

University of Georgia

AUXIN NOZZLES VS FLAT FAN NOZZLES FOR PEANUT PEST MANAGEMENT - I			
Trial ID: NZ-01-18		Study Dir.: BILL TYSON AND GREG SIKES	
Location: BULLOCH COUNTY		Investigator: Eric P. Prostko	

Reps: 4 Plots: 90 by 1000 feet
 Spray vol: 15 GAL/AC Mix Size: 3 L (total for 4 plots; minimum=469.3 L)

Trt No.	Treatment Name	Amt Product to Measure	Rep 1	Rep 2	Rep 3	Rep 4
1	XR11006-VP		101	201	301	401
2	TADF06-D		102	202	302	402

Sort Order: Treatment

Trial Comments

MARCH 23, 2018
 GREG SIKES FARM
 BULLOCH COUNTY
 JOHN DEERE JD 4630
 BOOM LENGTH = 90 FEET
 NOZZLE SPACING = 15 INCHES
 72 NOZZLES
 600 GAL SPRAY TANK
 GROUND SPEED = 12.6 MPH
 GPA = 15
 PSI = 25
 BOOM HEIGHT = 32"-34"
 WIND - SE 2-4 MPH

27 KROMOEKOTE CARDS WERE USED IN ANALYSIS (3 REPS AND 9 CARDS/REP)

PLANTING DATE: MAY 11
 VARIETY: GA-06G
 SINGLE 36" ROWS
 ROTATION: 2015 = FIELD CORN; 2016 = COTTON; 2017 = COTTON; 2018 = PEANUTS

APPLICATION DATES:

MAY 11 = VALOR + STRONGARM + ACUMEN (GENERIC PROWL)
 JUNE 14 = GRAMOXONE + DUAL MAGNUM + STORM + 2,4-DB
 JUNE 19 = ALTO + FOLICUR
 JULY 9 = ELATUS
 JULY 25 = ELATUS + PEGPOWER + BORON
 AUGUST 15 = BRAVO + FOLICUR + PEGPOWER + BORON + DIMILIN
 AUGUST 27 = ELATUS + BIFENTHRIN

HARVESTED AREA = 6 ROWS (18 FT) x 1000 FT (0.413 ACRES/REP)

DIGGING DATE: OCTOBER 9
 HARVEST DATE: OCTOBER 17
 HARVEST MOISTURE: 8.55%
 YIELDS ADJUSTED TO 10%

SUMMARY:

1) KROMEKOTE SPRAY CARD ANALYSIS OF THE NOZZLE TYPES INDICATED THE FOLLOWING:

A) SIGNIFICANT DIFFERENCES IN DROPLET SIZE (VMD50) AND COVERAGE WERE OBSERVED. XR11006 NOZZLE PRODUCED SMALLER DROPLETS AND HAD BETTER COVERAGE THAN THE TADF06-D NOZZLE.

XR-11006 = 367 MICRONS AND 14.6% COVERAGE
 TADF06-D = 531 MICRONS AND 10.2% COVERAGE

2) IN THE FIELD, NO DIFFERENCES IN PEST CONTROL (WEED, INSECT, DISEASE) OR PEANUT YIELD WERE OBSERVED BETWEEN THE XR11006 AND TADF06-D NOZZLES (P>0.15).

