Vegetarian 88-05

May 5, 1988

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I. NOTES OF INTEREST

A. Vegetable Crops Calendar.

June 20-24, 1988. 4-H Horticulture Institute, Camp Cloverleaf. (Contact Jim Stephens).


II. COMMERCIAL VEGETABLES

A. Flavor in Cherry Tomatoes.

Fruit quality in cherry tomatoes is a composite of external qualities including uniformity, color, and shape and of internal qualities such as seed size and numbers, skin toughness, texture, and flavor. Texture is related to wall thickness and firmness. Flavor, the impact of a substance on the sense of taste, is related to the balance of sugars, free acids, and numerous volatile organic compounds.

Results of some interesting experiments conducted by Graeme Hobson and Peter Adams at Littlehampton Institute of Horticultural Research in England were reported in a recent issue of the London-based horticultural publication, Grower (Vol. 109, No. 2).

Fruit quality is controlled by a number of interacting factors, however, the genetic background of the variety determines basic fruit characteristics. Other contributing conditions such as environment and fertility may modify the basic fruit characteristics controlled by heredity. Accordingly, when different varieties are grown under the same conditions, genetic control of quality will be apparent. On the other hand, when the same variety is grown under varying nutritional or cultural conditions, the modifying effects of these factors will be expressed.

Some of the findings in the English study were:

- Cherry tomato varieties differ in flavor.
- There is frequently an inverse relationship between good flavor and high yield.
- Fruit from near the stem have a higher dry matter content, and better flavor than fruit at the end of the cluster.
- Fruit allowed to ripen to a more advanced stage of maturity on the plant, had better flavor than those harvested earlier.
- Holding cherry tomatoes at 50°F is necessary to retain quality of fruit harvested at advanced stages of ripening.
- Film overwraps also assist in quality retention. Research is being conducted to determine the film characteristics that are most suitable.
- Greenhouse grown plants in NFT or rockwool with high salinity had a higher sugar and acid concentration than those grown at low salinity. When fruit acidity is not increased sufficiently to compensate for higher sugar, additions of potassium will further increase acidity to attain a favorable sugar:acid balance.

How does all of this relate to production of quality cherry tomatoes in Florida? Growers can capitalize on these research results by selecting the varieties producing the most flavorful fruit consistent with acceptable yield and disease resistance, providing
adequate potassium nutrition, not harvesting fruit from the very ends of fruit clusters, harvesting fruit at a more advanced stage of maturity, and by cooling and holding fruit at 50°F after harvest.

(Maynard: Veg. 88-05)

B. Asparagus Variety Trial.

An asparagus variety trial was initiated in January of 1986 to evaluate potential of asparagus in North Florida for local sale. Eleven varieties were seeded into #200 Todd planter flats on January 9, 1986. They were set in the field on May 5, 1986. Plants were spaced 12 inches in-row and 72 inches between rows. Plots were 25 feet long and replicated 4 times. No harvesting was done in 1987. A light harvesting was started in 1988. Normally the crop would have been harvested for 3–5 weeks, but almost 2 weeks of growth was lost due to late, hard frosts and emerging spears were destroyed. Five harvests were made and weights were recorded for marketable spears. All spears were trimmed to 9 inches before weighing.

Yields ranged from a low of 212 lbs./A for 'Mary Washington' to a high of 1324 lbs./A for 'UC 157 F,' a hybrid for the University of CA breeding program. 'Jersey Giant,' an all male hybrid from Rutgers University breeding program, also had high yields. Both 'UC 157 F,' and 'Jersey Giant' had very attractive and large spears. Most of the varieties had acceptable spear size except the 'Mary Washington', but yields were much lower than the 2 highest.

Asparagus is a perennial crop and in most production areas commercial harvesting is profitable for 10–15 years. Yields can normally be expected to increase for several years and harvesting period can be extended to 6 to 8 weeks for the fourth and following years.

These are preliminary trial results and should be used with care in recommending production or selection of varieties since long term production of the various varieties is not known.

**Asparagus Variety Trial - NFREC, Quincy 1987**

<table>
<thead>
<tr>
<th>Variety</th>
<th>Source</th>
<th>Yield* (lb./A)</th>
<th>Percent Plants Survived After 2 Years</th>
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<td>Jersey Giant</td>
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<td>Brocks Imperial #84</td>
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<td>Rutgers Univ.</td>
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<td>51 x 22-8</td>
<td>Rutgers Univ.</td>
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(Olson: Veg. 88-05)
C. USDA Proposes Watermelon Research and Promotion Program.

