

Honeydew and Specialty Melon Evaluation

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Interpretative Summary

Five cultivars of honeydew and speciality type melons were evaluated in 2001. Performance from all cultivars was less than optimum. Foliage diseases and fruit cracking and rotting resulted in an extremely large percentage of the fruits having to be graded as culls. This also resulted in smaller fruits than desired. 'Passport', an early maturing, speciality type melon has characteristics that merit further evaluation for local fresh market production.

Introduction

In the muskmelon family, several other types from Europe and Asia, often referred to as speciality melons, are gaining in popularity in the United States. These melons are of highest eating quality and are smaller than typical cantaloupes and honeydew melons. Fruits average 1 1/2 to 2 lbs and are very sweet and aromatic and with distinctive smooth greenish to yellow rind. Most of these types of melons are not especially resilient for lasting quality and are recommended for local market or home garden use. They have a softer rind/skin and do not hold as well as shipping type cantaloupes and honeydew melons.

Materials and Methods

Five hybrid cultivars were evaluated at Knoxville Experiment Station in 2001. Seeds were grown in the greenhouse in 4.5 in peat pots. Plants were transplanted to the field on May 03, 2001. Experiment was arranged in a randomized complete block with 4 replications. Individual plots consisted of 11 hills/plot spaced 24 inches apart and 2 plants per hill. Black plastic on 6 inch raised beds equipped with trickle irrigation was utilized. All plots were fertilized with 500 lbs/a broadcast application of 10-10-10 prior to mulch installation. Additional nitrogen totaling 60 lbs/a N was applied in weekly increments in drip irrigation with equal amounts from calcium nitrate, potassium nitrate and ammonium nitrate.

Results and Discussion

Common to all the cultivars evaluated in 2001 was observed their lack of resilience relative to lasting quality compared to typical shipping type cantaloupes. Fruit cracking and rotting and foliage diseases were quite prevalent in all the cultivars evaluated. Fruit cracking resulted in a large percentage of the fruits being graded as culls as reflected in the numbers of culls (Table 1) and the low percentages of marketable fruits (Table 2). Cultivar 'Alienor' produced few total fruits and practically no marketable fruits. The

incidence of foliage diseases was severe on this cultivar and thus its performance under 2001 environmental conditions was unsatisfactory. From previous experience, the fruit numbers from the honeydew types, 'Early Dew', 'Honey Brew', and 'San Juan' were about typical for honeydews under Tennessee conditions, however, individual marketable fruit weights were a little less than expected. The same is true for sugar content. Sugar content varied considerably among fruits of the given cultivars. This could partially be a result that we were not familiar with the maturity characteristics of some of the speciality types and may not have harvested them at the optimum maturity as they do slip as do typical muskmelons. Cultivar 'Passport', a speciality type, matured very early with sugar content of many fruits in the range of 12-13% (EBrix). This cultivar appears to have potential for local fresh market sales and merits further evaluation.

Table 1. Numbers of marketable and cull fruits of honeydew and speciality melon cultivars evaluated the University of Tennessee Knoxville Experiment Station, 2001.

Cultivar	Marketable	Culls	Total
Early Dew	403 ab	4384 a	8415 a
Honey Brew	4808 ab	3677 ab	8485 a
San Juan	5869 a	2546 abc	8415 a
Alienor	283 c	990 c	274 b
Passport	2263 bc	1839 bc	4102 ab

Means in a column followed by the same letter do not differ significantly according to

Duncan's Multiple Range Test at P= 0.05.

Table 2. Weights of marketable and cull fruits, percentage marketable fruits and sugar content of honeydew and speciality melon cultivars evaluated the University of Tennessee Knoxville Experiment Station, 2001.

Cultivar	Fruit Weight		Fruits Marketable	Sugar Content
	Marketable	Culls		

Early Dew	2.1c.	2.9b	48ab	8.5a
Honey Brew	3.3a	4.2a	59a	9.5a
San Juan	2.4abc	2.6b	68a	9.0a
Alienor	1.4c	2.8b	24b	7.7a
Passport	3.1ab	1.9b	57a	7.5a

Means in a column followed by the same letter do not differ significantly according to Duncan's Multiple Range Test at P= 0.05.

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This research represents one season's data and does not constitute recommendations. After sufficient data is collected over the appropriate number of seasons, final recommendations will be made through research and extension publications.