

In the 1985 trial, powdery mildew on 'Early Summer Gold' was markedly less severe than on most of the other cultivars tested (Table 4). For example, on 20 Feb. and 6 Mar., the average number of mildew foci per 6 midcanopy leaves of 'Early Summer Gold' was only 2% and 7%, respectively, of that found on 'Sundance', the most heavily diseased cultivar on each date. 'President' and 'Cracker' also had generally lower disease ratings.

Mildew ratings were consistently higher on the yellow crookneck cultivars 'Sundance', 'Sunrise', and 'Dixie' (Table 4).

It is evident from these 3 years of replicated field trials that differences in susceptibility to powdery mildew exist among several of the common commercial cultivars of summer squash. The zucchini type squash were, on a whole, less susceptible to powdery mildew than the yellow squashes. In almost all cases, the cultivars noted as less susceptible to powdery mildew have been zucchini types. 'Richgreen', and 'Burpee Hybrid' were among the least diseased zucchini cultivars.

The yellow crookneck types 'Sundance' and 'Dixie' (currently popular in commercial plantings in Dade County) and 'Sunrise' were among the most susceptible varieties tested. Frequent applications of fungicide are made to summer squash in Dade County to contain powdery mildew below damaging levels. The recent registration of triadimefon has helped growers control this disease where inconsistent results have been seen with older materials (6,8). Use of highly susceptible cultivars certainly suggests increased dependence on a one-dimensional control program.

Recently, at least one case of reduced performance of triadimefon has been noted in Dade County. Spilker and Noegel (9) have warned that triadimefon is less effective against *S. fuliginea* than against *E. cichoracearum*. Using differences in conidial characteristics between the 2 genera (9), we did, indeed, find a large portion of the powdery mildew foci in this field to be *S. fuliginea*. This observation supports the thesis that extensive use of systemic, "site-specific" (7) fungicides can lead to rapid reduction in fungicide performance in commercial fields.

Development of tolerance to highly effective, albeit narrow spectrum, fungicides could conceivably be mitigated by the use of an integrated approach to control of powdery mildew. 'Cracker' has compared favorably in horticultural characteristics with other yellow squash cultivars in other parts of the state (1,2). It may be a candidate for more extensive planting in Dade County.

The excellent performance of 'Early Summer Gold' in our tests suggests that it also be considered for increased commercial use. However, this cultivar is an open pollinated variety, with lower yield potential than the hybrids currently used in commercial production. The greatest potential for 'Early Summer Gold' can be as a source of germplasm for the development of improved cultivars with lower susceptibility to powdery mildew, good yields, and favorable quality traits.

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EVALUATION OF MUSKMELON CULTIVARS FOR SOUTHWEST FLORIDA: SPRING AND FALL 1984

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Abstract. Muskmelon (*Cucumis melo* L. var. *reticulatus* Ser.) cultivars and advanced breeding lines were evaluated in re-

plicated trials during Spring and Fall 1984 at the Gulf Coast Research and Education Center in Bradenton, Fla. Nineteen entries in the spring and 20 in the fall were examined for marketable yield, earliness of production, and fruit characteristics such as length, diameter, weight, cavity size, flesh width, and soluble solids. In the spring, yields ranged from 100 to 286 hundredweight/acre. There were no significant differences among 'Ambrosia', 'Florida 93-8', 'Edisto 47', 'Planter's Jumbo', 'Magnum 45', 'Summet', and 'Dixie Jumbo' with respect to high yield. Three cultivars produced fruit with soluble solids above 12% ('Galia', 'Florida 93-8', and 'Florida 93-71'). Only 'Saticoy' was below U.S. No. 1 grade of 9% soluble solids. In the fall, yields ranged from 164 to 378 hundredweight/acre. Greatest yields came from 'Planter's Jumbo'

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and 'HXP 3587.' Soluble solids ranged from 6.1 to 10.6% with only 5 cultivars over 10% ('Florida 93-71', 'Florida 93-8', 'Honeyloupe', 'Luscious', and 'Ball 1776').

