Vegetarian 95-1
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I. NOTES OF INTEREST

A. Vegetable Crops Calendar.

February 2, 1995. Strawberry Field Day at the Dover Center. (Contact Will E. Waters).


II. COMMERCIAL VEGETABLES

A. Calibrated Soil Testing.

Calibration. Soil tests are calibrated if they can accurately predict crop response to fertilization based on the concentration of a nutrient found in the unfertilized soil. Some extractants are insensitive to the concentration of an element in a soil and therefore can not be calibrated for those growing areas. You want to select labs that employ extractants that have been calibrated for your growing area. During the calibration research phase, certain soil nutrient concentrations (let's use potassium as an example) might be determined to be "low" and other concentrations determined to be "high". Crop growth on "low" soils is poor and growth on "high" soils is usually normal with maximum yields. Using the "low", "medium", and "high" testing soils, fertilization research is conducted to determine the amount of fertilizer (K\textsubscript{2}O) needed to supplement the native soil K and achieve maximum yield and quality.

Soil test reports. Growers are often perplexed by various soil test report formats and conventions. Extractable nutrients are often reported in parts per million (ppm) or pounds per acre (lb/A). It is important for the report user to realize that the ppm value was the number determined in the lab from the soil sample while lb/A was calculated by multiplying ppm by 2. This math is based on the idea that there are 2 million lbs of soil in an acre furrow slice which is, in itself, a gross estimation. Therefore the math is not strictly accurate for all soils tested by a lab. Furthermore, the "lb/A" designation leads to confusion because soil test users assume that "lb/A" means "available lb/A". The uninformed user might subtract the lb/A on the soil report from a crop nutrient requirement from a book and derive a fertilizer recommendation. For example, a sweet corn K requirement might be 150 lb K per acre and the soil test report said 70 lb/A of K in this soil. It would not be proper to subtract 70 from 150 and recommend that 80 lb of K be applied. The value "70 lb/A" might have been correctly interpreted as "high", meaning no fertilizer was required. Remember that the soil test numbers on the report are extracted nutrients and are called soil test index values. They are an index to the soil fertility and need to be interpreted as "low", "medium", "high", etc. to be of use in determining a fertilizer application.

(Hochmuth, Vegetarian 95-01)


The concept of seedless watermelons was described first in the U.S. literature by Kihara based on experimentation that began in
Japan in 1939. Seed for planting seedless watermelons results from a cross between a selected tetraploid female parent, developed by treating diploid lines with colchicine, and a selected diploid (normal) male parent. The resulting triploid is sterile and does not produce viable seed. However, small, white rudimentary seeds develop which are eaten along with the flesh just as immature seeds are eaten in cucumber.

Fruit enlargement in normal fruit, including watermelon, is enhanced by growth-promoting hormones produced by the developing seed. Growth hormones are lacking in seedless watermelons so those agents must be provided by pollen. Since flowers on triploid plants lack sufficient viable pollen to induce normal fruit set, normal watermelons are interplanted with triploids to serve as pollenizers. An adequate bee population is necessary to insure that sufficient transfer of pollen occurs. Seedless fruit (from triploid plants) tend to be triangular shaped without sufficient pollination.

Although the procedure for production of seedless watermelons has been known for almost 50 years and commercial varieties have been available for nearly 20 years, the interest in and acreage of seedless watermelons has remained small. Erratic performance, poor seed germination, high seed costs, and inadequate varieties resulted in the lack of interest in seedless watermelon production.

Specialty vegetables are in high demand and seedless watermelons offer an attractive alternative for discriminating consumers and the food service industry. Seedless watermelons are being actively promoted by marketing organizations and seed companies to stimulate demand. At the same time, new varieties are being developed that are superior to those previously available.

The objective of this trial was to evaluate the performance of seedless watermelon cultigens under west-central Florida conditions.

Seeds of 25 seedless watermelon varieties or experimental lines for replicated trials and 25 entries for observational trials were planted in a peat-lite growing mix in No. 150 Todd planter flats on 28 January. The watermelon transplants were grown by a commercial plant grower.

