Vegetarian 85-1 January 17, 1985

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Note:

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The use of trade names in this publication is solely for the purpose of providing information and does not necessarily constitute a recommendation of the product.
I. NOTES OF INTEREST

A. New Publications


B. Vegetable Crops Calendar

Feb. 11, 1985. 6:30 P.M. Vegetable Crop meeting for Dixie, Gilchrist, and Levy counties, Trenton Community Center.

Feb. 20-21 - IFAS - Florida Seedsmen & Garden Supply Association Annual Educational Seminar, 1 P.M. University Centre Hotel, Gainesville.


May 16, 1985, 9:30 A.M. Gulf Coast Research and Education Center Vegetable Field Day, Bradenton, Florida.


II. PESTICIDE UPDATE

A. Section 18 for Monitor on Escarole/Endive, Parsley and Chinese Cabbage

The Environmental Protection Agency has granted a Section 18 exemption to the Florida Department of Agriculture and Consumer Services for the use of Monitor (melhamidaphas) to control aphids and leafminers on escarole/endive, parsley and Chinese cabbage.

A maximum applied rate of 0.75 lb a.i. per application on a 4 to 7 day interval up to 2.0 lb a.i. per acre per crop may be made. A 10 day pre harvest interval will be observed for Chinese cabbage and a 28-day PHI for escarole/endive and parsley.

This exemption applies for 12,453 acres of these crops in Martin, Seminole, Brevard, DeSoto, Lake, Palm Beach, Sarasota, Orange, Hillsborough and Charlotte counties.

This exemption expires June 30, 1985.

(Stall - Veg. 1-85)
III. COMMERCIAL VEGETABLES

A. Crop Losses Due to Weeds

"Crop Losses Due to Weeds in Canada and the United States", a special report of the Losses Due to Weeds Committee has been published by the Weed Science Society of America. The basic objective of the report was to provide estimates of crop losses due to weeds in agronomic and horticultural crops in 10 regions. Florida, Georgia, Alabama and South Carolina are included in the southeast region.

The reported estimates were based on current crop-production practices, crop yields and prices received for commodities. They were based on extrapolation from weed-crop competition studies, comparative observations between weedy check plots and herbicide control plots, and numerous observations made in producer fields in which mixed populations of economically important weeds existed.

The report points out several advantages of estimating weed-crop losses. Documenting monetary losses would help guide the development of new herbicides and improvement of other weed-control methods by identifying areas of greatest need and greatest potential monetary returns. This can also provide a basis to direct research and extension activities toward crops for which the greatest need exists and the greatest gains can be expected.

The table indicates the losses from potential production from the southeast U.S. and were pulled from numerous tables in the survey. For an example it is estimated that in the 4 southeast states 13% of the potential green snapbean production is lost due to weeds. This is equivalent to 316000 cwt of beans with a value of $7,342,000.

It should be remembered that surveys of this nature have limitations, but do provide the best estimate of crop-weed losses without on site research data. Weed control data is being developed in Florida along with crop competition data for several crops and weeds. In the future we will try to incorporate Florida data to compare this state to the southeast and nation.

Estimated average annual losses due to weeds in vegetables in the southeast, 1975-1979.

<table>
<thead>
<tr>
<th>Crop</th>
<th>Reduction</th>
<th>Quantity (cwt x 1000)</th>
<th>Value ($ x 1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bean, green snap</td>
<td>13</td>
<td>316</td>
<td>7342</td>
</tr>
<tr>
<td>Cabbage</td>
<td>9</td>
<td>503</td>
<td>3858</td>
</tr>
<tr>
<td>Potato</td>
<td>7</td>
<td>722</td>
<td>5012</td>
</tr>
<tr>
<td>Sweet Potato</td>
<td>8</td>
<td>121</td>
<td>1466</td>
</tr>
<tr>
<td>Sweet Corn (fresh)</td>
<td>12</td>
<td>707</td>
<td>7076</td>
</tr>
<tr>
<td>Lettuce</td>
<td>3</td>
<td>55</td>
<td>827</td>
</tr>
<tr>
<td>Cucumber (fresh)</td>
<td>10</td>
<td>394</td>
<td>4580</td>
</tr>
<tr>
<td>Cucumber (pickled)</td>
<td>5</td>
<td>1</td>
<td>191</td>
</tr>
<tr>
<td>Cantaloupe</td>
<td>13</td>
<td>63</td>
<td>438</td>
</tr>
<tr>
<td>Watermelon</td>
<td>15</td>
<td>2940</td>
<td>10128</td>
</tr>
<tr>
<td>Pepper</td>
<td>5</td>
<td>101</td>
<td>2306</td>
</tr>
<tr>
<td>Tomato (fresh)</td>
<td>9</td>
<td>395</td>
<td>1754</td>
</tr>
</tbody>
</table>