Muskmelon is a minor crop in Florida, as reflected in the fact that of 3 major marketing surveys, only one mentions Florida muskmelon production, and then in just a paragraph (2,3,4). To summarize this singular report (4), the production areas are concentrated in the southwest and north central parts of Florida. Much of the harvest is sold at local markets and farm stands. Harvest season begins in the southwest and proceeds north, peaking in May and June. Limited production occurs in the fall in the southwest and west-central areas. It is likely that acreage may expand in the future.

Even though production of muskmelons is not great at the present time, there is still a need to identify varieties with superior performance. Increased muskmelon production in Florida will likely occur with the introduction and identification of cultivars with climatic adaptation to the state. Replicated muskmelon cultivar trials were conducted at the Gulf Coast Research and Education Center in Bradenton, Fla. in Spring and Fall 1984.

Materials and Methods

Spring 1984. The land had been treated in Jan. 1983 with 1 ton dolomite/acre and 600 lb./acre superphosphate (0-8-8-0) containing 80 lb./ton micronutrients as F 503 oxide. The land was in row crop production before this trial. Beds were formed in late Jan. 1984 and a full bed surface dressing was incorporated 3-4 inches and included 18-0-21-1.2 (N-P-K-Mg) at 600 lb./acre. An acre was equivalent to 4840 linear feet of finished bed. The beds were fumigated with 67% methyl bromide: 33% chloropicrin at 350 lb./acre. Two bands of fertilizer (18-0-21-1.2 at 1452 lb./acre) were placed in narrow grooves on the bed surface 9 inches to each side of the plant row. The beds were then covered with black polyethylene. The 30-inch wide beds were spaced on 9.0-ft centers with lateral irrigation ditches (seepage irrigation) spaced every 4 rows.

Seed of 19 muskmelon entries (Table 1) were sown on 2 Feb. 1984 into containerized planter flats (1½ inch × 1½ inch square cells, Todd model #150) filled with a peat:vermiculite media (1:1, v:v) amended with dolomite, superphosphate, and Micromax at 16.9, 5.6, and 1.1 lb./yd³ of media, respectively.

Transplants were set in the field on 5 Mar. 1984 and watered in with soluble 20-88-16.6 fertilizer at 5 lb./100 gal of water. Severe weather conditions and high mole cricket populations caused some transplant loss, and resetting of the field occurred until 16 Mar. 1984. Plants were set in a single row down the center of each bed with 30-inch spacing between plants. The trial consisted of 3 replications of 8 plants per plot which were arranged in a randomized complete block design. Registered pesticides were applied routinely for disease control and as needed for insect population control.

Fruit was harvested beginning 10 May 1984 and continued at regular intervals through 20 June 1984. Melons were counted and weighed, and the first 5 mature fruit from each plot were also measured for length, diameter, cavity size, flesh thickness and percent soluble solids (sugar content).

Table 1. Cultivars and breeding lines studied in the 1984 muskmelon variety trials.

Cultivar or breeding line	Type ^x	Season ^y	Source ^x
All Star	F ₁	F	Harris Moran
Ambrosia	F ₁	S, F	Burpee
Arava (green flesh)	op	S, F	Israel
Ball 1776	F ₁	S, F	Ball
Dixie Jumbo	F ₁	S, F	Twilley
Early Dawn	F ₁	S, F	Harris Moran
Edisto 47	op	S, F	Arco
Florida 93-8	F ₁	S, F	AREC-Leesburg
Florida 93-71	F ₁	S, F	AREC-Leesburg
Galia (green flesh)	op	S, F	Israel
Gold Star	F ₁	S, F	Harris Moran
Gretel	F ₁	S	Asgrow
Harvest Pride	F ₁	F	Castle
Honeybush	op	S	Burpee
Honeyloupe	op	F	Ferry-Morse
Luscious	F ₁	S, F	Park
Magnum 45	F ₁	S, F	Petoseed
M649	F ₁	F	SG Seeds
Planter's Jumbo	op	S, F	Burrell
Saticoy	F ₁	S, F	Petoseed
Summet	F ₁	S, F	Asgrow
Supermarket	F ₁	S, F	Petoseed
Superstar	F ₁	S	Harris Moran

^xF₁ = hybrid, op = open pollinated.

^yS = spring; F = fall.