The EauGallie fine sand was prepared in early February by incorporation of 0-1.2-0 lb N-P_2O_5-K_2O per 100 linear bed feet (lbf). Beds were formed and fumigated with methylbromide:chloropicrin, 67:33 at 2.3 lb/100 lbf. Banded fertilizer was applied in shallow grooves on the bed shoulders at 2.7-0-3.8 lb N-P_2O_5-K_2O/100 lbf after the beds were pressed and before the black polyethylene mulch was applied. The total fertilizer applied was equivalent to 130-60-182 lb N-P_2O_5-K_2O/A. 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.

Standard watermelons that were being evaluated were direct seeded in beds on each side of two seedless watermelon beds on 15 February to serve as diploid pollenizers. 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), aphids (endosulfan), and gummy stem blight (chlorothalonil and metalaxyl-chlorothalonil).

Watermelons were harvested on 25 May, 2 June, and 9 June. Marketable (U.S. No. 1 or better) according to U.S. Standards for Grades were separated from culls and counted and weighed individually.

Early yields, represented by the first of three harvests, ranged from 42 cwt/acre for 'Sunrise' to 290 cwt/acre for 'Genesis'. Early
yields of 18 other entries were statistically similar to those of 'Sunrise' whereas 20 other entries had yields similar to those of 'Genesis'. Average fruit weight ranged from 6.4 lb for 'Sunrise' to 16.7 lb for RXW 701. Average weight of fruit at first harvest of 22 other entries was similar to that of 'Sunrise', whereas 23 other entries had average fruit weight similar to that of RXW 701. Soluble solids of fruit from the first harvest varied from 11.9% for 'Supersweet 4073' to 13.6% for 'Tiffany'. There were few differences in yield, average fruit weight, or soluble solids at the first harvest.

Total yields ranged from 461 cwt/acre for 'Flordalee III' to 842 cwt/acre for 'Crimson Trio', but were statistically similar. Average fruit weight for the entire season varied from 8.3 lb for 'Chiffon' to 16.9 lb for 'Millionaire'. Total yields far exceeded the state average yield of about 198 cwt/acre for the 1988-89 to 1992-93 seasons. Soluble solids over the entire season ranged from 11.5% for 'Supersweet 4073' to 12.9% for W0010, but these differences were not significant. Accordingly, soluble solids in all entries far exceeded the 10% specified for optional use in the U.S. watermelon grade standards for very good internal quality.

Seedless watermelon variety trials have been conducted at this location each spring season since 1988. The highest yields have ranged from 546 cwt/acre in 1991 to 1161 cwt/acre in 1993. In spring 1994, the highest yield in the replicated trial was 842 cwt/acre which was somewhat more than the 795 cwt/acre average yield of the previous six years. 'Millionaire' was included in five of the six replicated trials (observational trial in 1993 because of the 'Storm of the Century') and was the highest yielding variety in three of the trials and in the statistically highest yielding group in two other trials.

Based on results of this and previous trials, varieties, in alphabetical order, that appear to have considerable potential for commercial production in Florida include 'Crimson Trio', 'King of Hearts', 'Millionaire', 'Supersweet 2532', 'Supersweet 5032', 'Supersweet 5244', 'Tiffany', and 'Tri-X-313'. 'Merrilee III' should be considered for trial plantings.

(Maynard, Vegetarian 95-01)

III. VEGETABLE GARDENING

A. FL27 - State Major Program for Homeowner Fruits and Vegetables.

The purpose of this program is to promote the growing of fresh vegetables and fruits for home consumption and to improve the skills and knowledge necessary for successful gardening endeavors in all 67 Florida Counties, including the federally targeted city of Jacksonville.

This is to remind county agents who are working with home fruit and vegetable gardeners (10 days or more within the fiscal year), that work should be planned and reported under State Major Program FL27. It seems to me that a lot more work is going on in this program than is being reported by county staff.

There is still some confusion about where to report Master Gardener program work. Keep in mind that projects, activities and educational outreach performed by Master Gardeners should be reported (in most instances) under one or two SMPS: a) FL14, Environmental Landscape Management in Florida, if work is on lawns, ornamentals, landscape trees and shrubs, and b) FL27, Florida Urban Gardening Program, if work is on home fruits and vegetables.
Programs designed for Master Gardeners, such as recruiting, organizing, training, and deploying, should be reported elsewhere.

Accomplishments/Impacts - In 1994, nine counties reported under FL27 - Baker, Duval, Jefferson, Lafayette, Liberty, Manatee, Orange, Polk, and Washington (total clientele of 17,000). The following are some of the highlights reported.

