

‘ATHENA’ STILL HARD TO BEAT IN CANTALOUPE TRAILS

William Terry Kelley, Extension Horticulturist, and Denne Bertrand, Research Associate, Tifton Campus, Horticulture Building, 4604 Research Way, P.O. Box 748, Tifton, Georgia 31793, wtkelley@uga.edu

Introduction

Cantaloupes continue to be a major crop for Georgia vegetable producers with over 5000 acres of melons planted in 2006. The crop is worth over \$60 to the state’s farm gate value. ‘Athena’ has been the predominant variety of cantaloupe grown in Georgia for many years. Many attempts have been made to find a melon superior in yield and performance to ‘Athena’. However, ‘Athena’ continues to be popular with growers and buyers. One similar variety, ‘Aphrodite’, has been a suitable replacement, but is considered too large by most growers. This test compared three varieties being tested for commercial release to ‘Athena’ and ‘Aphrodite’ and also looked at how plant spacing could affect the size of ‘Aphrodite’ cantaloupes. All of these cultigens were Syngenta Seed Company releases and lines.

Methods

Two commercially-available cantaloupe varieties and three potential releases were compared at the Tifton Vegetable Park at the Coastal Plain Experiment Station (elev. 382 feet) in Tifton, Georgia. Additionally, ‘Aphrodite’ was planted at two different in-row spacings to determine the effect on fruit size of that variety.

Containerized cantaloupe transplants were produced in greenhouses on the research station. Plot land was deep turned and disked. Beds were laid off and 600 lb/A 10-10-10 was applied and incorporated. Methyl bromide was applied (134 lb. a.i./acre) when black plastic mulch and drip tape were installed. Cantaloupes were transplanted to the field on April 3, 2007 into a Tifton sandy loam soil (fine, loamy, siliceous, thermic Plinthic Kandiudult). Plots consisted of single rows which contained 15 plants each spaced two feet apart. Black plastic covered beds were six feet from center to center. The planting was arranged in a Randomized Complete Block Design with four replications.

Normal cultural practices were used for cantaloupe production in Georgia. An additional 140 pounds/A N were applied through drip irrigation as 7-0-7 for a total of 200 pounds N, 60 pounds P and 200 pounds K. Fungicide and insecticide applications were made according to current University of Georgia recommendations. Drip irrigation was applied as needed.

Cantaloupes were harvested at maturity on June 22, June 27, July 3 and July 13, 2007. Data were collected on fruit number and weight by size class. Results are summarized in Tables 1 and 2.

Results

A significant frost less than a week after transplanting resulted in damage on the leaves of most transplants. That combined with hot and dry conditions the remainder of the spring resulted in smaller than usual melon size overall.

There were no differences among varieties in total weight. Total fruit number was greater in ‘Athena’ and ‘Aphrodite’ at 18” than in ‘EXP 2’ and ‘EXP 3’. In the 4.5-6.0 pound class, there was no difference among varieties for fruit weight, although ‘Aphrodite’ was closer to ‘Athena’ in fruit weight at the closer spacing. Among 3.0-6.0 pound fruit, there were no differences in fruit number.

Table 1. Yield and number of various size classes of five cantaloupe varieties and one variety at two different spacings grown at Tifton, GA in 2007.

Variety	Fruit > 7.5 lbs.		Fruit 6.0-7.5 lbs.		Fruit 4.5-6.0 lbs.		Fruit 3.0-4.5 lbs.	
	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.
Athena	0 a	0 a	0 b	0 b	638 b	3120.0 b	4698 a	16,829 a
Aphrodite @ 24"	0 a	0 a	174 ab	1122.3 ab	1856 a	9408.0 a	4466 a	16,707 a
Aphrodite @ 18"	0 a	0 a	174 ab	1171.6 ab	1392 ab	6867.0 ab	5800 a	20,074 a
EXP 1	0 a	0 a	290 a	1914.0 a	2262 a	11,600.0 a	4466 a	16,695 a
EXP 2	0 a	0 a	0 a	0 b	1740 ab	9002.0 ab	4466 a	16,991 a
EXP 3	58 a	464.0 a	116 ab	754.0 ab	1914 a	9788.0 a	4524 a	16,078 a
Mean of Test	9.7	77.3	125.7	827.0	1633.7	8297.4	4736.7	17228.9
L.S.D. (0.05)	71.4	571.0	204.4	1363.5	1213.9	6142.3	1655.3	6112.4
C.V. (%)	489.9	489.9	107.9	109.4	49.3	49.1	23.2	23.5

One-row plot, 30 ft. long x 6 ft. wide.

Table 2. Yield and number of various size classes, total yield and number and average weight of various size classes of five cantaloupe varieties and one variety at two different spacings grown at Tifton, GA in 2007.

Variety	Fruit < 3.0 lbs.		Fruit 3.0-6.0 lbs.		Total All Sizes		Avg.	Avg.
	No.	Wt.	No.	Wt.	No.	Wt.	3-4.5 lb.	4.5-6 lb.
Athena	5684 a	12,740 a	5336 a	19,949 b	11,020 a	32,689 a	3.58 abc	4.85 a
Aphrodite @ 24"	2610 b	6803 b	6206 a	26,115 ab	9106 ab	34,040 a	3.73 ab	5.19 a
Aphrodite @ 18"	3596 ab	8500 ab	7192 a	26,941 ab	10,962 a	36,613 a	3.48 c	4.93 a
EXP 1	2320 b	5498 b	6728 a	28,295 a	9338 ab	35,708 a	3.74 ab	5.11 a
EXP 2	2726 b	6635 b	6206 a	25,993 ab	8932 b	32,628 a	3.78 a	5.23 a
EXP 3	1972 b	4797 b	6438 a	25,865 ab	8584 b	31,880 a	3.54 bc	5.00 a
Mean of Test	3151.3	7495.5	6370.3	25526.3	9657.0	33926.1	3.64	5.05
L.S.D. (0.05)	2469.7	5663.4	1911.2	8047.8	2027.1	6766.8	0.21	0.46
C.V. (%)	52.0	50.1	19.9	20.9	13.9	13.2	3.9	6.0

One-row plot, 30 ft. long x 6 ft. wide.