(Stall - Veg 1-85)
B. Soluble Fertilizer Starter Solutions

Although plants use from 5 to 10 times as much nitrogen and potassium as they do phosphorus, application rates of phosphorus often approach one-half that of N or K. This is to make up for the poor plant recovery of P by annual vegetable plants. One reason for the poor recovery is that added P is rapidly fixed in insoluble forms in the soil. The plant's ability to gather P from the soil is restricted even further under cool soil conditions because the root's growth and nutrient foraging capacity is reduced.

Under this situation, crop establishment can be enhanced by providing abundant soluble P at planting time. This starter P, especially in the presence of small amounts nitrate-nitrogen, stimulates rapid root growth and enables the plant to become established quickly. This translates into more uniform stands and in many cases increased earliness and higher total yields.

There are many suitable soluble starter fertilizers on the market. Special grades such as 14-28-14, 23-21-17, 12-36-14, 5-50-17, 10-52-17, 10-30-20, or 20-20-20 can be used at the rate of 3-6 pounds per 50 gals of water. Some are already prepackaged in 3-pound units. They are applied at the rate of about 1/4-1/2 pint of solution per plant either by the water wagon or by the transplanter or water wheel. The lower rate should be used on melons and cucumbers. For a crop such as pepper the cost of the starter would be approximately $20-$40 per acre.

(Hochmuth - Veg. 1-85)

C. A Caution on the Use of the Word "Fritted"

The following appeared in a soils newsletter, "Highlights in Soil Science" written by G. Kidder, Extension Soils Specialist:

There is a fair amount of misuse of the term "fritted" in reference to micronutrients. The purpose of this article is to call attention to this fact and to provide a basis for Extension faculty to better understand certain fertilizer products that are in common use and avoid using incorrect information in their educational efforts.

A "frit" is a finely-ground, glass-like material which has a low solubility in soil. A fertilizer frit is produced by melting together silica sand and minerals which contain plant nutrient elements. When cooled, the glass-like material is ground to near powder fineness and is ready for use as a slowly-soluble source of plant nutrients.

In the 1950's and 1960's, there was considerable research done on various fritted materials and they were generally found to be good, long-lasting sources of otherwise highly soluble nutrients such as boron (B). Unfortunately, the fritting process requires a tremendous amount of energy--first, to melt the minerals and then, to grind the product. The rapid rise in cost of energy in the 1970's had a direct effect on the cost of producing fritted fertilizer materials. The economics shifted and it was usually far more economical in field situations to apply soluble sources more frequently than to use the longer-lasting frits.
A victim of the high cost of energy was a popular micronutrient mixture sold under the trade name "FTE 503." FTE stood for 'fritted trace elements.' That product had been recommended by name in many IFAS publications as a general purpose, prophylactic micronutrient treatment. Unfortunately, it continues to be recommended by trade name today, years after it ceased to be manufactured. Contributing to the confusion is the existence of newer products which have "F" and "503" as part of their trade names. The following table contains data on products which are available in Florida. Please avoid using outdated terms in your talks and publications.

