

RESCUE AND NUTRIPHITE DO NOT SIGNIFICANTLY EFFECT YIELD OF CANTALOUPE AND CUCUMBER

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Introduction

Fresh market cucumber and cantaloupe production account for over 16,000 acres of production in the Georgia vegetable industry and total more than \$100 million in farm gate value. A foliar nutrient product from Triangle Chemical called TriCard Rescue and one from Biagro Western Sales called Nutri-phite Magnum have been reported to increase yields in these crops. Nutri-phite Magnum is a 2-0-16 solution while TriCard Rescue is a 7-4-9 solution. These materials were applied according to label protocols to determine their effects on yield of fresh market cucumbers and cantaloupe.

Methods

Cantaloupe transplants (variety "Athena", Syngenta Seed Co.) were produced in a UGA greenhouse. Plots were established at the Coastal Plain Experiment Station Tifton Vegetable Park (elev. 382 feet) in Tifton, GA. Plot land was deep turned and disked and 600 pounds 10-10-10 fertilizer was broadcast. Beds were fumigated with methyl bromide (134 lb. a.i./acre) and black plastic mulch and drip tape installed prior to planting.

Cantaloupes were transplanted on April 25, 2006 into a Tifton sandy loam (fine-loamy siliceous thermic Plinthic Kandudults) soil. "Stonewall" variety cucumbers were direct seeded into the plastic on April 21, 2006. Cantaloupe plots consisted of a single row of plants 50 feet long with two feet between plants and were planted on raised beds that were spaced six feet apart (from center to center). Cucumbers were seeded in single rows with an in-row spacing of 12 inches and plots were 15 feet in length also on similar raised beds. Plots were replicated four times in both tests. The experiments were

arranged in a Randomized Complete Block Design.

TriCard Rescue was applied at a rate of one quart per acre (in 20 gallons of water) and was applied to the foliage 1) seven days after planting; 2) when first male buds appeared; 3) and after each harvest. Nutri-phite Magnum was applied in a similar fashion at the same timings. Applications were made on May 31, June 20, July 7, July 13, July 20 and July 31, 2007. These were compared to an untreated check.

Additional fertilizer was applied through the drip irrigation system approximately weekly from May 3 through July 28. A total of 154 pounds of N and K was applied during the season. Cantaloupes were harvested on July 3, July 13, July 18, July 24 and August 4, 2006 and data collected on yield and fruit number. Other than treatment applications, normal cultural and pest control practices were used. Data were analyzed using the Statistical Analysis System and means separated using Least Significant Difference.

Results

Results are presented in Table 1 and Table 2. The untreated check was numerically lower in yield and fruit number for cucumbers, but the differences were not significant. The average fruit size of cucumbers was largest with the untreated check, but again the differences were not significant. In cantaloupes, although plots treated with Rescue had higher yields and fruit number they were not significantly greater than the other treatments. Fruit from plots treated with Nutri-phite Magnum were significantly larger than those treated with Rescue, but neither was significantly different from fruit in the untreated check plots.

Table 1. Total marketable yield, fruit number and average fruit weight of cucumbers treated with Rescue and Nutriphite and untreated cucumbers at Tifton, Georgia in 2006.

Treatment	Yield (55# cartons)/Acre	Fruit/Acre	Average Fruit Size (g)
Rescue	1,672 A	80,269 A	519 A
Nutriphite	1,723 A	86,558 A	500 A
Untreated	1,650 A	78,771 A	524 A
Mean of Test	1,682	81,866	515
L.S.D. (0.05)	592.8	30,920	44.2
C.V. (%)	20.4	21.8	5.0

Table 2. Total marketable fruit, total fruit weight and average fruit weight of cantaloupe treated with Rescue and Nutriphite and untreated cantaloupe at Tifton, Georgia in 2006.

Treatment	Yield lbs./Acre	Fruit/Acre	Average Fruit Size (lbs.)
Rescue	54,330 A	10,615 A	5.1 B
Nutriphite	51,720 A	9,515 A	5.4 A
Untreated	51,588 A	9,784 A	5.3 AB
Mean of Test	52,546	9971	5.28
L.S.D. (0.05)	10,319	1848	0.15
C.V. (%)	18.7	17.6	2.8