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PEACH RESPONSE TO SIMULATED 2,4-D CHOLINE AND
AND DICAMBA-BAPMA DRIFT (TEST 1, YEAR 2)
Trial ID: PEACH-02-17 Study Dir.: JEFF COOK
Location: FORT VALLEY 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	2	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)

~8 YEAR OLD PEACH TREES (SCARLET PRINCE)
STAGE OF GROWTH: 1 MONTH PRIOR TO HARVEST - PIT HARDENING TO FINAL SWELL (JUNE 2, 2016)
~8 FT TALL

TRIAL LOCATION: N32.519330/W-83.866135

BASED UPON 15 GPA AND ENGENIA @ 12.8 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 (1.25X)
0.1% V/V = 0.08X (1/12.5TH RATE)
0.01% V/V = 0.008X (1/125TH RATE)

SPRAYED 1/2 TREE FROM MIDDLE TO LEFT
40 PSI
11002DG SPRAY TIPS, 20" SPACING, VERTICAL ORIENTATION

COMPOSITE PEACH LEAF SAMPLES COLLECTED ON JUNE 17 (15 DAT) INDICATED THE FOLLOWING:

DICAMBA 1% = 17.5 PPM DICAMBA
DICAMBA 0.1% = 3.10 PPM DICAMBA
DICAMBA 0.01% = 0.69 PPM DICAMBA

2,4-D 1% = 30.4 PPM 2,4-D
2,4-D 0.1% = 0.88 PPM 2,4-D
2,4-D 0.01% = 0.34 PPM 2,4-D

VISUAL RATINGS ON JUNE 17:
TREE INJURY = % OF WHOLE TREE SHOWING INJURY SYMPTOMS
INJURY SEVERITY: SCALE 1 - 10, 1 = NO INJURY, 10 = COMPLETE DEATH
LEAF DROP: 1 = NONE, 2 = SLIGHT, 3 = MODERATE, 4 = SEVERE

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PEACH TIP DIEBACK RATINGS - 8 NEW WOOD TIP SAMPLES PER TREE FROM DAMAGED SIDE

SUMMARY -2016:

1) FOR PEACH PEACH TREE INJURY:

A) NO INTERACTION BETWEEN HERBICIDE AND RATE.
B) WHEN AVERAGED OVER RATES, ENGENIA WAS MORE INJURIOUS THAN 2,4-D CHOLINE
C) WHEN AVERAGED OVER HERBICIDES, A RATE RESPONSE WAS OBSERVED. 1% > 0.1% > 0.01%

2) FOR PEACH TREE DAMAGE SEVERITY, A SIGNIFICANT INTERACTION BETWEEN HERBICIDE AND RATE WAS OBSERVED.

A) ENGENIA @ 1% AND 0.1% WAS MORE INJURIOUS THAN THE SAME RATES OF 2,4-D CHOLINE. NO DIFFERENCES OBSERVED BETWEEN ENGENIA OR CHOLINE @ 0.01% V/V.

3) FOR PEACH TREE LEAF DROP, A SIGNIFICANT INTERACTION BETWEEN HERBICIDE AND RATE WAS OBSERVED.

A) ENGENIA @ 1% CAUSED MORE LEAF DROP THAN ANY OTHER RATE. NO DIFFERENCES OBSERVED BETWEEN ANY OTHER RATE OR HERBICIDE.

4) FOR PEACH TREE YIELD/YIELD LOSS, NO INTERACTION WAS OBSERVED BETWEEN HERBICIDE AND RATE.

A) WHEN AVERAGED OVER RATE, ENGENIA CAUSED HIGHER YIELD LOSSES THAN 2,4-D CHOLINE.
B) WHEN AVERAGED OVER HERBICIDE, THE 1% V/V RATE CAUSED HIGHER YIELD LOSSES THAN THE 0.1 OR 0.01 % V/V RATES.
C) NO SIGNIFICANT DIFFERENCES IN YIELD BETWEEN 0.1 AND 0.01 % V/V RATES WAS OBSERVED.

5) FOR PEACH TREE TIP DIEBACK, A SIGNIFICANT INTERACTION BETWEEN HERBICIDE AND RATE WAS OBSERVED.

