

Title: Report: Shipper Cantaloupe and Round Melon Variety Evaluation
2010 season

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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. The Pennsylvania Vegetable Growers Association funded this variety trial program in 2009 and 2010.

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 and at the PVGA growers twilight meeting also held at SEAREC on August 5, 2010.

Methodology:

Both years replicated plantings were installed at SEAREC in late May and early June. Several 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. For our yield and brix 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 transplants were drenched prior to planting with Rootshield. The original plants that were to be installed at SEAREC had to be replaced as the field was too wet to create raised beds until after the first week in June.

Results:

Harvest Data Summary

| Variety | Marketable Fruit /Acre | Marketable pounds / Acre 2010 | Marketable pounds /acre 2009 | Cull weight pounds 2010 | Brix | Flavor | Average size pounds 2010 |
|-----------------|------------------------|-------------------------------|------------------------------|-------------------------|------|-----------|--------------------------|
| Sugar Cube | 6,715 | 19,077 | n/a | 11,160 | 13 | Excellent | 2.84 |
| L'il Lope | 8,712 | 22,760 | n/a | 8,042 | 13.1 | Excellent | 2.61 |
| Camposol Canary | 3,902 | 22,288 | n/a | 10,450 | 11 | Very good | 5.71 |
| Atlantis | 5,173 | 16,388 | 30,980 | 18,889 | 8.4 | Fair | 3.17 |
| Sensation | 2,178 | 10,392 | n/a | 13,724 | 8.4 | Good | 4.77 |
| Strike | 2,450 | 25,301 | 27,042 | 15,509 | 8.4 | Very good | 10.3 |
| Wrangler | 4,447 | 16,675 | 33,142 | 8,505 | 10.7 | Excellent | 3.75 |
| Masters Choice | 3,358 | 18,665 | 31,853 | 23,050 | 10 | Very good | 5.59 |
| Athena | 3,449 | 18,558 | 26,297 | 17,721 | 9.25 | Very good | 5.38 |
| Aphrodite | 1,634 | 9,501 | 28,486 | 18,422 | 10 | Very good | 5.81 |
| Grand Slam | 2,631 | 15,163 | n/a | 24,176 | 7.25 | Fair | 5.76 |
| Orange Sherbet | 3,176 | 21,999 | 20,953 | 16,080 | 11 | Excellent | 6.93 |
| Snow Leopard | 8,591 | 24,732 | n/a | 7,805 | 12 | Very good | 2.88 |
| Ariel | 2,087 | 12,188 | n/a | 24,920 | 10.1 | Good | 5.84 |
| Diva | 726 | 6,153 | 39,513 | 39,657 | 7.7 | Fair | 8.48 |
| Fantasista | 2,723 | 9,620 | 20,069 | 23,686 | 10.7 | Good | 3.53 |
| Goddess | 998 | 6,369 | n/a | 23,037 | 9.5 | Good | 6.38 |

Note: n/a under 2009 marketable yields are for varieties that were not in last years program.

Discussion:

The 2009 and 2010 seasons were completely different and it shows in the marketable yields. The 2009 season was cool and wet while the 2010 season was only wet at the outset, then turned very hot and dry. Cucumber beetles were controlled readily in 2009,

but seemed to keep coming throughout 2010. Some varieties such as Aphrodite that have been very consistent in both our trials program and with growers', just did not perform well in the extreme heat of 2010. The yields for 2009 were inserted into the table above to provide some reference point for these differences.

After several presentations of the 2009 results, growers recommended L'il Lope, Sugar Cube and Snow Leopard, so those varieties were added to the program. Other varieties that were included this year, but not in last years' trial were either recent releases or recommended by others.

Recommendations:

Athena: This is still the standard by which other shipper types are compared. With good yields and flavor as well as the ability to hold up well in large bins, this remains the single most useful melon.

Aphrodite: Second only to Athena as a shipper type, Aphrodite typically yields well with larger fruit. Good flavor. The extreme heat of 2010 had a very negative impact on this variety.

Strike: After three years of trialing this variety, it probably deserves more attention. The size was oddly extra large in 2010, but in the #5-6 class in 2008 and 2009. This one develops good flavor and sugars.

Wrangler: Although the yield for this variety were down in 2010, the unusually pleasant aroma, high sugar levels and excellent flavor make this a variety that direct marketers should consider adopting. At growers tastings, it is the single variety that everyone goes back repeatedly for more.

Masters Choice: We originally looked at Masters Choice in 2008 and were pleased with the quality, but it lost a slot in the 2009 program simply due to the number of varieties to be trialed. With good yields, flavor and sugar levels, this one belongs at direct market stands.

Sugar Cube: After presenting the results of the 2009 program at the Mid-Atlantic Fruit and Vegetable conference, several growers accosted the researcher and insisted that this variety be included if another program was installed. Good yields, excellent flavor and sugar levels with the added bonus of fitting the 'personal' size class, make this a melon worth planting.

Lil' Loupe: After presenting the results of the 2009 program at the Mid-Atlantic Fruit and Vegetable conference, several growers accosted the researcher and insisted that this variety be included if another program was installed. Good yields, excellent flavor and sugar levels with the added bonus of fitting the 'personal' size class, make this a melon worth planting (same remarks as Sugar Cube).

Snow Leopard: This researcher has long been seeking a white fleshed melon that did not 'melt' as harvest approached. Snow Leopard has white skin with green spots that will really stand out at your market. With a brix level of 12, the sugar levels are good and the flavor as good or better than many western honeydews.

Camposol Canary: If you are looking for a yellow skinned, green fleshed melon with good flavor, reasonable packout and high sugar levels, then this one may fit your needs. Our tasters found the flavor and appearance very good.

Orange Sherbet: This is a truly unusual melon. It has the best looking skin of any non-smooth skinned type. The sugar levels always run high, and the flavor excellent. The sole characteristic that sets it oddly apart is the toothsome flesh, while not hard, the flesh runs very firm. This one will attract attention in a direct market.