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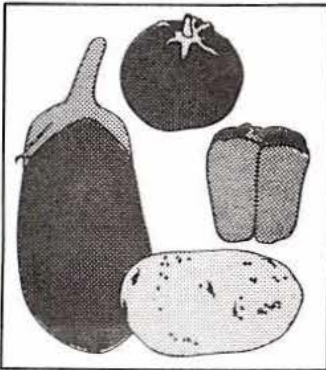
Cooperative Extension Service

Institute of Food and Agricultural Sciences

VEGETARIAN

A Vegetable Crops Extension Publication

Horticultural Sciences Department • P.O. 110690 • Gainesville, FL 32611 • Telephone 904/392-2134



Vegetarian 97-02

February 20, 1997

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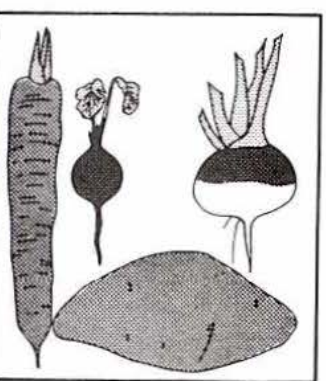
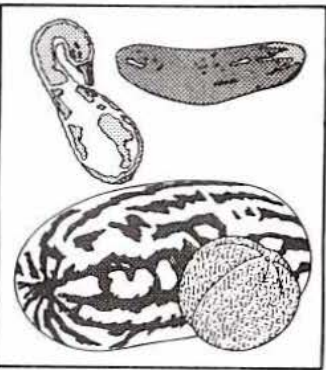
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I. NOTES OF INTEREST

A. Vegetable Crops Calendar.

March 10-14, 1997. 1997 Florida Postharvest Horticulture and Industry Tour. Contact Steve Sargent, Coordinator, Hort. Sci., UF, Gainesville (352) 392-2134 ext. 215.

II. COMMERCIAL VEGETABLES

A. Standard Watermelon Variety Trial Results Spring 1996.

Standard seeded watermelons weigh from 18 to 35 lb and represent most of the commercial crop grown in Florida. Icebox watermelons weigh 6 to 12 lb each and are grown on a small acreage. Seedless watermelons, weighing 12 to 18 lb, also are grown in Florida on a limited scale. Florida produced 8.25 million cwt of watermelons of all types from 33,000 harvested acres in 1994-95 which provided an average yield of 250 cwt/acre. The average price was \$7.49/cwt resulting in a crop value exceeding \$61 million which accounted for 4.2% of the gross returns to the state's vegetable growers.

Until a few years ago, the Florida crop was about equally divided among open pollinated and hybrid varieties of 'Crimson Sweet', 'Charleston Gray', and 'Jubilee' types. 'Charleston Gray' and 'Jubilee' production has been replaced by increases in production of 'Allsweet' and blocky 'Crimson Sweet' types.

The purpose of this trial was to evaluate some of the recently introduced commercial and experimental hybrids of the blocky Crimson Sweet and Allsweet types.

Soil samples from the experimental area obtained before fertilization were analyzed by the University of Florida Extension Soil Testing Laboratory: pH = 7.2 and Mehlich I extractable P = 42 (High), K = 15 (Very Low), Mg = 115 (High), Ca = 803 (Adequate), Zn = 3.3 (Adequate), Cu = 1.8 (Adequate), and Mn = 2.5 (Deficient) ppm.

The EauGallie fine sand was prepared in early February by incorporation of 0-1.2-0 lb N-P₂O₅-K₂O per 100 linear bed feet (lbf). Beds were formed and fumigated with methyl bromide:chloropicrin, 67:33 at 2.3 lb/100 lbf. Banded fertilizer was applied in shallow grooves on the bed shoulders at 3.1-0-4.3 lb N-P₂O₅-K₂O/100 lbf after the beds were pressed and before application of the black polyethylene mulch. The total fertilizer applied was equivalent to 148-60-206 lb N-P₂O₅-K₂O/acre. The final beds were 32 in. wide and 8 in. high and were spaced on 9 ft centers, with four beds between seepage irrigation/drainage ditches which were on 41 ft centers. The standard watermelons were planted in rows adjacent to the ditches and also served as pollenizers for seedless watermelons that were being evaluated in the two center beds of each land.