<table>
<thead>
<tr>
<th>PRODUCT NAME</th>
<th>GUARANTEED ANALYSIS</th>
<th>SOURCE OF NUTRIENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;FTE 503&quot;</td>
<td>(Has not been marketed for several years)</td>
<td>iron and boron are fritted; other nutrients are oxides or sulfates</td>
</tr>
<tr>
<td>&quot;F-503 (powder)&quot;</td>
<td>3.0% B, 3.0% Cu, 18.0% Fe, 7.5% Mn, 0.07% Mo, and 7.0% Zn</td>
<td>boron as borax, all other nutrients as oxides; none are fritted</td>
</tr>
<tr>
<td>&quot;F-503 Oxide&quot; or &quot;F-503 Ox&quot; (powder)</td>
<td>3.0% B, 3.0% Cu, 18% Fe, 7.5% Mn, 0.2% Mo, and 7.0% Zn</td>
<td>boron as borax, other nutrients as oxides or sulfates; none are fritted</td>
</tr>
<tr>
<td>&quot;F-503 G&quot; (granular)</td>
<td>2.4% B, 2.4% Cu, 14.4% Fe, 6.0% Mn, 0.06% Mo, and 5.6% Zn</td>
<td>boron as borax, other nutrients as oxides or sulfates; none are fritted</td>
</tr>
</tbody>
</table>

It should be emphasized that the sole purpose of this article is to call attention to the fact that some Frit Industries, Inc., products may not contain the glass-like, fritted materials some people are assuming are there. The Frit Industries, Inc. products are comparable to others of similar formulation such as the Traylor Chemical & Supply Co. product "TEM 300."

Use of trade names in this publication is solely for the purpose of providing specific information. It is not a guarantee or warranty of products named and does not signify approval to the exclusion of others of suitable characteristics.

(Hochmuth - Veg 1-85)

D. Preliminary 1984 Florida Vegetable Production Statistics

The Crop Reporting Board of the USDA confirmed that Florida continued to hold a strong second place in fresh market vegetable production in 1984. The report, issued on December 27, 1984, is for nine principal vegetables and melons. A more detailed report for Florida including most of our commercial crops will soon be issued by
the Florida Crop and Livestock Reporting Service.

The federal report shows data for broccoli, carrot, cauliflower, celery, sweet corn, lettuce, honeydew melon, onion, tomato and strawberry production. Nationally, these vegetables were grown on about 1 million acres and had a farm value of nearly 3.5 billion dollars.

Florida ranked first in sweet corn and tomato and second in celery and strawberry production and value. Florida ranks high in production of many other vegetables not reported in these data.

Ranking of the leading states by harvested acres, production and value for the crops reported is shown in Table 1.

### Table 1
Leading Fresh Market Vegetable States in 1984

<table>
<thead>
<tr>
<th>Rank</th>
<th>State</th>
<th>Harvested Area</th>
<th>Production</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>California</td>
<td>45.9</td>
<td>California</td>
<td>51.9</td>
</tr>
<tr>
<td>2</td>
<td>FLORIDA</td>
<td>13.0</td>
<td>FLORIDA</td>
<td>11.4</td>
</tr>
<tr>
<td>3</td>
<td>Texas</td>
<td>6.5</td>
<td>Arizona</td>
<td>6.6</td>
</tr>
<tr>
<td>4</td>
<td>Arizona</td>
<td>5.6</td>
<td>Texas</td>
<td>4.7</td>
</tr>
<tr>
<td>5</td>
<td>New York</td>
<td>5.2</td>
<td>Oregon</td>
<td>3.7</td>
</tr>
</tbody>
</table>

(D. N. Maynard - Veg. 1-85)

E. Vegetable Production Outlook in Florida

The following article by John VanSickle appeared in the November issue of Florida Food and Resource Economics:

The outlook for vegetables produced in Florida is becoming more and more difficult to determine. Uppermost in creating uncertainty in the market is the effect of freezes experienced in three of the last four production seasons. These freezes have had the effect of creating hardship for those whose crops were affected by the freeze, and creating an economic bonanza for those areas not affected by the freeze. Another factor placing uncertainty in the market for vegetables grown in Florida is the production situation in Mexico as most fresh vegetables consumed in the United States between October and June come from either Florida or Mexico.

Two conflicting forces have been in motion in Mexico over the past few years which affect the competitive position of Mexico with Florida. These forces are the rapidly increasing exchange rate of Mexican pesos for American dollars and the high rate of inflation in Mexico relative to the United States. An increasing exchange rate means that Mexican growers are realizing returns almost two times greater in 1984 than in 1981 (assuming the same price received in American dollars for each period). These factors combined with the high prices received for vegetables marketed in the United States because of the disasters of Florida's recent mid-winter freezes have led to Mexican growers
receiving extremely high returns for vegetables marketed in the United States. The bottom line is stronger competition from Mexico now and in the future than at any time in the past. Florida will probably increase production for many vegetables in many areas. These facts combined with what used to be considered a "normal" production season without killing freezes could lead to depressed prices received compared to previous years' returns.

