

Yield of New Muskmelon Cultivars in East KY

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Eastern Cantaloupe production has been identified as one of several profitable crops that Kentucky farmers can produce. Potential yields of 8,000 to 10,000 fruit/ac, with gross returns of \$5000.00 are possible. Variable costs are roughly \$1,000 per acre and net returns to the grower are in the \$2,200 range. One farm cooperative, several grower marketing associations and numerous farmer's market producers are currently producing cantaloupes for fresh market sales. This cultivar trial compares Athena which is currently produced on 75% of all Eastern cantaloupe acreage with five other cultivars which produce similar fruit. The cultivars were compared as to fruit yield and size.

Methods:

Six cantaloupe cultivars were compared to determine yield, and size for potential use by Kentucky growers for wholesale, roadside and farmers markets. Cantaloupe seeds were planted in plug trays and grown in the greenhouse for 4 weeks before transplanting on 5/28/02. Cantaloupes were transplanted through black plastic on 5/28/02. Cultivars were planted in a randomized complete block. There were 4 replications with 5 plants/replication. Each replication was 15 feet long with plants set 3 feet apart in the row. Rows were 7 feet on center. Soil test results are shown in Table 1. A total of 150 pounds of nitrogen was applied through drip lines as either ammonium or potassium nitrate. Curbit 3E and Gramoxone Extra (1 qt+ 2pt)/ac was applied for weed control between the plastic one week after transplanting. An additional spot spray was made 14 days later to improve control. Admire 2F at the rate of 24 fl. oz/ac was applied as drench just after transplanting using a backpack sprayer with the nozzle removed. Either mancozeb or chlorothalonil was used on a weekly basis with three applications of Quadris applied on alternate weeks during July and August. Endosulfan 3EC or Pounce 3.2EC was applied for insect control when needed. Following harvest the cantaloupes were sold through a local produce stand. The owner observed customer reactions to the various melons and reported buyer preferences and comments when he came to obtain more melons. He also began selecting only those melons that his customers wanted.

Results:

There was no significant difference in fruit number per acre for the six cultivars. There was a significant difference between Athena and the other 5 cultivars for average fruit weight. Odyssey had the highest yield in the trial producing significantly more cwt/acre than Athena. The other four cultivars cwt/ac were not different from Odyssey or Athena. Odyssey looked a lot like a big Athena. Vienna fruit were not as attractive as the other cultivars and tended to have more cracking around the stem end. However, all six muskmelon cultivars produced marketable fruit. At the roadside market Minerva, Eclipse and RML 8793VP were the first to sell. These are large, attractive melons that look like the Indiana melon that consumers wanted. Unfortunately, they are softer and do not store or

ship as well as Athena. Athena and Odyssey also sold well as long as they had good size (larger than 5 lb.) Vienna sold only if nothing else was available. None of the new cultivars tested is likely to replace Athena in the commercial wholesale market because produce buyers demand that melon. Odyssey might be mixed with Athena to improve overall fruit size.

Table 1	2002 Soil Test Results					
pH	buf-pH	P	K	Ca	Mg	Zn
6.44	6.87	63	243	3245	187	6.4

Table 2.	2002 Cantaloupe Cultivar Trial - Quicksand					
Cultivar	Days to Mat*	Seed source	Avg wt (lb)/ fruit	Marketable Fruit/ac	Total cwt/ac	Comments (shape and appearance)
Eclipse	63	SW	8.1 A	5906 A	480 AB	large size, good taste and quality, local sales
Odyssey	65	Sun	8.2 A	6327 A	519 A	heavy netted, shallow sutures, holds & ships well.
Vienna	63	SW	8.15 A	5082 A	415 AB	medium shelf life, cracks
RML 8793VP	63	SW	8.8 A	4978 A	439 AB	large, attractive, similar to Minerva, local sales.
Athena	63	SW	6.5 B	5393 A	351 B	firm flesh, good shipper.
Minerva	65	SW	8.6 A	4978 A	426 AB	large, very attractive fruit, local sales

LSD5%			1.21	2245	146	
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*** Day from transplanting to first fruit harvested.**

SW = SeedWay, 1225 Zeager Rd., Elizabethtown, PA 17022

Sun = SUN SEEDS, 18640 Sutter Blvd., Morgan Hill, CA 95037