^xIsraeli and AREC-Leesburg submissions acquired from Dr. G. W. Elmstrom at the Univ. Fla. Inst. Food Agr. Sci., Agr. Res. Educ. Center, Leesburg, Fla.

Table 2. Mean temperature and rainfall at the Gulf Coast Research and Education Center from 5 Mar. to 20 June 1984 (Spring planting) and 29 Aug. to 19 Nov. 1984 (Fall planting).

Month (date)	Avg daily temp (°F)		Rainfall ^z (inches)
	Maximum	Minimum	
<i>Spring Planting</i>			
March (5-31)	78.2	54.7	3.65
April	80.4	58.1	2.15
May	87.5	64.9	2.38
June (1-20)	88.5	62.8	5.22
<i>Fall Planting</i>			
August (29-31)	91.0	70.3	Trace
September	88.8	69.1	2.33
October	86.2	64.2	0.45
November (1-19)	79.6	54.0	0.00

^zRainfall immediately preceding or during first 2 weeks of harvest when muskmelons were sampled for sugar content: 9 May—0.12 inches; 10 May—0.03 inches; and 23 May—0.25 inches for Spring 1984; 22 Oct.—0.08 inches; 27 Oct.—0.24 inches; and 28 Oct.—0.13 inches for Fall 1984.

Prevailing weather conditions for the season appear in Table 2. Plants were subject to strong winds between 5 and 7 Mar. and recorded wind run readings were 148.4, 151.5 and 91.6 miles per day. This was accompanied by low temperatures in the 40s (F) for 6 of the first 8 nights in the field.

Fall 1984. The land had been treated in Apr. 1983 with dolomite, superphosphate, and micronutrients as in the spring trial. The land was used in the production of tomatoes in Fall 1983 and laid fallow until Fall 1984. Beds were formed, fumigated and fertilized on 13 Aug. 1984 as in Spring 1984. Bed spacing and irrigation was the same as Spring 1984. Beds were covered with white polyethylene.

Table 3. Annual differences in muskmelon production averaged over the 16 cultivars common to both the Spring and Fall 1984 trials.

	Season	
	Spring	Fall
Marketable yield (cwt/acre) ^z	199.5 b [*]	243.6 a
Fruit weight ^y (lb.)	2.8 b	3.4 a
Fruit length ^y (inches)	5.3 b	6.2 a
Fruit diameter ^y (inches)	4.7 b	5.5 a
Flesh width (inches)	1.3 b	1.6 a
Cavity diameter (inches)	2.2 b	2.5 a
Sugar (°Brix)	10.6 a	9.0 b

^zYields are adjusted to 100% plant stand.

^yThe parameters indicated had significant interaction effects between cultivar and season.

^{*}Mean separation between columns by Duncan's multiple range test, 5% level.

Seed of 20 muskmelon entries (Table 1) were sown on 8 Aug. 1984, and transplants were set in the field on 27 Aug. 1984. Production and experimental design were similar to Spring 1984. Very limited resetting was required. Registered fungicides were used routinely for disease control; however, there was an outbreak of downy mildew in early October. Metalaxyl was applied twice at recommended rates to control this disease. No insecticide applications were necessary.

Fruit was harvested beginning 22 Oct. 1984 and continued at regular intervals through 19 Nov. 1984. Measurements taken on the marketable fruit were the same as in the spring. Prevailing weather conditions for the fall season appear in Table 2. There was no unusual weather.

Results and Discussion

Annual. Combined analysis of variance for the 16 cultivars common to both trials showed significant differences between the spring and fall seasons (Table 3). Yield and fruit dimensions were lower in the spring than in the fall. However, there was a significant interaction effect between

muskmelon cultivar and season for average fruit weight, length and diameter. Therefore, all cultivars did not follow the trend of producing smaller fruit size in the spring than in the fall. Sugar concentration (% soluble solids) is a primary consideration in assigning marketable grades to muskmelon (1). The U.S. Fancy designation requires no less than 11% solids, and a U.S. No. 1 requires no less than 9% soluble solids. Sugar content was higher in the spring (10.6%) than in the fall (9.0%), although sugar levels were in the U.S. No. 1 category both seasons.

