

## Specialty Melon Variety Evaluation

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### Introduction

Fifteen specialty melon varieties were evaluated in this trial. These included ananas, Christmas, honeydew, galia, canary, Sicilian, Piel de Sapo, and specialty hybrid types of melons. This trial was designed to evaluate a number of different specialty melons under Kentucky conditions.

### Materials and Methods

All varieties were seeded on April 25 into cell packs (72 cells per tray) at the Horticulture Research Farm in Lexington. Cell packs were set on a mist bench with bottom heat until seeds germinated, then moved to a dryer, cooler bench in the greenhouse, where the seedlings were thinned to one per cell. Plants were set into black plastic mulched, raised beds using a waterwheel setter on May 29. Each plot was 21 feet long, with 7 plants set 3 feet apart within the row and 6 feet between rows. Each plot was replicated 4 times in a randomized complete block design with 6 feet between replications. Drip irrigation was used to provide water and fertilizer as needed.

Fifty lbs N/A as ammonium nitrate were applied and incorporated into the field prior to bed shaping and planting. The plot was fertigated with a total of 60 lbs N/A as ammonium nitrate divided into eight applications over the season. The systemic insecticide Admire 2F was applied to the base of each plant as a drench treatment the day after planting, using the maximum rate of 24 fl oz/A. Foliar insecticide applications during the season included Sevin and Pounce. Fungicide applications included a pre-plant application of Ridomil Gold, and foliar applications of Bravo and Quadris. A pre-emergent herbicide, Curbit was applied and incorporated between the rows as the vines began to grow off the plastic mulch. One fruit from each replication was measured and evaluated for flavor, soluble solids, interior color, rind color and net type.

### Results

The use of Admire 2F helped to reduce the number of early cucumber beetles. Early in the season, cool rainy weather prevailed and this was followed by hot dry periods. The dry weather helped to reduce the severity of some diseases, although disease became more destructive mid to late season. Very little virus was observed in the plot. Early vine cover was thick, with little plant death. Plants were generally harvested twice a week, more often at the beginning due to the quick ripening of the galia and ananas type melons.

**Honeydew type.** Sundew and Honey Brew performed very well. These melons were also two of last year's best performers, with high yield (Table 1) and high sugar (Table 2). Sweet Delight also performed well, but it produced some oddly shaped fruit making it less marketable. This season the honeydews exhibited less surface checking, and developed a slight yellow blush when fully ripe.

**Christmas type.** The Christmas type melons in this trial were St. Nick and Sweet Barcelona. Although Sweet Barcelona had the higher yield, St. Nick had a more desirable flavor as well as a higher sugar content (Table 2). These are large melons averaging over ten pounds and have a distinctive taste as well as a very crisp, white flesh. For storage, Christmas melons should be harvested before slip. Slight checking of the surface was observed at maturity.

**Canary type.** Golden Beauty and Dorado were both excellent melons and marketable yields were identical. Dorado was slightly smaller than Golden Beauty and was judged to taste slightly better than Golden Beauty (Table 2); however, Golden Beauty did not produce any cull melons. Both varieties had excellent quality, were very attractive and were observed to store for an extended period under refrigeration and maintain eating quality.

**Ananas type.** Three ananas type melons were evaluated, HSR 4002B, HSR 2528, and Dove. Yield was about the same for all three varieties. None of the ananas melons were judged to perform well in these trials. These varieties also ripen rapidly and were prone to decay if not picked promptly.

**Miscellaneous melon types.** Sapomiel, a Piel de Sapo melon, performed very well. It was attractive, similar to a Christmas melon and had an excellent flavor. Sweet Dreams, a galia type melon, had an excellent taste and high sugar content. This is an excellent quality melon for local sales; however, the exterior is not as attractive as we would like. Branco Perfecto, a Sicilian melon, looked very much like a honeydew, except it had the wrinkly skin characteristic of a canary melon. Branco Perfecto did not have the exceptional sugar content and eating quality that we would like. The two specialty hybrid melons, Gourmet and HSR 4011, both ripened rapidly and had an off-flavor, particularly if they were a little overripe.

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**Table 1. Specialty melon variety trial yield and fruit characteristics, Lexington, Ky., 2002.**