A) ENGENIA AT 1% AND 0.1% V/V CAUSED MORE PEACH TIP DIEBACK THAN SIMILAR RATES OF 2,4-D CHOLINE.
B) NO DIFFERENCE IN TIP DIEBACK BETWEEN 0.01% V/V RATES OF ENGENIA AND 2,4-D CHOLINE.

SUMMARY- 2017

1) GENERAL COMMENTS:

A) INSUFFICIENT CHILL HOURS WERE RECEIVED (ONLY 493), THUS YIELD DATA WAS NOT COLLECTED.
B) APRIL 28, 2017: FRUIT/TREE = NUMBER OF FRUIT PER TREE OUT OF SHUCK; CALIPER MEASUREMENTS 10" FROM GROUND

2) NO DIFFERENCES IN FRUIT/TREE OR TREE CALIPER WERE OBSERVED ON APRIL 28, 2017 (330 DAT)

3) GENERALLY, PEACH TREE VIGOR WAS REDUCED BY DICAMBA BUT NOT 2,4-D CHOLINE.

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PEACH RESPONSE TO SIMULATED 2,4-D CHOLINE AND
AND DICAMBA-BAPMA DRIFT (TEST 1, YEAR 2)
Trial ID: PEACH-02-17 Study Dir.: JEFF COOK
Location: FORT VALLEY Investigator: Eric P. Prostko

GENERAL TRIAL INFORMATION

Study Director: JEFF COOK **Title:** _____
Affiliation: _____ **Postal Code:** _____

Investigator: Eric P. Prostko **Title:** _____
Affiliation: _____ **Postal Code:** _____

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: _____ PEACH **Variety:** SCARLET PRINCE **Planting Date:** _____
Planting Method: _____ **Rate:** _____ _____ **Depth:** ____ __
Perennial Age: ____ _____ **Row Spacing:** ____ _____ **Seed Bed:** _____
Soil Temperature: ____ _ **Soil Moisture:** _____ **Emergence Date:** _____

Plot Width, Unit: 6 FT **Plot Length, Unit:** 25 FT **Reps:** 3
Site Type: _____
Tillage Type: _____ **Study Design:** FACTOR
Trial Initiation Comments: _____
_____

Previous: Crops Pesticides Year
1. _____ _____ ____

MAINTENANCE

Field Prep./Maintenance: _____

No.	Date	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Unit
1.	_____	_____	____	_____	___	_____	_____

SOIL DESCRIPTION

Texture: _____ **% OM:** ____ **% Sand:** ____ **% Silt:** ____ **% Clay:** ____
pH: ____ **CEC:** ____ **Soil Name:** _____ **Fertility Level:** _____

MOISTURE CONDITIONS

On:	Date	Time	Amount	Unit	Type	Interval	Unit
1.	_____	_____	_____	__	_____	_____	___

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

APPLICATION DESCRIPTION

	A	B	C	D	E	F
Application Date:	Jun-2-16	_____	_____	_____	_____	_____
Time of Day:	8:30 AM	_____	_____	_____	_____	_____
Application Method:	BROADCAST	_____	_____	_____	_____	_____
Application Timing:	POST	_____	_____	_____	_____	_____
Applic. Placement:	FOLIAGE	_____	_____	_____	_____	_____
Air Temp., Unit:	73 F	____ _	____ _	____ _	____ _	____ _
% Relative Humidity:	72	_____	_____	_____	_____	_____
Wind Velocity, Unit:	2 MPH	____ ____	____ ____	____ ____	____ ____	____ ____
Dew Presence (Y/N):	N	_	_	_	_	_
Water Hardness:	--	_____	_____	_____	_____	_____
Soil Temp., Unit:		____ _	____ _	____ _	____ _	____ _
Soil Moisture:	OPTIMUM	_____	_____	_____	_____	_____
% Cloud Cover:	40	_____	_____	_____	_____	_____

CROP STAGE AT EACH APPLICATION

	A	B	C	D	E	F
Crop 1 Stage:	_____ _____	_____	_____	_____	_____	_____
Stage Scale:	FINALSWEL	_____	_____	_____	_____	_____
Height, Unit:	8 FT	____ ____	____ ____	____ ____	____ ____	____ ____