Averaged for both seasons (Table 4), marketable yield was greatest for 'Planter's Jumbo' (296.4 hundredweight (cwt)/acre), 'Ambrosia' (283.5 cwt/acre), 'Florida 93-8' (266.6 cwt/acre), 'Magnum .45' (257.0 cwt/acre) and 'Edisto 47' (254.1 cwt/acre), none of which were significantly different from one another. Average fruit weight ranged from 2.5 to 3.9 lb. Heaviest fruit were produced by 'Edisto 47', 'Ambrosia', and 'Early Dawn'. Fruit length ranged from 4.4 to 6.4 inches, and diameter ranged from 4.5 to 5.6 inches. Roundest fruit were produced by 'Galia', 'Ambrosia', 'Arava', 'Luscious', 'Ball 1776', and 'Gold Star'. The most oval fruit were produced by 'Saticoy', 'Early Dawn', and 'Florida 93-8'. Cavity diameter was greatest for 'Ball 1776', 'Gold Star', 'Luscious', 'Arava', and 'Ambrosia', all equal to or greater than 2.5 inches. Flesh thickness ranged from 1.3 to 1.6 inches with 11 entries not significantly different with respect to greatest thickness of the fruit wall. Sugars ranged from 7.7 to 11.4%. Three entries ('Florida 93-71', 'Florida 93-8', and 'Galia') had sugar content equal to or greater than 11% (U.S. Fancy) as an annual average, 5 were between 10% and 11%, and only 3 entries were less than 9% (lower than U.S. No. 1).

Spring. Marketable yield (Table 5) for Spring 1984 ranged from 109.6 cwt/acre for 'Honeybush' to 285.5 cwt/acre for 'Ambrosia'. 'Ambrosia' was not significantly different in yield from 'Florida 93-8', 'Edisto 47', 'Planter's Jumbo', 'Magnum .45', 'Summet', and 'Dixie Jumbo'. Plant stands were similar among all entries except 'Supermarket' which only had a 71% plant stand. Since the reported

Table 4. Annual averages for muskmelon cultivars examined in Spring and Fall seasons, 1984.

Cultivar or breeding line	Marketable yield ^z (cwt/acre)	Marketable fruit					
		Weight (lb.)	Length (inches)	Diameter (inches)	Cavity diameter (inches)	Flesh ^y width (inches)	Soluble solids (°Brix)
Planter's Jumbo	296.4 a [*]	3.5 b	5.9 b-f	5.3 ab	2.2 e-g	1.6 ab	9.3 b-d
Ambrosia	283.5 ab	3.6 ab	5.8 c-f	5.5 a	2.5 a-c	1.6 a	10.2 a-c
Florida 93-8	266.6 a-c	2.8 d-f	5.5 f	4.6 ef	2.2 d-g	1.3 e	11.2 a
Magnum .45	257.0 a-c	2.6 f	5.5 f	4.7 d-f	2.0 fg	1.4 a-e	8.8 c-e
Edisto 47	254.1 a-d	3.9 a	6.4 a	5.5 a	2.4 cd	1.6 a	9.2 b-e
Florida 93-71	236.3 b-e	2.7 ef	5.8 c-f	4.9 c-e	2.2 d-f	1.5 a-c	11.4 a
Dixie Jumbo	225.8 c-e	3.0 c-e	5.8 c-f	5.1 b-d	2.3 c-e	1.4 b-e	7.7 e
Arava	218.5 c-f	2.8 d-f	4.7 g	5.1 b-d	2.5 a-c	1.4 c-e	10.1 a-c
Summet	215.6 c-f	3.1 cd	5.7 d-f	5.0 b-e	2.2 d-g	1.5 a-d	9.8 a-d
Galia	215.6 c-f	2.5 f	4.4 g	4.5 f	2.0 g	1.3 de	11.0 a
Luscious	199.7 d-g	3.5 b	6.1 a-e	5.6 a	2.7 ab	1.5 a-c	10.7 ab
Supermarket	193.0 e-g	2.8 d-f	5.7 ef	4.9 c-e	2.3 de	1.4 a-e	9.8 a-d
Ball 1776	190.2 e-g	3.4 b	6.1 a-d	5.6 a	2.7 a	1.5 a-c	10.2 a-c
Early Dawn	170.1 fg	3.8 a	6.3 ab	5.2 a-c	2.5 bc	1.5 ab	10.0 a-d
Gold Star	167.0 fg	3.2 bc	5.8 c-f	5.3 ab	2.7 ab	1.4 b-e	9.1 b-e
Saticoy	155.9 g	2.7 ef	6.2 a-c	5.0 b-e	2.2 d-f	1.4 a-e	8.5 de

^zYields are adjusted to 100% plant stand.