A Recommended Decision (RD) on a proposed National Watermelon Research and Promotion Plan has been issued by the U.S. Department of Agriculture. This Recommended Decision is based on the record of continuous public hearing held during February 1987, in Las Vegas, Nevada, and Atlanta, Georgia, to consider the industry-proposed plan.

Copies of the Recommended Decision (RD) on the Watermelon Research and Promotion Plan are being sent to 47 counties in Florida to be sent to watermelon growers and handlers in each of those counties.

Written exceptions and comments to this Recommended Decision will be considered by USDA, and a Secretary's Decision will be issued. If that decision is favorable toward the proposed plan, a referendum will be held late this year.

The plan is authorized by the Watermelon Research and Promotion Act (Section 1641-1662 of the Food Security Act of 1985) which requires that a referendum of watermelon growers and handlers be "conducted at county extension offices" in the 48 contiguous State's if the plan is approved by the Secretary of Agriculture.

Originally advanced by the National Watermelon Association in accordance with the 1985 Watermelon Research and Promotion Act, the program would provide research, advertising, and sales promotion to improve the position of watermelons in the marketplace. It would operate at no cost to the federal government, financed by a 2 cents per hundredweight assessment on watermelons paid by handlers and by farmers who grow five or more acres of watermelons.

Anyone who both grows and handles watermelons would pay assessments for each function. Otherwise, no handler or producer would have to pay more than one assessment on any watermelon. Producers and handlers assessed under the program could request and receive refunds.

A 29-member board appointed by the Secretary of Agriculture would administer the program. Twenty-eight members would come from nominations by watermelon producers and handlers; one member to be appointed from outside the industry would represent the public. As in similar research and promotion programs in agriculture, the board would develop plans with approval by the secretary and would oversee an administrative staff managing the program's daily work.

Comments on the recommended proposal should be sent in quadruplicate to the Hearing Clerk, Rm. 1079-S, USDA, 14th and Independence, Washington, D.C. 20250, by May 23. Upon reviewing them, the secretary will decide on whether to hold a referendum among all eligible watermelon producers and handlers to measure support for the plan. The plan would become effective only if approved by at least two-thirds of the producers and handlers voting, or by a majority of producers and handlers accounting for at least two-thirds of the volume of watermelons grown by all voters.

Copies of the proposal and additional information may be obtained from W. M. Stall, State Coordinator or Tom Tichenor, Marketing Order Administration Branch, Fruit and Vegetable Division, AMS, USDA, Rm. 2523-S, P. O. Box 96456, Washington, DC 20090-6456; telephone (202) 475-3930.

(Stall: Veg. 88-05)
### III. VEGETABLE GARDENING

#### A. Computerized data bases and programs.

During the 80's, several computerized programs and/or data bases on gardening have been released by commercial companies or universities. Following is a list of some of the programs that have been publicized as available (most for sale). The prices quoted probably have changed and some of these may no longer be available. Also, I'm sure I have overlooked a few.

Disclaimer: I have not reviewed these programs, so I am not endorsing any of them. They are mentioned here merely to acquaint the reader with the existence of such gardening aids.

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<th>Program</th>
<th>DB or P</th>
<th>Computers</th>
<th>Company</th>
<th>Price</th>
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ADDRESS

Garden Plan

Gardener's Asst.

Plantin' Pal

Compugarden

Ortho Personalized Plant Selector

DeVinci Landscapes

Landscape Design

Tree Search
Perennial Search
Conifer Search

Agweather
Bedding Plant Info.
Consult
Display Board
Fruit Info.
Growers Guide
Home Horticulture
Horticulture Math
Info. Program
Mail
Nursery-Landscape
Landscape Selector
Plant Problem Control
Upload/Download

North Dakota State University
Fargo, North Dakota 58105

Shannon Software, Ltd.
2912 Pine Spring Road
Falls Church, VA 22042
(703) 573-9274

Home & Hobby Software
4936 Morgan Ave. South
Minneapolis, MN 55409

Compugarden, Inc.
725 Richmond Ave.
Silver Spring, MD 20910
(301) 587-7995

Ortho Computerized Gardening
Ortho Info. Services
575 Market Street
San Francisco, CA 94105

Hayden Software Company
600 Suffolk Street
Lowell, Massachusetts 01854

Avant-Garde Software
37B Commercial Blvd.
Novato, CA 94947
(415) 883-8083

Taxonomic Comp. Research
P.O. Box 5747
Raleigh, NC 27650-5747

Spartan Ornamental Network
Dept. of Horticulture
Michigan State University
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Professor