Vegetarian 89-06

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I. NOTES OF INTEREST

A. Calendar.


July 30 - Aug. 4, 1989. ASHS Convention, Tulsa, OK.


B. Vavrina new Vegetable Specialist.

Dr. Charles S. Vavrina is the new Extension Vegetable Specialist at the Southwest Florida Research and Education Center in Immokalee, Florida. Dr. Vavrina began with the station on April 1, 1989. His previous employment was with the University of Georgia as an Assistant Professor.

Dr. Vavrina was born and reared in Englewood, New Jersey. He was later joined in marriage to Ms. Debi Adcock. Dr. Vavrina received his PhD from the University of Georgia in March of 1987 where his major was in Horticulture. He received his MS from the University of Connecticut in March of 1975 where his major was in Plant Science. Dr. Vavrina received his BS degree from Bethany College in June of 1971 where his major was in Zoology. Dr. Vavrina holds membership with several professional societies throughout the nation.

Dr. Vavrina’s responsibilities in Immokalee will involve all facets of vegetable culture and management production technology from site selection to harvest. Specific responsibilities will include statewide recommendations and assistance for vegetable stand establishment and transplant house technology.

(Cantliffe, Vegetarian 89-06)

II. COMMERCIAL VEGETABLES

A. An Incorrect Use of the Soil-Test Index.

Several recent instances indicate that there is a misconception present regarding the relation of the soil-test index value and a resulting fertilizer rate. I have seen a few situations where individuals have mathematically converted the index value into the supposed actual crop-available nutrient on a per acre basis. The approach here was to multiply the index (which is expressed in parts per million) by a factor of 2 to get pounds per acre. This is based on the assumption that there are 2 million pounds of soil in an acre furrow slice. After performing the calculations, the resulting figure is subtracted from the crop nutrient requirement value to arrive at a fertilizer rate. Sounds easy, right?

There are two problems with this approach. One problem is that the 2 million pound aspect is surely not very accurate. The 2 million pound value is only an estimate for an "average" soil. What does your soil really weigh? It can vary greatly depending on soil texture and moisture.

The other problem is a major one. The bottom line is that the index should not be mathematically manipulated to derive a fertilizer rate. The index value is expressed in ppm only because that is the amount of nutrient extracted from the soil sample. We extract with the Mehlich-I extractant. Other labs use different extracting solutions and thus produce different index values. Although we express the index in terms of soil concentration, the index must be interpreted as reflecting "low", "medium", or "high" nutrient supplying capacity of a given soil. The index does not indicate the exact amount of a certain nutrient that is available to the crop. Therefore, we can not mathematically manipulate the index to derive fertilizer rates. The fertilizer rates must result from the interpretation of the index. If the index indicates a soil very low in phosphorus, then we add the total crop nutrient
requirement for phosphorus as fertilizer. The exact amount of phosphorus to add is derived from response data gathered from experiments that test the response of a crop to added nutrient on a soil that can not supply much of the crop nutrient requirement.

Do not be misled into thinking that the soil test index is a bottom-line magic value upon which we can base fertilizer calculations. That would be an inappropriate use of the index and one that could result in a fertilizer recommendation that is seriously in error.

(Hochmuth, Vegetarian 89-06)

B. Fall Tomato Varieties.

Fall tomato production has been on the increase in Florida. This increase has been brought about by the introduction of two new tomato varieties that will set fruit under high night temperatures (greater than 70°F). Most varieties of fresh market tomatoes presently available set poorly (puffy fruit) or not at all when night temperatures rise about 70°F for prolonged periods of time.

The two new recent releases for fall production include 'Solar Set' (FL 7164) a release from University of Florida breeder Dr. Jay Scott and 'Heat Wave' (PSR 39686) from Petoseed's breeding program.

The vine vigor for both varieties is similar to 'Duke' or 'FTE 12' but less than that of 'Sunny'. Both varieties should be pruned lightly (204 suckers removed) to prevent top fruit from sunburning.

In replicated yield trials at the North Florida Research and Education Center the early and total yields between the two were not significantly different (Table 1). Both varieties produce a high percentage of large (6x6) and extra large (5x6) fruit.