^yFlesh width measured from exterior of melon to edge of internal cavity.

^{*}Mean separation within columns by Duncan's multiple range test, 5% level.

Table 5. Seasonal yield and fruit characteristics of muskmelon from Spring 1984 variety trial.

Cultivar or breeding line	Marketable yield ^z (cwt/acre)	Plant stand (%)	Marketable fruit					
			Weight (lb.)	Length (inches)	Diameter (inches)	Cavity diameter (inches)	Flesh ^y width (inches)	Soluble solids (°Brix)
Ambrosia	285.5 a ^x	96 a	3.3 ab	5.3 bc	4.9 a-c	2.3 a-d	1.4 a-e	11.5 a-c
Florida 93-8	250.0 ab	100 a	2.2 f	4.6 de	4.0 ef	2.0 e-h	1.1 f	12.0 ab
Edisto 47	246.2 ab	100 a	3.2 a-c	6.1 a	5.0 a-c	2.0 d-h	1.5 a-c	9.0 ef
Planter's Jumbo	238.9 a-c	96 a	3.3 ab	5.8 ab	5.3 a	2.2 c-f	1.6 a	10.2 b-f
Magnum 45	227.1 a-d	100 a	2.3 ef	5.4 bc	4.5 c-e	1.9 f-h	1.3 c-e	10.1 b-f
Summet	208.6 a-e	100 a	3.1 a-c	5.6 ab	4.9 a-c	2.2 c-f	1.5 a-c	10.4 a-e
Dixie Jumbo	208.0 a-e	100 a	2.7 c-e	5.6 ab	4.8 a-c	2.3 a-e	1.3 c-e	9.2 d-f
Arava	196.5 b-f	88 a	2.4 d-f	4.2 ef	4.7 b-d	2.3 a-c	1.3 de	10.9 a-e
Galia	189.5 b-g	96 a	2.1 fg	3.7 f	3.8 f	1.8 gh	1.1 f	12.6 a
Florida 93-71	188.8 b-g	96 a	2.3 ef	5.3 bc	4.5 c-e	2.0 e-h	1.3 c-e	12.1 ab
Supermarket	181.7 b-g	71 b	2.8 b-d	5.2 b-d	4.6 b-d	2.1 c-f	1.3 c-e	10.4 a-e
Luscious	160.8 c-g	100 a	3.1 a-c	5.6 ab	5.2 ab	2.5 a	1.4 a-e	11.3 a-d
Gold Star	156.6 c-g	96 a	2.9 a-d	5.3 bc	5.0 a-c	2.5 a	1.2 ef	10.2 b-f
Ball 1776	155.0 d-g	100 a	3.0 a-c	5.7 ab	5.2 ab	2.5 ab	1.4 b-e	10.2 b-f
Early Dawn	148.8 d-g	100 a	3.4 a	5.6 ab	4.9 a-c	2.4 a-c	1.4 a-e	11.5 a-c
Saticoy	147.7 d-g	96 a	2.2 f	5.5 ab	4.6 c-e	2.1 c-g	1.3 de	8.0 f
Super Star	139.9 e-g	100 a	3.0 a-c	4.8 c-e	5.2 ab	2.5 ab	1.4 a-d	9.1 ef
Gretel	114.8 fg	100 a	3.1 a-c	6.1 a	5.4 a	2.2 b-e	1.5 ab	9.2 d-f
Honeybush	109.6 g	96 a	1.7 g	4.5 de	4.3 d-f	1.8 h	1.3 de	9.5 c-f

^zYields are adjusted to 100% plant stand.^yFlesh width measured from exterior of melon to the edge of the internal cavity.^xMean separation within columns by Duncan's multiple range test, 5% level.

yields were based on 100% plant stands for comparison, the yield of 'Supermarket' was actually 29% lower than listed in Table 5, and among the poorest.

