

EVALUATION OF INSECTICIDE TREATMENTS IN SQUASH 2007

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Introduction

Summer squash is targeted in the summer and fall growing seasons in southern Georgia by pickleworm, *Diaphania nitidalis* (Stoll), cucumber beetles, *Diabrotica* spp., squash bugs, *Anasa* spp., and sweetpotato whitefly, *Bemisia tabaci* (Gennadius). This experiment evaluated various control options for these pests in 2007.

Materials and Methods

Yellow Crook Neck squash was direct seeded into 2 rows per 6-ft bare ground beds on 15 June and maintained with standard cultural practices at the Lang Farm, Georgia Coastal Plain Experiment Station at Tifton. A total of 500 lbs/a of 10-10-10 and 1 pt/a Curbit was applied at planting to Tift pebbly clay loam field plots followed by two side-dress applications of 150 lbs/a Cal-nitrate. Irrigation was applied weekly with an overhead sprinkler system. Scouting was initiated on 22 June and continued weekly until harvest. Four applications of insecticide were made on 19, 26 June and 2, 11 July. One sample of 5 plants, with one leaf per plant for whitefly and aphid counts, was scouted per plot after weekly applications. Squash was harvested from 40 ft of 2 rows on 17, 24 July and fruit were categorized as marketable, pickleworm damage, or virus damaged and the average weight was measured. Damage ratings for pickleworm along with larvae per fruit were reported. Data was analyzed using GLM and LSD tests for separation of means (SAS Institute 1990).

Results and Discussion

The best treatments in terms of pickleworm control were the E2Y45 treatments and Novaluron alternated with Spintor. These treatments also had the lowest damage fruit from pickleworm along with Spintor alone and Synapse. Whitefly counts were low and inconclusive since no treatments were significantly different from the check. In terms of marketable yields, the best treatments were the Avaunt treatment and the high rate of E2Y45. Pickleworm control was a significant factor in the increased yields.

Treatment - rate per acre	Silverleaf rating on 12 July	Average Number of Aphids	Average number of Whitefly adults	Average number of squash bugs	Average number of cucumber beetle	Pickle worms collected in fruit	Weight of pickle worm damaged fruit	Weight of mosaic virus damaged fruit	Weight of clean market-able fruit
1. Untreated Check	0.8 abc	6.7 a	0.5 bcd	0.1 a	0.0 a	12.8 ab	3.8 ab	6 a	13 b
2. E2Y45 0.044 lb ai/a + Dynamic	0.3 c	5.8 a	0.4 cd	0.0 a	0.1 a	0.3 c	0.0 d	17 a	16 b
3. E2Y45 0.044 lb ai/a	0.0 c	4.7 a	0.4 d	0.1 a	0.0 a	0.0 c	0.0 d	15 a	21 ab
4. E2Y45 0.088 lb ai/a	0.3 c	4.3 a	0.6 bcd	0.1 a	0.1 a	0.0 c	0.0 d	14 a	30 a
5. Spintor 2SC 0.078 lbs ai/a	0.5 bc	4.8 a	0.7 bcd	0.2 a	0.1 a	4.5 bc	0.8 cd	13 a	22 ab
6. Novaluron 0.83EC 0.078 lb ai/a	0.8 abc	5.1 a	0.9 ab	0.1 a	0.1 a	9.8 bc	2.5 bc	14 a	21 ab
7. Novaluron 0.83EC 0.078 lb ai/a Alternate with Spintor 0.078 lbs ai/a	1.3 ab	6.6 a	0.8 abc	0.0 a	0.1 a	0.7 c	1.1 cd	15 a	23 ab
8. Avaunt 30 WDG 0.065 lbs ai/a	0.3 c	5.8 a	1.1 a	0.1 a	0.1 a	4.8 bc	2.6 bc	14 a	31 a
9. Synapse 24WG 3oz prod/a	0.8 abc	4.2 a	0.7 abcd	0.1 a	0.1 a	4.5 bc	1.1 cd	16 a	19 b
10. Montana 2FL 2.3 oz prod/a	0.8 abc	3.8 a	0.7 abcd	0.4 a	0.0 a	20.0 a	5.1 a	12 a	19 b
11. Admire Pro 4.6F 10 oz prod/a**	1.5 a	3.8 a	0.5 bcd	0.1 a	0.0 a	5.5 bc	4.3 ab	11 a	21 ab
12. Admire Pro 4.6F 10 oz prod/a** Followed by Novaluron 0.078 lb ai/a	0.0 c	3.0 a	0.4 d	0.1 a	0.1 a	7.5 bc	4.0 ab	11 a	22 ab

* Means within columns followed by the same letter are not significantly different (LSD, P<0.05).