Watermelon seeds were planted on 12 March in holes punched in the polyethylene mulch at 3 ft in-row spacing. Twenty-nine entries were included in the trial. The 24 ft long plots had eight plants each and were replicated three times in a randomized complete-block design. Weed control in row middles was by cultivation and applications of paraquat. Pesticides were applied as needed for control of silverleaf whitefly (endosulfan and esfenvalerate) and gummy stem blight (chlorothalonil and metaxyl-chlorothalonil).

Watermelons were harvested 3-4 June, 10-12 June, and 19-21 June. Marketable fruit (U.S. No. 1 or better) according to U.S. Standards for Grades of Watermelons were separated from culls and counted and weighed individually. Soluble solids determinations were made with a hand-held refractometer on six fruit of each entry at each harvest, and the incidence of hollowheart was recorded for these fruits. The resulting data were subjected to analysis of variance and mean separation was by Duncan's multiple range test.

Temperature during the experimental period was near normal. Rainfall was greater than normal which did not provide good watermelon growing conditions. Also, there was considerable wind early in the season which caused some plant loss and necessitated some resetting.

Early yields (first of three harvests) ranged from 0 for 'Royal Sweet' to 195 cwt/acre for WM 8007. Fifteen other entries had yields similar to those of WM 8007 while 20 other entries had yields similar to those of 'Royal Sweet'. Average fruit weight varied from 13.7 lb for 'Summer Flavor 420' to 29.8 lb for 'Sultan'. Soluble solids ranged from 9.9% for 'Mardi Gras' to 12.5% for 'Royal Majesty'.

Total yields varied from 245 cwt/acre for 'Royal Majesty' to 439 cwt/acre for WM 8007. Yields of all entries except LF 1402, 'Summer Flavor 510', and 'Royal Majesty' were similar to those of WM 8007. Average fruit weight ranged from 15.8 lb for LF 1408 to 26.9 lb for 'Royal Sweet'. Eight other entries had average fruit weight similar to that of 'Royal Sweet'. Soluble solids concentration for the entire season ranged from 10.1% for 'Summer Flavor 500' to 12.2% for 'Royal Sweet'. Seventeen other entries had soluble solids concentrations similar to those of 'Royal Sweet'. Seasonal average soluble solids for all entries exceeded the 10% specified for optional use to designate very good internal quality in the U.S. Standards for Grades of Watermelons. The incidence of hollowheart was highest in WM 8032 and the severity greatest in LF 1390, but each was significantly different from only one other entry.

More than 50% of the fruit of 'Baron', 'Carnival', 'Regency', 'Royal Flush', 'Summer Flavor 510', 93-32, and 94-08 were in the desirable medium size 18-26 lb weight class. At least 80% of the fruit of 'Carnival', HSR 602, 'Regency', 'Royal Star', 'Royal Sweet', 'Sangria', 'Sultan', 'Summer Flavor 500', WM 8032, WM 8043, 93-32, and 94-08 exceeded 18 lb.

Watermelon yields were lower than those obtained at this location in recent years. Weather conditions, especially early in the season are believed to have caused the lower than expected yields. However, yields were higher than the state average yield of 220 cwt/acre for the 1990-91 through 1994-95 seasons.

Based on results of this and previous trials, the following 'Allsweet' type and blocky 'Crimson Sweet' type varieties are expected to perform well in Florida: 'Fiesta', 'Regency', 'Royal Star', 'Royal Sweet', and 'Sangria'. 'Mardi Gras', 'Carnival', and 'Royal Flush' performed well in the 1996 GCREC trials and should be considered in planning for the 1997 season. 'Starbrite' has performed well in past trials and seed is being advertised for the 1997 season.