If the seasonal yields are broken down into weekly harvest yields, the entries can be separated as early, midseason or late in maturity (Table 6). The earliest and most concentrated maturity was given by 'Super Star' which produced

Table 6. Marketable yield of muskmelon by week of harvest, Spring 1984.

Cultivar or breeding line	Harvest week ^{z,y}					
	1	2	3	4	5	6
	%					
Ambrosia	0.6	27.8	26.4	25.0	18.9	1.4
Florida 93-8	2.6	11.1	33.9	28.5	11.6	12.4
Edisto 47	0.0	6.2	23.7	54.0	10.8	5.3
Planter's Jumbo	0.0	6.4	39.4	41.3	9.0	3.9
Magnum 45	0.0	38.1	33.1	11.9	9.8	7.2
Summet	3.6	27.7	12.2	27.4	20.0	9.2
Dixie Jumbo	1.5	35.8	24.2	27.3	9.8	1.4
Arava	8.2	25.5	20.3	17.1	17.9	11.0
Galia	3.8	35.3	16.2	18.0	18.1	8.5
Florida 93-71	0.6	13.7	35.1	19.3	13.6	17.7
Supermarket	3.8	28.2	18.0	20.4	14.7	14.9
Luscious	7.4	29.5	30.5	26.2	4.8	1.6
Gold Star	8.1	36.2	28.2	25.2	2.3	0.0
Ball 1776	2.3	23.5	26.6	34.0	12.9	0.7
Early Dawn	16.9	52.3	9.8	11.4	7.8	1.7
Saticoy	3.5	53.0	19.3	17.8	1.0	5.4
Super Star	49.7	43.2	3.1	4.0	0.0	0.0
Gretel	2.0	32.5	25.2	32.3	7.9	0.0
Honeybush	6.2	33.4	23.4	23.6	10.8	2.5

^zWeek 1 = 10-16 May; 2 harvests = 10 and 15 May.

Week 2 = 17-23 May; 4 harvests = 17, 18, 21 and 23 May.

Week 3 = 24-30 May; 2 harvests = 25 and 29 May.

Week 4 = 31 May-6 June; 4 harvest = 31 May, 1, 4, and 6 June.

Week 5 = 7-13 June; 2 harvests = 6, 12 June.

Week 6 = 14-20 June; 4 harvests = 14, 15, 18, and 20 June.

^ySmall discrepancies in the percentages for all harvests summing to 100% is due to rounding.

49.7% of the total yield in the first week of harvest and 43.2% in the second week. Another early type was 'Early Dawn' which produced 69.2% of its seasonal yield in the first 2 weeks of harvesting. Late maturing entries were 'Florida 93-71', 'Supermarket', 'Arava', and 'Summet'. All other entries were early to midseason (harvested mainly in weeks 2 through 4) and midseason (harvested mainly in weeks 3 through 5).

Marketable fruit characteristics are contained in Table 5. Average fruit weight ranged from 1.7 lb. ('Honeybush') to 3.4 lb. ('Early Dawn'). 'Early Dawn' fruit were significantly heavier than 50% of the entries. Fruit length ranged from 3.7 inches for 'Galia' to 6.1 inches for 'Edisto 47' and 'Gretel'. Diameter ranged from 3.8 inches for 'Galia' to 5.4 inches for 'Gretel'. 'Gretel' and 'Galia' not only produced the largest and smallest melons, but also among the most oval and round, respectively. Cavity diameter ranged from 1.8 inches ('Honeybush' and 'Galia') to 2.5 inches ('Luscious', 'Gold Star', 'Superstar', and 'Ball 1776'). Flesh thickness was greatest for 'Planter's Jumbo' (1.6 inches) and least for 'Florida 93-8' and 'Galia' (1.1 inches).

Six entries ('Ambrosia', 'Florida 93-8', 'Galia', 'Florida 93-71', 'Luscious', and 'Early Dawn') had average soluble solids in the U.S. Fancy category. All but one of the remaining entries were in the U. S. No. 1 category based on sugar content alone. 'Saticoy' had an 8% soluble solids content and could classify as U.S. Commercial or below since soluble solids are not specified for this grade.