UF (Gainesville) - As a result of demonstrations held at the Organic Gardening Research and Education Park, gardeners can help prevent organic waste from entering landfills, while reducing water and chemical fertilizer needs in their gardens. A slide video tape and accompanying fact sheet were prepared on the benefits of using various soil organic amendments. These may be obtained by contacting the IFAS film library and asking for V.T. 1107, Producing Garden Vegetables with Organic Soil Amendments, and IFAS Center for Biomass Programs to get the fact sheet EES-327 (same title).

Duval - The Jacksonville Urban Gardening staff was greatly reduced due to budget cuts in 1994. However, with the help of Duval Master Gardeners, extension worked with 20 community gardens (containing 123 plots), and 263 home gardens, for a total of 1524 adult gardeners. The total value of all gardens in the Urban Gardening project was about $380,000.

One of the more successful Jacksonville UG community gardens continues at the Fort Caroline site. Started 10 years ago by the “Gardening Lots” staff, this one-acre site on church property contains 18 garden plots and 20 gardeners. What makes this particular garden unique is the degree to which the gardening participants have organized themselves. There is a president who oversees rules and regulations and major aspects of the garden project. The secretary edits and mails to all participants a monthly newsletter. The treasurer collects a $2.00 weekly fee per garden plot, and makes disbursements to pay all bills.

The group has developed an irrigation control system for solving one of the most severe problems: how to water plants in a state with government imposed water restrictions. Each garden plot has drip lines connected to an individual water-metering device. Thus gardeners are charged only for the amount of the water used on their plot. Watering schedule (strictly followed), allows everyone to get water and prevents overloading the system during any one hour. Rules prohibit watering outside the allotted times, except by hand held hoses. Equipment has been purchased to help till all plots, with labor provided by volunteers. This garden at Fort Caroline (Jacksonville) expresses a degree of togetherness and community pride that all other community gardens might be wise to emulate.

Orange - a survey showed 54% of respondents said their garden was more successful due to Extension help; 28% switched to safer pesticides; 21% were now conserving water; and 35% were now using more efficient ways to fertilize and 100% of those surveyed had a better understanding of biological pest controls as a result of Orange Co. Extension efforts.

Manatee - about 55 gardeners learned how to solarize gardens for soil pest control. They also learned how to “scout” more diligently to reduce chemical treatments.

Liberty and St. Johns - a county wide vegetable gardening contest was held by extension in each county. In these contests, participating gardens (30 in St. Johns, and 12 in Liberty) were visited by extension workers, providing an opportunity to educate gardeners of better ways of growing vegetables.

Elsewhere - from a statewide perspective, the Florida Master Gardener program, with all of its projects and activities, continues to be of paramount importance to this FL27 state major program called Urban
Gardening. Within this program, such reactive efforts as telephone contacts, office visits and clinic consultations remain foremost among several methods of reaching home fruit and vegetable gardeners. Gardening meetings of all types are conducted regularly by county extension staffs statewide.

Several counties utilized mass media approaches to reaching urban gardeners. Orange County is a good example, where outstanding work is conducted with radio, television, and the newspaper.

Demonstration gardens were also of key educational importance in other counties, some of which were Baker (30X30 foot garden behind the extension office); St. Lucie (similar); Putnam (similar); Osceola (similar); Manatee (2 gardens); Nassau (included a grant study); and Orange County (a water-wise garden). Master Gardeners were usually actively involved with these demonstration gardens.

Finally, annual fairs and exhibition events held around the state provided ample opportunity for extension workers to reach gardeners, gardening related enterprises, the general public, and public officials.

