



Title: Report: Shipper Cantaloupe and Round Melon Variety Evaluation 2009

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Introduction:

Consumers today increasingly demand high quality, full flavored produce. In addition, the single most important trend in produce is the demand for locally produced fruits and vegetables. While consumers vary in their definition of "locally produced" there is no doubt that good flavor is one important characteristic that comes in their package of expectations. In 2008, the researcher held a non-replicated muskmelon trial at the Penn State Southeast Research and Extension Center (SEAREC) to screen several new varieties and evaluate the need for a full replicated trial comparing these varieties to the present standards (Aphrodite, Athena, Burpee Hybrid and Eclipse). Several of the varieties in this screening trial were determined to be above average in flavor and texture, therefore we applied to the PVGA for funding for a replicated trial in 2009.

The overall objective of this program is to identify muskmelon and new round melon cultivars that have promise as successful fresh market varieties for Pennsylvania. A challenge in this type of trial is in balancing the needs of larger commercial growers that value primarily shipping characteristics and appearance with the somewhat different demands of the direct market grower that may place a higher value on taste followed by appearance and shelf life. In this program we evaluated marketable yield and had a tasting for growers at the PVGA Field Day at the SEAREC on August 13, 2009.

Methodology:

Three plantings were installed in late May and early June 2009. Each of the grower cooperators received at least 10 plants of each variety for a non-replicated plasticulture trial. On these farms, we were only planning on collecting the growers' subjective observations as to the market potential of the newer varieties as compared to the standards. In order to collect yield data, we planted a replicated planting consisting of 4 randomized blocks of each cultivar at SEAREC. Each plot consisted of 10 plants on 2' spacings. All plots at SEAREC received season long applications of insect and disease sprays consistent with the Penn State Commercial Vegetable Guide. All plants were treated with RootShield immediately prior to planting. Harvests were twice per week starting on August 12 and ran until the plots were exhausted.

Results:

Harvest Data Summary

Variety	Marketable fruit # 4 plots	Marketable fruit wgt. Lbs. 4 plots	Cull fruit # 4 plots	Cull fruit wgt. Lbs. 4 plots	Total wgt. mkt /acre lbs.	Total # fruit /acre
Diva	71	435.4	14	70.02	39,513	6443
Fantasia	56	221.15	27	96.63	20,069.4	5082
Strike	63	297.98	24	106.18	27,041.7	5717
Eclipse	81	434.46	5	18	39,427.3	7351
Aphrodite	43	313.9	13	88.55	28,486.4	3902
Masters Choice	73	351	22	87.9	31,853.3	6625
Twice as Nice	33	142.27	3	9	12,911	2995
Pixie	42	90.45	7	13.25	8,208.34	3812
Orange Sherbet	43	230.89	17	57.17	20,953.26	3902
Sarah's Choice	73	327.43	22	87.36	29,714.27	6625
Burpee Hybrid	84	373.5	35	126.34	33,895.13	7623
Athena	53	289.78	19	97.65	26,297.54	4810
Atlantis	64	341.38	13	71.22	30,980.24	5808
Wrangler	101	365.21	11	31.17	33,142.8	9166
OUI	57	156.61	27	71.2	14,212.36	5173

Due to the unusually wet and cool season, several varieties performed very poorly. Since the yields for some varieties were well above those indicated in Knotts Handbook for Vegetable Growers Fourth Edition at #17,500 – 20,000/ acre, this can be attributed to these varieties poor performance under this seasons conditions.

Tasting notes:

An informal tasting was held at the PVGA field day at SEAREC on August 13, 2009 and at Weisers Orchards in the field during harvest. Athena, Aphrodite, and Atlantis all had similar flavor profiles and were judged flavorful and marketable. Wrangler was not only flavorful, but also had an aroma that kept tasters coming back for more. Orange Sherbet was found to have good flavor, but the texture was deemed a little too firm (the word toothsome was used). Other varieties such as Masters Choice and Sarah's Choice tasted OK, but received little in the way of second sample requests. Not all of the varieties were available at the field day due to the delayed season and losses due to disease in the field.

Conclusions:

Varieties like Eclipse, Burpee Hybrid, and Pixie performed poorly in this program. Many of these plants succumbed to Fusarium plant and fruit rots. On the other hand, Wrangler not only yielded well, but our tasters found the fruit flavor excellent with an especially enticing aroma. Atlantis, Athena, Aphodite, Orange Sherbet, Sarah's Choice and Masters Choice all provided good yields of fruit that tasters found pleasant. Due to the somewhat unusually cool and wet weather, this researcher recommends that this trial be repeated with the exception of Eclipse which will not be available any longer and the addition of Ariel, a new release.