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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:	FLAT FAN						
Nozzle Size:	11002DG						
Nozzle Spacing, Unit:	20	IN					
Nozzles/Row:							
Band Width, Unit:							
Boom Length, Unit:	60	IN					
Boom Height, Unit:							
Ground Speed, Unit:							
Incorporation Equip.:							
Hours to Incorp.:							
Incorp. Depth, Unit:							
Carrier:							
Spray Volume, Unit:	15	GPA					
Spray pH:							
Propellant:	CO2						
Tank Mix (Y/N):							

Trt No	Treatment Application Comment

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PEACH RESPONSE TO SIMULATED 2,4-D CHOLINE AND
AND DICAMBA-BAPMA DRIFT (TEST 1, YEAR 2)
Trial ID: PEACH-02-17 Study Dir.: JEFF COOK
Location: FORT VALLEY Investigator: Eric P. Prostko

Trt No.	Treatment Name	Form Conc	Form Type	1	2	3	4	5	6	7	8	9
	Weed Code			-----	-----	----	-----	-----	-----	-----	-----	-----
	Crop Code			PEACH	TREE	PEACH	PEACH	PEACH	PEACH	PEACH	PEACH	PEACH
	Part Rated			TREE -	DAMAGE -	LEAF -	TREE -	TREE -	TREE -	TIP -		TRUNK D
	Rating Data Type			INJURY	SEVERITY	DROP	YIELD	YIELD	YLD LOSS	DIEBACK	FRUIT	CALIPER
	Rating Unit			PERCENT	1-10	1-4	KG/TREE	LB/TREE	PERCENT	PERCENT	#/TREE	INCHES
	Rating Date			Jun-17-16	Jun-17-16	Jun-17-16				Dec-23-16	Apr-28-17	Apr-28-17
	Trt-Eval Interval			15 DA-A	15 DA-A	15 DA-A				204 DA-A	330 DA-A	330 DA-A
	PRM Data Type							T1				
	# Subsamples, Dec.				- 1	- 1	- 2	- 2				- 2
1	ENGENIA 1% V/V	5	SL	80.0 a	7.7 a	3.3 a	11.17 b	24.57 b	60.3 a	57.0 a	2.3 a	5.58 a
2	ENGENIA 0.1% V/V	5	SL	66.7 b	4.0 c	1.7 b	21.78 a	47.92 a	16.7 b	16.0 c	4.0 a	5.58 a
3	ENGENIA 0.01% V/V	5	SL	48.3 c	2.7 d	1.5 b	24.92 a	54.82 a	15.0 b	1.7 d	9.7 a	5.67 a
4	2,4-D CHOLINE 1% V/V	3.8	SL	68.3 b	5.5 b	1.7 b	13.78 b	30.32 b	43.0 a	25.7 b	8.0 a	5.67 a
5	2,4-D CHOLINE 0.1% V/V	3.8	SL	38.3 d	2.7 d	1.7 b	24.73 a	54.41 a	11.7 b	3.7 d	16.7 a	5.58 a
6	2,4-D CHOLINE 0.01% V/V	3.8	SL	26.7 e	2.2 d	1.8 b	26.18 a	57.60 a	5.3 b	2.0 d	12.0 a	6.33 a
7	NTC			0.0 f	1.0 e	1.8 b	26.77 a	58.89 a	0.0 b	1.3 d	21.7 a	6.00 a
	LSD P=.10			7.64	0.53	0.40	7.890	17.359	22.97	9.65	17.50	1.210
	Standard Deviation			5.25	0.36	0.28	5.422	11.928	15.78	6.63	12.03	0.832
	CV			11.2	9.87	14.42	25.42	25.42	72.68	43.26	113.28	14.4
	Grand Mean			46.90	3.67	1.93	21.333	46.933	21.71	15.33	10.62	5.774
	Bartlett's X2			4.148	1.524	0.0	6.962	6.962	4.33	13.299	18.162	4.175
	P(Bartlett's X2)			0.528	0.91	.	0.324	0.324	0.503	0.039*	0.006*	0.653
	Replicate F			1.856	0.364	0.462	6.634	6.634	2.103	0.371	1.418	0.598
	Replicate Prob(F)			0.1985	0.7025	0.6411	0.0115	0.0115	0.1648	0.6975	0.2800	0.5654
	Treatment F			83.942	117.727	15.385	4.048	4.048	5.733	28.864	0.970	0.359
	Treatment Prob(F)			0.0001	0.0001	0.0001	0.0189	0.0189	0.0051	0.0001	0.4847	0.8913