Fall. Marketable yield (Table 7) for Fall 1984 ranged from 164.1 cwt/acre for 'Saticoy' to 377.7 cwt/acre for 'All Star'. 'All Star' was significantly greater in yield to all remaining entries except 'Planter's Jumbo' which had a yield of 354.0 cwt/acre. Plant stands were similar among the entries, ranging from 83.3 to 100%.

When the total yield for the season is examined by weekly harvest interval (Table 8) the maturity of each entry is identifiable. 'Arava', 'Early Dawn', and 'Gold Star' were

Table 7. Seasonal yield and fruit characteristics of muskmelon from Fall 1984 variety trial.

Cultivar or breeding line	Marketable yield ² (cwt/acre)	Plant stand (%)	Marketable fruit					
			Weight (lb.)	Length (inches)	Diameter (inches)	Cavity diameter (inches)	Flesh ³ width (inches)	Soluble solids (°Brix)
All Star	377.7 a*	100 a	3.8 c-e	6.0 ef	5.5 b-g	2.4 c-f	1.6 b-d	6.9 de
Planter's Jumbo	354.0 ab	100 a	3.7 d-f	6.0 c-f	5.4 d-h	2.1 fg	1.5 b-d	8.4 a-d
Magnum .45	287.0 bc	100 a	2.8 g-i	5.6 fg	4.9 g-i	2.1 fg	1.5 b-d	7.6 c-e
Florida 93-71	283.8 bc	96 ab	3.0 gh	6.4 b-e	5.4 d-h	2.4 c-f	1.7 a-c	10.6 a
Florida 93-8	283.1 bc	100 a	3.3 c-g	6.5 a-d	5.2 e-h	2.3 c-g	1.4 cd	10.3 ab
Ambrosia	281.5 bc	100 a	3.8 b-d	6.2 c-e	6.0 ab	2.7 a-d	1.8 ab	8.9 a-d
Edisto 47	262.1 cd	96 ab	4.5 a	6.6 a-c	6.0 ab	2.7 a-d	1.7 a-c	9.3 a-c
Dixie Jumbo	243.6 c-e	100 a	3.2 fg	5.9 ef	5.4 d-h	2.4 d-g	1.5 cd	6.1 e
Honeyloupe	243.5 c-e	83 b	2.5 i	6.0 d-f	4.7 i	1.7 h	1.5 cd	10.4 a
Harvest Pride	241.9 c-e	100 a	2.6 hi	5.4 gh	4.9 hi	2.0 fg	1.5 cd	8.7 a-d
Galia	241.7 c-e	100 a	2.9 g-i	5.1 h	5.1 f-i	2.1 f-g	1.5 b-d	9.4 a-c
Luscious	238.4 c-e	96 ab	3.8 b-e	6.5 a-d	5.9 a-c	2.7 a-c	1.6 a-d	10.1 ab
Arava	237.9 c-e	92 ab	3.2 fg	5.1 h	5.5 c-g	2.7 a-d	1.4 cd	9.4 a-c
Ball 1776	225.4 c-e	96 ab	3.8 b-e	6.5 a-d	5.9 a-d	3.0 a	1.6 a-d	10.2 ab
Summet	222.6 c-e	88 ab	3.0 g-i	5.9 ef	5.0 f-i	2.2 fg	1.4 d	9.1 a-d
M649	206.2 c-e	100 a	4.3 a-c	6.4 b-e	6.2 a	2.6 b-e	1.8 a	9.5 a-c
Supermarket	204.2 c-e	100 a	2.8 g-i	6.2 c-e	5.1 f-i	2.4 c-g	1.5 b-d	9.2 a-d
Early Dawn	191.5 de	96 ab	4.3 ab	7.0 a	5.6 b-f	2.6 b-e	1.7 a-c	8.4 a-d
Gold Star	177.4 e	92 ab	3.6 d-f	6.3 b-e	5.7 a-e	2.8 ab	1.6 b-d	8.1 b-e
Saticoy	164.1 e	100 a	3.2 fg	6.8 ab	5.4 d-h	2.4 d-g	1.6 c-d	9.0 a-d

²Yields adjusted to 100% plant stand.³Flesh width measured from exterior of melon to the edge of the internal cavity.

