
T1 = [C4]+[C5]+[C6]+[C7]			

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PECAN RESPONSE TO SIMULATED 2,4-D CHOLINE/DICAMBA-BAPMA DRIFT TEST 2 - YEAR 1										
Trial ID: PECAN-01-16		Study Dir.: LENNY WELLS								
Location: PONDER FARM		Investigator: Eric P. Prostko								
Weed Code		-----	-----	-----	-----	-----	-----	-----	-----	-----
Crop Code		PECAN	PECAN	PECAN	PECAN	PECAN	PECAN	PECAN	PECAN	PECAN
Part Rated		TREE -	CHLORPHY	TREE -	NUTS	NUTS	NUTS	NUTS	NUTS	WGT -
Rating Data Type		INJURY	INDEX	INJURY	N/0.01	S/0.01	E/0.01	W/0.01	0.04/TR	50/NUTS
Rating Unit		PERCENT	PERCENT	PERCENT						GRAMS
Rating Date		Aug-1-16	Aug-1-16	Oct-27-16	Oct-31-16	Oct-31-16	Oct-31-16	Oct-31-16	Oct-31-16	Oct-31-16
Trt-Eval Interval		60 DA-A	60 DA-A	147 DA-A	151 DA-A	151 DA-A	151 DA-A	151 DA-A	151 DA-A	151 DA-A
PRM Data Type										
# Subsamples, Dec.									T1	
Trt Treatment	Form Form									
No. Name	Conc Type Plot	1	2	3	4	5	6	7	8	9
1 ENGENIA 1% V/V	5 SL 101	20.0	29.30	10.0	8.0	4.0	8.0	9.0	29.0	509.0
	204	25.0	34.00	10.0	23.0	22.0	24.0	18.0	87.0	509.0
	307	20.0	37.90	10.0	28.0	22.0	21.0	24.0	95.0	457.0
	Mean =	21.7	33.73	10.0	19.7	16.0	17.7	17.0	70.3	491.7
2 ENGENIA 0.1% V/V	5 SL 102	0.0	46.50	0.0	11.0	7.0	6.0	10.0	34.0	495.0
	207	0.0	47.40	0.0	16.0	30.0	23.0	17.0	86.0	527.0
	306	1.0	37.40	0.0	27.0	19.0	18.0	13.0	77.0	528.0
	Mean =	0.3	43.77	0.0	18.0	18.7	15.7	13.3	65.7	516.7
3 ENGENIA 0.01% V/V	5 SL 103	0.0	38.20	0.0	29.0	12.0	23.0	19.0	83.0	511.0
	205	0.0	41.10	0.0	12.0	28.0	24.0	17.0	81.0	444.0
	301	0.0	41.80	0.0	27.0	46.0	31.0	20.0	124.0	486.0
	Mean =	0.0	40.37	0.0	22.7	28.7	26.0	18.7	96.0	480.3
4 2,4-D CHOLINE 1% V/V	3.8 SL 104	30.0	28.60	30.0	6.0	19.0	18.0	8.0	51.0	468.0
	203	30.0	27.70	25.0	18.0	32.0	20.0	17.0	87.0	482.0
	302	30.0	29.80	20.0	20.0	41.0	32.0	15.0	108.0	487.0
	Mean =	30.0	28.70	25.0	14.7	30.7	23.3	13.3	82.0	479.0
5 2,4-D CHOLINE 0.1% V/V	3.8 SL 105	5.0	34.00	0.0	12.0	16.0	16.0	17.0	61.0	399.0
	206	2.0	42.40	0.0	27.0	37.0	38.0	25.0	127.0	428.0
	304	2.0	41.30	0.0	36.0	29.0	20.0	12.0	97.0	431.0
	Mean =	3.0	39.23	0.0	25.0	27.3	24.7	18.0	95.0	419.3
6 2,4-D CHOLINE 0.01% V/V	3.8 SL 106	0.0	40.40	0.0	32.0	17.0	13.0	18.0	80.0	494.0
	202	0.0	46.80	0.0	43.0	49.0	27.0	21.0	140.0	477.0
	303	0.0	40.90	0.0	23.0	30.0	27.0	21.0	101.0	479.0
	Mean =	0.0	42.70	0.0	32.7	32.0	22.3	20.0	107.0	483.3
7 NTC	107	0.0	43.80	0.0	21.0	26.0	17.0	30.0	94.0	441.0
	201	0.0	37.40	0.0	21.0	27.0	34.0	23.0	105.0	398.0
	305	0.0	42.00	0.0	29.0	43.0	35.0	25.0	132.0	454.0
	Mean =	0.0	41.07	0.0	23.7	32.0	28.7	26.0	110.3	431.0

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Weed Code			-----		-----
Crop Code			PECAN		PECAN
Part Rated			WGT -		YIELD -
Rating Data Type			TREE		LOSS
Rating Unit			POUNDS		TREE
Rating Date			Oct-31-16		Oct-31-16
Trt-Eval Interval			151 DA-A		151 DA-A
PRM Data Type					
# Subsamples, Dec.			- 1		
Trt Treatment	Form	Form			
No. Name	Conc	Type Plot	10		11
1 ENGENIA	5 SL	101	16.3		64.0
1% V/V		204	48.8		0.0
		307	47.8		28.0
		Mean =	37.6		30.7
2 ENGENIA	5 SL	102	18.6		59.0
0.1% V/V		207	49.9		0.0
		306	44.8		32.0
		Mean =	37.8		30.3
3 ENGENIA	5 SL	103	46.7		0.0
0.01% V/V		205	39.6		14.0
		301	66.4		0.0
		Mean =	50.9		4.7
4 2,4-D CHOLINE	3.8 SL	104	26.3		42.0
1% V/V		203	46.2		0.0
		302	58.0		12.0
		Mean =	43.5		18.0
5 2,4-D CHOLINE	3.8 SL	105	26.8		41.0
0.1% V/V		206	59.9		0.0
		304	46.0		30.0
		Mean =	44.2		23.7
6 2,4-D CHOLINE	3.8 SL	106	43.5		5.0
0.01% V/V		202	73.6		0.0
		303	53.2		19.0
		Mean =	56.8		8.0
7 NTC		107	45.6		0.0
		201	45.9		0.0
		305	66.0		0.0
		Mean =	52.5		0.0

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Location:	PONDER FARM	Investigator:	Eric P. Prostko
PRM Data Type			
T1 = [C4]+[C5]+[C6]+[C7]			