(Stephens, Vegetarian 95-01)

IV. UPCOMING EVENTS

A. 1995 Seedsman Seminar.

1995 Seedsman Seminar
Holiday Inn West, Gainesville
Registration $25.00

Wednesday, February 8, 1995
Moderator - Richard Wojcik (Sunseeds)
1:00 Presidents Address - Allen Stevens (Florida Seed Co.)
Opening Address
1:15 John Cross (Seed Specialists, Inc.) - Seed health
Watermelon Fruit Blotch
1:45 Tom Kucharek (UF) - Growers perspective
2:05 Dick Barrett (Plants of Ruskin) - Transplant producers perspective
2:25 Wayne Weibe (Peto) - Seed industry perspective
2:45 Don Hopkins (UF) - Public research perspective
3:05 Darrell Maddox (STA Labs) - ASTA position on watermelon fruit blotch & techniques for WFB identification
Coffee Break

Revamping the FL Seed Laws
3:45 Don Maynard (UF) - Arbitration - past history, recent cases
4:05 Rick Anderson (Peto) - Problems with the existing seed law
4:25 Dale Dubberly (FDACS) - FL seed law
4:45 Discussion & Adjournment
6:00 FSGS Social Hour & Banquet
Thursday, February 9 1995
Moderator - Paul Sawyer (Abbott & Cobb)

Flower Seed
08:30 Paul Kummiskey (Earl J. Smalls Growers) - Experiences with seed quality as a producer/user
08:50 Roger Styer (Pan American) - Matching seed quality to plug producers needs
09:10 Bob Croft (Sakata Seed) - Flower seed quality: Exploiting the potential
09:30 Bruce Christensen (Pan American) - Troubleshooting in the flower seed industry
Coffee Break

New Crops
10:10 Brett Callaway (Pioneer Seed) - Corn germplasm preservation
10:30 Ken Owens (Peto) - Hot peppers
10:50 John Reynolds (Asgrow) - Virus resistance in cucubits by virus coat proteins mediated protection
11:10 Rob Ferl (UF) - Lettuce engineered for Glyphosate tolerance
11:30 Harry Klee (UF) - Engineering tomatoes & strawberries for better quality
11:50 Adjourn

(Vavrina, Vegetarian 95-01)

B. 1995 Florida Postharvest Horticulture Institute & Industry Tour.

1995 FLORIDA POSTHARVEST HORTICULTURE INSTITUTE & INDUSTRY TOUR
Holiday Inn West, Gainesville
Seminar: March 2,3; Industry Tour: March 6-9

At the Postharvest Institute the latest practical information is presented by University of Florida faculty and other experts for maintaining postharvest quality of fruit (tropical and sub-tropical), vegetables and ornamental crops for domestic and export markets. The Institute is designed for industry professionals involved in postharvest handling of horticultural crops in such diverse areas as field and packinghouse management, sales, import/export, wholesaling, retailing, extension education and students.

The Friday afternoon session will include hands-on demonstrations on temperature and relative humidity measurement and cooling principles and methods. A display area will be available for industry exhibits on both days.

The Postharvest Industry Tour will provide an opportunity to experience first hand the latest technologies for handling and shipping a variety of horticultural crops. Participants will visit harvest, packing and shipping operations throughout Florida, as well as a port facility and warehouse operations. The tour will depart from Gainesville on Monday morning, March 6, and return to Gainesville on Thursday evening, March 9. Tour enrollment will be limited to 35 persons.


REGISTRATION FEES:
Institute:$75.00 by Feb. 10; $95.00 after.
Tour: $150.00 by Feb. 10; $170.00 after.
Optional reference material: $10.00

Fee includes the reference notebook, luncheons on both days and the evening banquet on Thursday.
Includes transportation only; meals and motel are extra (4 days/3 nights).

Hotel reservations in Gainesville may be made by calling the Holiday Inn West. Request group rates for the Postharvest Horticulture Institute ($49.00 per night, single, or $59.00, double). Make reservations at 800-551-8206 or 904-332-7500. The special rate includes a coupon to purchase the hot breakfast buffet for $2.99.

REGISTRATION FORM - RETURN BY FEBRUARY 10, 1994

Name ____________________________ Organization ____________________________

Address ____________________________

Day Phone: ___________ FAX: ___________

COSTS:

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TOTAL ENCLOSED: ___________

I am also interested in: Registering for one graduate credit _____ Exhibit space for my company _____

MAKE CHECKS PAYABLE TO: Florida Fruit and Vegetable Association Research Foundation.

MAIL REGISTRATION FORM AND PAYMENT TO:
Holiday Inn West, c/o Ann Fowler, Catering, 7417 NW 8th Ave., Gainesville FL 32605
(Tel. 904-332-7500; Fax: 904-332-0487)

Institute Coordinator: Dr. Steven A. Sargent. (Tel. 904-392-1928, ext. 215; Fax: 904-392-5653).

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