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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Trt No.	Treatment Name	Form Conc	Form Type	10
	Weed Code			-----
	Crop Code			PEACH
	Part Rated			TREE -
	Rating Data Type			VIGOR
	Rating Unit			1-10
	Rating Date			May-11-17
	Trt-Eval Interval			343 DA-A
	PRM Data Type			
	# Subsamples, Dec.			- 1
1	ENGENIA 1% V/V	5	SL	6.3 b
2	ENGENIA 0.1% V/V	5	SL	7.3 ab
3	ENGENIA 0.01% V/V	5	SL	6.5 b
4	2,4-D CHOLINE 1% V/V	3.8	SL	6.3 b
5	2,4-D CHOLINE 0.1% V/V	3.8	SL	7.3 ab
6	2,4-D CHOLINE 0.01% V/V	3.8	SL	9.2 a
7	NTC			8.7 a
	LSD P=.10			1.85
	Standard Deviation			1.27
	CV			17.2
	Grand Mean			7.38
	Bartlett's X2			5.591
	P(Bartlett's X2)			0.471
	Replicate F			5.017
	Replicate Prob(F)			0.0261
	Treatment F			2.426
	Treatment Prob(F)			0.0902

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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PEACH RESPONSE TO SIMULATED 2,4-D CHOLINE AND
AND DICAMBA-BAPMA DRIFT (TEST 1, YEAR 2)
Trial ID: PEACH-02-17 Study Dir.: JEFF COOK
Location: FORT VALLEY Investigator: Eric P. Prostko

Part Rated
LEAF = LEAF / FOLIAGE
PRM Data Type
T1 = [C4]*2.2

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PEACH RESPONSE TO SIMULATED 2,4-D CHOLINE AND
AND DICAMBA-BAPMA DRIFT (TEST 1, YEAR 2)
Trial ID: PEACH-02-17 Study Dir.: JEFF COOK
Location: FORT VALLEY Investigator: Eric P. Prostko