(D. N. Maynard - Veg. 1-85)

IV. HOME GARDENING

A. The National Junior Horticultural Association (NJHA) and Its Role in Florida

"I dropped a seed into the earth. It grew, and the plant was mine." This statement by Liberty Hyde Bailey (1903), was quoted in Hort Science by J. Lee Taylor, Michigan State professor, to demonstrate the natural curiosity that youth have in plants. This curiosity is the basis for 4-H gardening projects and the development of The National Junior Horticultural Association (NJHA).

Actually, The NJHA started out as the National Junior Vegetable Growers Association (NJVGA), with projects based just on vegetables. Prof Grant B. Snyder, Massachusetts, along with others originated NJVGA fifty years ago.

When I started at the University in 1962, Florida was participating in the activities of NJVGA through project work in 4-H and FFA. Obviously, due to the vegetable connection, leadership for this and all programs in vegetable youth work came from the Extension Vegetable Specialist.

In 1965, the NJVGA became the NJHA, expanding the scope of its projects and activities to include ornamentals, turf and fruits in addition to vegetables. However, the scope of NJHA projects in Florida continued to focus on vegetables for a number of years.

Gradually there did come a change in Florida. First, vegetable 4-H demonstrations were changed to 4-H horticultural demonstrations. In 1976, 4-H vegetable judging became the 4-H horticultural contest. Today 4-H and NJHA activities are conducted jointly by all three horticultural departments. The Florida FFA, however, continues to conduct separate vegetable and other horticultural events. Currently, no NJHA chairperson has been from Florida since the resignation of Ann MacDonald in 1983. The age limit for NJHA projects is 15 except for The Young America Division, through 22.

NJHA projects conducted nationally fall mainly into 2 major types: report-type projects, where individuals or groups carry out a project and then complete a written report describing and illustrating what they did and how; and performance-type projects, where individuals and teams compete in a variety of contests, including demonstrations, public speaking, and plant identification and information.

State-wide contests are held in many states, including Florida, to select participants for the national contests held during the NJHA annual convention. The state 4H contests (Florida) in the Horticultural Demonstrations and Hort Identification are held at State 4th Congress in July, at Gainesville.

The procedure for selecting winners in report-type contests is
quite different. Around October 1 participants forward their reports to their state chair-person, who is usually an extension specialist or agent. This state chair-person, often with a committee, evaluates all reports and determines a state winner in all the project areas. State winners then go to the national meeting where they are interviewed and their records evaluated for national awards. In previous years, it was not imperative that project winners attend the national convention. Instead, their records were forwarded and evaluated based on written and graphic evidence.

The NJHA annual convention is a 4-day event (Friday through Monday) held in a different city each year in late October. Two have been held in Florida, in 1962 at The Deauville Hotel, Miami Beach, and in 1971 at The Sheraton Beach Hotel, Miami Beach. Florida has had representation at all the conventions since 1962, and even prior to that year. Our 4H'ers participated in October 1984 at Grand Rapids, Michigan, and will do so in October 1985 at Lexington, Kentucky.

In Florida, the programs of the NJHA are interwoven in the fabric of the projects and activities of 4-H and FFA programs. There is no clear-cut delineation of where one groups' program begins and the others end. We have had 4-H and FFA members who served as national officers in NJHA, but we do not have a state NJHA organization as do some other states.

(Stephens - Veg. 1-85)

Prepared by Extension Vegetable Crops Specialists

Dr. D. J. Cantliffe
Acting Chairman

Dr. G. J. Hochmuth
Assistant Professor

Dr. M. Sherman
Assistant Professor

J. M. Stephens
Associate Professor

Dr. D. N. Maynard
Professor

Kathleen Delate
Visiting Ext. Agent I

Dr. S. M. Olson
Assistant Professor

Dr. W. M. Stall
Associate Professor