Table 1. Total yields, average fruit weight, soluble solids and the incidence and severity of hollowheart of standard watermelons. Gulf Coast Research and Education Center, Bradenton. Spring 1996.

Entry	Seed Source	Total Harvest				
		Weight (cwt/A) ¹	Avg. Fruit Weight (lb)	Soluble Solids (%)	Hollowheart (%) (in.) ²	
WM 8007	Rogers	439 a ³	23.4 a-f	11.1 b-f	12 b	0.1 b
94-52	Sakata	432 ab	23.9 a-f	10.7 d-g	0 b	0 b
Mardi Gras	Rogers	429 ab	22.8 b-g	10.4 e-g	0 b	0 b
WM 8038	Rogers	407 a-c	20.1 f-h	11.1 c-g	8 b	0.1 b
Carnival	Rogers	371 a-c	22.1 b-g	11.5 a-d	7 b	0.1 b
WM 8043	Rogers	371 a-c	25.0 a-c	10.2 fg	17 ab	0.1 b
Royal Flush	Petoseed	366 a-c	18.9 g-i	11.5 a-d	0 b	0 b
HSR 602	Abbott & Cobb	364 a-c	24.6 a-c	11.4 a-d	8 b	0.1 b
WM 8032	Rogers	364 a-c	24.7 a-d	11.1 b-g	33 a	0.1 b
Summer Flavor 500	Abbott & Cobb	358 a-c	25.3 ab	10.1 g	0 b	0 b

95-03	Sakata	340 a-c	21.3 b-h	11.6 a-d	11 b	0.1 b
93-32	Sakata	337 a-c	21.9 b-h	11.1 b-f	6 b	0.1 b
Baron	American Sunmelon	335 a-c	19.8 f-h	11.6 a-d	6 b	0.1 b
W5023	Pioneer	334 a-c	20.1 f-h	11.0 c-g	0 b	0 b
Summer Flavor 420	Abbott & Cobb	333 a-c	20.6 e-h	11.6 a-d	8 b	0.1 b
Fiesta	Rogers	321 a-c	21.0 c-h	11.1 c-g	0 b	0 b
94-08	Sakata	318 a-c	21.6 b-h	11.3 a-e	0 b	0 b
Royal Star	Petoseed	302 a-c	24.7 a-c	11.3 a-e	7 b	0.1 b
Royal Sweet	Petoseed	297 a-c	26.9 a	12.2 a	0 b	0 b
Sultan	Harris Moran	296 a-c	24.7 a-d	11.9 a-d	0 b	0 b
LF 1408	Known You	287 a-c	15.8 i	11.4 a-d	0 b	0 b
LF 1390	Known You	287 a-c	17.9 h-i	11.3 a-e	11 b	0.7 a
W5025	Pioneer	277 a-c	21.6 b-h	11.5 a-d	13 b	0.1 b
Ferrari	Shamrock	266 a-c	20.7 d-h	11.5 a-d	11 b	0.3 ab
Regency	Petoseed	264 a-c	21.6 b-h	12.1 ab	11 b	0.1 b
Sangria	Rogers	263 a-c	21.6 b-h	11.7 a-c	7 b	0.1 b
LF 1402	Known You	256 bc	19.9 f-h	11.7 a-c	0 b	0 b
Summer Flavor 510	Abbott & Cobb	247 c	19.2 g-i	10.2 fg	7 b	0.1 b
Royal Majesty	Petoseed	245 c	20.4 f-h	12.0 a-c	7 b	0.2 b

¹ Acre = 4840 lb.

² Average width of fruit cracks of those fruit sampled.

³ Mean separation in columns by Duncan's multiple range test, 5% level.

(Maynard, Vegetarian 97-02)

III. VEGETABLE GARDENING

A. Revised Scoring System for Big Vegetables.

Scoring Big Vegetables

A comparative system for competition featuring Florida's largest vegetables.