Trt No.	Treatment Name	Form Conc	Form Type	Plot	1	2	3	4	5	6	7	8	9
	Weed Code				-----	-----	----	-----	-----	-----	-----	-----	-----
	Crop Code				PEACH	TREE	PEACH	PEACH	PEACH	PEACH	PEACH	PEACH	PEACH
	Part Rated				TREE -	DAMAGE -	LEAF -	TREE -	TREE -	TREE -	TIP -		TRUNK D
	Rating Data Type				INJURY	SEVERITY	DROP	YIELD	YIELD	YLD LOSS	DIEBACK	FRUIT	CALIPER
	Rating Unit				PERCENT	1-10	1-4	KG/TREE	LB/TREE	PERCENT	PERCENT	#/TREE	INCHES
	Rating Date				Jun-17-16	Jun-17-16	Jun-17-16				Dec-23-16	Apr-28-17	Apr-28-17
	Trt-Eval Interval				15 DA-A	15 DA-A	15 DA-A				204 DA-A	330 DA-A	330 DA-A
	PRM Data Type								T1				
	# Subsamples, Dec.					- 1	- 1	- 2	- 2				- 2
1	ENGENIA	5	SL	101	80.0	7.5	3.0	13.55	29.81	56.0	65.0	2.0	5.75
	1% V/V			204	75.0	8.0	3.5	15.20	33.44	54.0	41.0	3.0	6.00
				307	85.0	7.5	3.5	4.75	10.45	71.0	65.0	2.0	5.00
				Mean =	80.0	7.7	3.3	11.17	24.57	60.3	57.0	2.3	5.58
2	ENGENIA	5	SL	102	65.0	4.0	2.0	21.00	46.20	31.0	11.0	7.0	5.75
	0.1% V/V			207	65.0	3.5	1.5	26.95	59.29	19.0	24.0	1.0	6.00
				306	70.0	4.5	1.5	17.40	38.28	0.0	13.0	4.0	5.00
				Mean =	66.7	4.0	1.7	21.78	47.92	16.7	16.0	4.0	5.58
3	ENGENIA	5	SL	103	55.0	2.5	1.5	35.25	77.55	0.0	0.0	6.0	5.00
	0.01% V/V			205	45.0	3.0	1.5	18.15	39.93	45.0	3.0	4.0	5.50
				301	45.0	2.5	1.5	21.35	46.97	0.0	2.0	19.0	6.50
				Mean =	48.3	2.7	1.5	24.92	54.82	15.0	1.7	9.7	5.67
4	2,4-D CHOLINE	3.8	SL	104	70.0	6.0	1.5	14.55	32.01	52.0	26.0	5.0	5.50
	1% V/V			203	70.0	5.5	1.5	12.80	28.16	61.0	21.0	6.0	5.50
				302	65.0	5.0	2.0	14.00	30.80	16.0	30.0	13.0	6.00
				Mean =	68.3	5.5	1.7	13.78	30.32	43.0	25.7	8.0	5.67
5	2,4-D CHOLINE	3.8	SL	105	50.0	3.0	1.5	33.10	72.82	0.0	6.0	34.0	7.00
	0.1% V/V			206	30.0	2.5	1.5	21.45	47.19	35.0	2.0	9.0	4.75
				304	35.0	2.5	2.0	19.65	43.23	0.0	3.0	7.0	5.00
				Mean =	38.3	2.7	1.7	24.73	54.41	11.7	3.7	16.7	5.58
6	2,4-D CHOLINE	3.8	SL	106	30.0	2.0	1.5	32.10	70.62	0.0	5.0	13.0	5.50
	0.01% V/V			202	30.0	2.5	2.0	31.85	70.07	4.0	0.0	21.0	7.50
				303	20.0	2.0	2.0	14.60	32.12	12.0	1.0	2.0	6.00
				Mean =	26.7	2.2	1.8	26.18	57.60	5.3	2.0	12.0	6.33
7	NTC			107	0.0	1.0	2.0	30.55	67.21	0.0	0.0	51.0	6.50
				201	0.0	1.0	2.0	33.15	72.93	0.0	4.0	11.0	6.50
				305	0.0	1.0	1.5	16.60	36.52	0.0	0.0	3.0	5.00
				Mean =	0.0	1.0	1.8	26.77	58.89	0.0	1.3	21.7	6.00

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Weed Code				-----
Crop Code				PEACH
Part Rated				TREE -
Rating Data Type				VIGOR
Rating Unit				1-10
Rating Date				May-11-17
Trt-Eval Interval				343 DA-A
PRM Data Type				
# Subsamples, Dec.				- 1
Trt No.	Treatment Name	Form Conc	Form Type	Plot / 10
1	ENGENIA 1% V/V	5	SL	101: 6.0
				204: 6.0
				307: 7.0
				Mean = 6.3
2	ENGENIA 0.1% V/V	5	SL	102: 8.0
				207: 5.0
				306: 9.0
				Mean = 7.3
3	ENGENIA 0.01% V/V	5	SL	103: 8.5
				205: 4.0
				301: 7.0
				Mean = 6.5
4	2,4-D CHOLINE 1% V/V	3.8	SL	104: 8.0
				203: 5.0
				302: 6.0
				Mean = 6.3
5	2,4-D CHOLINE 0.1% V/V	3.8	SL	105: 8.0
				206: 5.0
				304: 9.0
				Mean = 7.3
6	2,4-D CHOLINE 0.01% V/V	3.8	SL	106: 9.0
				202: 8.5
				303: 10.0
				Mean = 9.2
7	NTC			107: 8.0
				201: 9.5
				305: 8.5
				Mean = 8.7

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AND DICAMBA-BAPMA DRIFT (TEST 1, YEAR 2)

Trial ID: PEACH-02-17 Study Dir.: JEFF COOK
Location: FORT VALLEY Investigator: Eric P. Prostko

Part Rated
LEAF = LEAF / FOLIAGE
PRM Data Type
T1 = [C4]*2.2