Variety	Melon Type <sup>1</sup>	Seed Source	Days to Harvest	Yield (cwt/A) <sup>2</sup>	Avg. No. Melons/A	Avg. Wt./fruit (lbs.)	No. Melons/A Culls	Outside Measurements			Seed Cavity	
								Length (in.)	Width (in.)	Flesh Thickness (in.)	Length (in.)	Width (in.)
Sundew	HD	SS	85	747.1 a	10900	6.9	173	8.5	7.8	1.8	5.6	4.0
Honey Brew	HD	AC/RU	90	714.4 ab	10100	7.1	432	9.4	7.4	1.9	6.2	3.7
Sweet Delight	HD	RU	90	704.4 ab	9000	7.8	86	8.9	7.8	1.7	5.8	4.6
Sweet Barcelona	CR	BU	84	739.7 ab	6800	10.8	346	14.1	8.3	2.0	10.0	4.0
St. Nick	CR	HR	84	668.3 abc	6600	10.2	346	10.5	7.8	2.4	7.1	3.4
Golden Beauty	CA	JS	80	654.8 abc	9700	6.8	0	10.3	7.4	1.8	7.1	3.8
Dorado	CA	HR	85	654.3 abc	10600	6.2	432	9.5	7.0	1.9	6.4	3.4
HSR 4002B	AN	HL	95-100	580.4 abcd	10400	5.6	432	7.9	6.9	1.7	4.9	3.3
HSR 2528	AN	HL	95	547.9 bcd	10200	5.4	432	8.2	6.6	1.7	5.5	3.5
Dove	AN	HL	75	508.1 cd	10400	4.9	1210	6.8	6.4	1.7	4.0	3.0
Branco Perfecto	SC	SW	92	637.0 abc	7900	8.1	432	9.4	7.3	1.7	5.8	3.7
Sapomiel	PD	UG	94	586.2 abcd	8100	7.2	346	10.8	7.7	1.8	7.6	4.0
Sweet Dreams	GA	SW	79	493.7 cd	7300	6.8	1815	7.7	7.4	2.2	4.3	3.0
Gourmet	SH	HL	73	547.6 bcd	9900	5.6	1988	8.0	7.1	1.9	5.1	3.4
HSR 4011	SH	HL	75-80	417.8 d	7300	5.8	2506	7.0	7.0	1.9	3.5	3.1

<sup>1</sup> Melon Type HD=honeydew, CR=Christmas, CA=Canary, SC=Sicilian, PD=Piel de Sapo, AN=ananas, GA=galia, SH=specialty hybrid.

<sup>2</sup> Numbers followed by the same letter are not significantly different (Duncan Waller LSD P=0.05). Cwt=hundreds of pounds per acre.

**Table 2. Specialty melon trial fruit characteristics, Lexington, Ky., 2002.**

Variety	Flavor (1-5) <sup>1</sup>	Sugar (%)	Interior Color <sup>2</sup>	Rind Color <sup>3</sup>	Fruit Shape	Cracking (1-4) <sup>4</sup>	Net Type <sup>5</sup>	Comments
Sundew	4.5	12.8	cr-lg	lg	oval	1	na	Doesn't slip, attractive exterior and interior.
Honey Brew	4.4	12.5	cr-lg	lg	oval	1.25	na	Doesn't slip, some surface checking.
Sweet Delight	4.4	12.9	cr-lg	lg	oval	1	na	Doesn't slip, some oddly shaped, attractive interior.
Sweet Barcelona	2.6	10.4	cr-lg	dg w/yl	oblong	1	na	Doesn't slip, coarse surface checking, distinctive exterior.
St. Nick	4.3	13.2	cr-wh	dg w/lg	oblong	1	na	Slips at full/over maturity, harvest before slip for storage, light surface checks, flesh, distinctive exterior.
Golden Beauty	4.3	13.4	cr-lg	dy	oblong	1	na	Doesn't slip, very attractive, wrinkled exterior, harvest when dark yellow.
Dorado	4.6	14.5	cr	dy	oblong	1	na	Doesn't slip, attractive interior and exterior, harvest when dark yellow.
HSR 4002B	3.0	9.92	lo	tn	oblong	1	md	Stem slips when ripe, attractive.
HSR 2528	2.9	8.9	cr	tn	oval	1	lt	Stem slips when ripe, attractive interior and exterior.
Dove	3.4	10.7	cr	tn	oval	1.3	lt	Stem slips when ripe, becomes overripe very quickly, must be harvested at first of exterior yellowing.
Branco Perfecto	4.0	11.6	cr	lg	oblong	1	na	Doesn't slip, wrinkly exterior, slightly pink cavity walls.
Sapomiel	4.5	13.8	cr	dg w/yl	oblong	1	na	Doesn't slip, surface checks, large fruit, attractive exterior.
Sweet Dreams	4.6	12.8	lo-cr	gr/yl	oval	1.5	lt	Stem slips when ripe, becomes over ripe very quickly, course netting, distinctive attractive interior, must be harvested at the first sign of exterior yellow.
Gourmet	3.8	10.6	cr	tn	oval	1.5	md	Stem slips when ripe, becomes overripe very quickly, attractive exterior, must be harvested at the first sign of exterior yellow.
HSR 4011	3.9	11.0	cr-wh	lg/yl	round	1.5	lt	Stem slips when ripe, course netting, distinctive exterior, small seed cavity.

<sup>1</sup>Flavor 1=poor, 5=excellent, sweet taste, pleasant texture.

<sup>2</sup>Interior color lo=light orange, cr=cream, lg=light green, wh=white.

<sup>3</sup>Rind color lg=light green, gr=green, dg=dark green, yl= yellow, dy=dark yellow, tn=tan

<sup>4</sup>Cracking 1= little or no cracking, 4=severe cracking & fruit splitting.

<sup>5</sup>Net type lt=light netting, md=medium netting, hv=heavy raised netting, na=none.