J. M. Stephens.

Feb 1994 (revised 1-24-97).

Vegetable	Extra-large*		Points per		Preparation rules
	lbs	(oz)	oz	lb	
Beet	5	(80)	6.0	96	Trim top and bottom 1".
Boniata	10	(160)	3.0	48	No multiple roots.
Broccoli	5	(80)	6.0	96	Stalk trimmed to 1".

Vegetable	Extra-large*		Points per		Preparation rules
	lbs	(oz)	oz	lb	
Cabbage	15	(240)	2.0	32	Stalk trimmed to 1".
Calabaza	30	(480)	1.0	16	Stem trimmed to 2".
Carrot	3	(48)	10	160	Leaves trimmed to 1".
Cassava	10	(160)	3	48	No multiple roots.
Cauliflower	10	(160)	3	48	Stalk trimmed to 1".
Celery	10	(160)	3	48	Stalk trimmed to 1".
Corn, SW	3	(48)	10	160	Unshucked, base to 1".
Cucumber	4	(64)	7.5	120	No stem.
Eggplant	4	(64)	7.5	120	Stem trimmed to 1".
Garlic	1	(16)	30	480	Roots and top trimmed to 1".
Gourds	50	(800)	.6	9.6	Stem trimmed to 1".
Jicama	15	(240)	2	32	Stem trimmed to 2".
Kohlrabi	15	(240)	2	32	Root and leaf stems trimmed to 1".
Lettuce	3	(48)	10	160	Root stem trimmed to 1".
Malanga	15	(240)	2	32	Trim even 1".
Muskmelon	20	(320)	1.5	24	Stem trimmed to 1".
Mustard	10	(160)	3	48	Stalk trimmed to 1".
Okra	.5	(8)	60	960	Stem trimmed to 1".
Onion	3	(48)	10	160	Trimmed to 1" no (doubles).
Pepper	1	(16)	30	480	Stem trimmed to 1".
Potato, Irish	3	(160)	10	160	No multiple tubers,
Potato, Sweet	15	(240)	2	32	No multiple roots.
Pumpkin	175	(2800)	.2	32	Stem trimmed to 2".
Radish, S.	3	(48)	10	160	Leaves & tap root trimmed to 1".
Radish, W.	15	(240)	2	32	Leaves & tap root trimmed to 1".
Rutabaga	15	(240)	2	32	Leaves & tap root trimmed to 1".
Squash, Butternut\Acorn	15	(240)	2	32	Stem 1".

Vegetable	Extra-large*		Points per		Preparation rules
	lbs	(oz)	oz	lb	
Squash, Summer	5	(80)	6	96	Stem trimmed to 1".
Squash, Winter	50	(800)	.6	9.6	Stem trimmed to 2".
Squash, Zucchini	10	(160)	3	48	Stem trimmed to 1".
Tomato	3	(48)	10	160	Stem trimmed to 1".
Turnip	15	(240)	2	32	Leaves & tap root trimmed to 1".
Watermelon	100	(1600)	.3	4.8	Stem trimmed to 1".
Winter melon	75	(1200)	.4	6.4	Stem trimmed to 1".
Yam, true	15	(240)	2	32	One continuous tuber.

Formula: $100 \div P/pz + \text{normal size (oz.)} \times 5 = \text{Extra-large.}$

(Vegetarian, 97-02)

Prepared by Extension Vegetable Crops Specialists

Dr. D. J. Cantliffe
Chairman

Dr. G. J. Hochmuth
Professor & Editor

Dr. D. N. Maynard
Professor



Dr. S. M. Olson
Professor

Dr. S. A. Sargent
Assoc. Professor

Dr. W. M. Stall
Professor

Mr. J. M. Stephens
Professor

Dr. C. S. Vavrina
Assoc. Professor

Dr. J. M. White
Assoc. Professor