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Weed Code	VMD50	COVERAGE	SOYBEAN LOOPER	3CAH	GARDEN FLEA	----- ARAHY EARLY - LF SPOT	----- ARAHY WHITE - MOLD PERCENT	----- ARAHY PLOT - YIELD LBS/PLOT	----- ARAHY PLOT - YIELD LB
Crop Code									
Part Rated									
Rating Data Type									
Rating Unit	MICRONS	PERCENT	#/10 SWP	#/10 SWP	#/10 SWP	1-10	PERCENT	LBS/PLOT	LB
Rating Date	Mar-23-18	Mar-23-18	Oct-2-18	Oct-2-18	Oct-2-18	Aug-17-18	Oct-12-18	Oct-17-18	Oct-17-18
PRM Data Type									TY1
# Subsamples, Dec.	9 -								- 0
Trt No.	Treatment Name								
	1	2	3	4	5	6	7	8	9
1 XR11006-VP	366.976 b	14.560 a	0.5 a	27.3 a	18.3 a	1.0 a	4.75 a	2695.5 a	6628 a
2 TADF06-D	531.038 a	10.173 b	0.5 a	31.3 a	19.5 a	1.0 a	8.38 a	2769.5 a	6810 a
Tukey's HSD P=.10	3.8554	0.8045	0.96	4.99	19.93	.	5.001	141.46	347.8
Standard Deviation	1.6171	0.3374	0.58	3.00	11.98	0.00	3.005	85.01	209.0
CV	0.36	2.73	115.47	10.26	63.46	0.0	45.79	3.11	3.11
Grand Mean	449.0069	12.3663	0.50	29.25	18.88	1.00	6.563	2732.50	6719.2
Levene's F	0.006	1.434	0.00	0.017	0.343	0.00	0.259	0.006	0.006
Levene's Prob(F)	0.942	0.297	1.00	0.901	0.579	0.00*	0.629	0.941	0.941
Replicate F	109.757	3.422	3.000	11.870	3.800	0.000	0.585	1.441	1.441
Replicate Prob(F)	0.0090	0.2261	0.1955	0.0359	0.1509	1.0000	0.6649	0.3856	0.3856
Treatment F	15439.905	253.576	0.000	3.556	0.022	0.000	2.910	1.516	1.516
Treatment Prob(F)	0.0001	0.0039	1.0000	0.1558	0.8920	1.0000	0.1866	0.3060	0.3060
PRM Data Type TY1 = 2.458989*[8]									

Means followed by same letter or symbol do not significantly differ (P=.10, Tukey's HSD)
 Could not calculate Tukey's HSD (% mean diff) for columns 6 because error mean square = 0.

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Location: BULLOCH COUNTY Investigator: Eric P. Prostko									
Weed Code Crop Code Part Rated Rating Data Type Rating Unit Rating Date PRM Data Type # Subsamples, Dec.	VMD50 MICRONS Mar-23-18 9 -	COVERAGE PERCENT Mar-23-18	SOYBEAN LOOPER #/10 SWP Oct-2-18	3CAH #/10 SWP Oct-2-18	GARDEN FLEA HOPPER #/10 SWP Oct-2-18	----- ARAHY EARLY - LF SPOT 1-10 Aug-17-18	----- ARAHY WHITE - MOLD PERCENT Oct-12-18	----- ARAHY PLOT - YIELD LBS/PLOT Oct-17-18	----- ARAHY PLOT - YIELD LB Oct-17-18 TY1 - 0
Trt Treatment No. Name Plot	1	2	3	4	5	6	7	8	9
1 XR11006-VP 101	380.784	15.169	0.0	36.0	29.0	1.0	6.00	2575.0	6332
201	359.570	13.828	1.0	28.0	25.0	1.0	3.50	2771.0	6814
301	360.573	14.683	0.0	20.0	15.0	1.0	4.00	2768.0	6806
401			1.0	25.0	4.0	1.0	5.50	2668.0	6561
Mean =	366.976	14.560	0.5	27.3	18.3	1.0	4.75	2695.5	6628
2 TADF06-D 102	544.633	10.329	0.0	38.0	54.0	1.0	10.00	2802.0	6890
202	521.459	9.939	2.0	35.0	10.0	1.0	10.00	2738.0	6733
302	527.021	10.250	0.0	19.0	14.0	1.0	10.50	2880.0	7082
402			0.0	33.0	0.0	1.0	3.00	2658.0	6536
Mean =	531.038	10.173	0.5	31.3	19.5	1.0	8.38	2769.5	6810

PRM Data Type
TY1 = 2.458989*[8]