*Mean separation within columns by Duncan's multiple range test, 5% level.

early cultivars, 'Honeyloupe', was a late cultivar, while the remainder of the entries were midseason in maturity.

Average marketable fruit weight (Table 7) ranged from 2.5 lb. for 'Honeyloupe' to 4.5 lb. for 'Edisto 47'. 'Edisto 47' was significantly larger than 17 other entries with only 'M649' and 'Early Dawn' having similar weight. Fruit

length ranged from 5.1 ('Galia' and 'Arava') to 7.0 inches ('Early Dawn'), and diameter ranged from 4.7 to 6.2 inches ('Honeyloupe' and 'M649', respectively). The roundest fruit was produced by 'Galia', 'M649', and 'Ambrosia'. The most oval fruit was produced by 'Honeyloupe', 'Saticoy', 'Early Dawn', 'Florida 93-8', and 'Supermarket'. Cavity size was smallest for 'Honeyloupe' (1.7 inches) which was significantly smaller than all other entries. Flesh width was greatest in 'M649', 'Early Dawn', 'Ball 1776', 'Florida 93-71', 'Luscious', 'Edisto 47', and 'Ambrosia'. Soluble solids were above 10% for 'Ball 1776', 'Luscious', 'Honeyloupe', 'Florida 93-8', and 'Florida 93-71'. Soluble solids were below 9%, therefore below U.S. No. 1 grade, for 'All Star', 'Planter's Jumbo', 'Magnum .45', 'Ambrosia', 'Dixie Jumbo', 'Harvest Pride', 'Early Dawn', and 'Gold Star'. Generally, sugar levels were lower in the fall than in the spring trial (Table 3).

Summary. The fall season of 1984 provided greater yields and generally larger fruit size than the spring of 1984. However, sugar concentration in the fruit was less in the fall than in the spring. Best yield performance considering the 16 entries common to both seasons came from 'Planter's Jumbo', 'Ambrosia', 'Florida 93-8', 'Magnum .45', and 'Edisto 47'. Of these, unacceptable sugar content from initial harvest was found in the fall for 'Planter's Jumbo', 'Magnum .45', and 'Ambrosia'.

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Table 8. Marketable yield of muskmelon by week of harvest, Fall 1984.

Cultivar or breeding line	Harvest week ^{2,3}				
	1	2	3	4	5
	%				
All Star	15.1	75.5	0.9	8.0	0.4
Planter's Jumbo	3.1	23.7	71.6	1.6	0.0
Magnum .45	22.0	63.6	5.4	7.2	1.8
Florida 93-71	0.0	72.9	13.9	9.0	4.2
Florida 93-8	0.0	41.7	44.7	11.7	1.8
Ambrosia	13.4	53.2	22.2	11.1	0.0
Edisto 47	3.4	63.1	17.4	16.1	0.0
Dixie Jumbo	17.6	52.0	19.5	10.8	0.0
Honeyloupe	0.0	13.6	50.3	33.4	2.7
Harvest Pride	11.9	78.4	2.6	7.2	0.0
Galia	5.7	43.6	40.6	6.4	3.7
Luscious	13.1	57.6	20.7	6.4	2.2
Arava	62.5	37.5	0.0	0.0	0.0
Ball 1776	12.4	55.6	17.1	14.8	0.0
Summet	28.4	32.3	17.4	19.4	2.4
M649	11.5	63.5	5.4	16.4	3.1
Supermarket	8.8	59.9	15.5	14.1	1.7
Early Dawn	47.0	19.8	18.4	10.5	4.3
Gold Star	42.3	36.3	12.9	8.6	0.0
Saticoy	15.5	47.4	25.5	9.1	2.6

²Week 1 = 22-26 Oct.; 2 harvests = 24 and 16 Oct.³Week 2 = 29 Oct.-2 Nov.; 3 harvests = 29, 31 Oct. and 2 Nov.

Week 3 = 5-9 Nov.; 3 harvests = 5, 7 and 8 Nov.

Week 4 = 12-16 Nov.; 2 harvests = 13 and 16 Nov.

Week 5 = 19-23 Nov.; 1 harvest = 19 Nov.

³Small discrepancies in the percentages for all harvests summing to 100% is due to rounding.