<table>
<thead>
<tr>
<th>Marketable Yield (cartons/A)</th>
<th>Early</th>
<th>Total</th>
<th>Average fruit weight (oz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>Large</td>
<td>Ex Large</td>
<td>Medium</td>
</tr>
<tr>
<td>Heat Wave</td>
<td>17a²</td>
<td>142a</td>
<td>951a</td>
</tr>
<tr>
<td>Solar Set</td>
<td>28a</td>
<td>147a</td>
<td>857a</td>
</tr>
<tr>
<td>Sunny</td>
<td>9b</td>
<td>37b</td>
<td>446b</td>
</tr>
</tbody>
</table>

²Mean separation by Duncan's Multiple Range Test, 5% level.


Seed of both may be in limited supply for fall, 1989 production. 'Solar Set' is available through Asgrow or Asgrow-Florida dealers and 'Heat Wave' through Petoseed dealers.

(Olson, Vegetarian 89-06)
III. VEGETABLE GARDENING

A. The Potential Value of CD-ROM in Extending Gardening Information.

It seems to me that Extension delivery systems have picked up dramatically in the past 5 years or so, particularly in the area of electronics. Most advances have centered around videos and computers.

Along these lines I was fortunate to attend a workshop held the last day of May by the Gainesville CD-ROM group led by Pierce Jones of the Ag Engineering Dept. What I and about 40 of my Extension colleagues (including county agents) found out was that CD-ROM has exciting potential for us in Extension, particularly those of us who work in the home horticulture arena.

I still don't know much about the technical aspects of CD-ROM, but in simple terms it translates to a Compact Disc, Read Only Memory, which can be plugged into our computers if we get the necessary adaptations. Now what makes it unique and different from the computerized retrieval systems we already have on VAX, such as FAIRS, is that CD-ROM is an independent system. We don't have to dial up the VAX on the phone; instead, just pop in a disc. You get a disc in the mail which contains an unbelievable storage capacity of factual information (text) complete with graphics. The disc is over 5 inches in diameter, yet can store 250,000 pages of information; you can retrieve any part of it almost instantaneously, either for printing or just viewing.

The hardware and software required appear to be fairly reasonable obstacles to overcome both from standpoint of price and required equipment. CD-ROM works with most IBM-PC compatibles, using a CD-ROM drive, a laser printer and Word Perfect capability.

All of the details of the delivery system are in the capable hands of the CD-ROM group, led by Jones. In its attempt to get this system operational for us in IFAS Extension, the group is putting material on the discs as we specialists prepare it and present it to them.

While I can speak from only one specialist's viewpoint, it looks to me that CD-ROM has vast potential for us in Extension. I plan to utilize this opportunity to the fullest extent. Can you imagine all of the information on gardening that has been generated by IFAS located on one simple disc? Right now it is scattered everywhere. We have circulars, handbooks, fact sheets, bulletins, mimeo reports, miscellaneous reports, conference/seminar notes, and much, much more, just sitting in files, hidden from view.

Of course it's going to take a lot of clerical and word processing assistance (time) to find all this material and transfer it to the CD-ROM format. However, with commitment we can start in that direction.

I do not envision CD-ROM replacing the printed literature that we are all so used to having, and still need in abundance. What it will do is supplement what is printed, so that county Extension offices have an alternative.

It's best value appears to be in providing access to little used, and therefore out-of-print documents. For example, selected topics from my old Vegetarian articles might be useful from time to time for reference to answer gardening questions, prepare TV and radio talks, newsletter articles, and news stories.

CD-ROM should prove extremely valuable in the 4-H area, where the publications pinch due to funding problems is being felt as much as in agriculture. Several old as well as current project record books and literature have fallen by the wayside, not to be reprinted. However, some counties may need one occasionally for specialized usage. If on a CD-ROM, it could be retrieved and printed by the county for that county only.

And that last statement leads to the disadvantages of CD-ROM, the first of which is printing costs borne by counties. However, when weighed against the
alternative, which in most instances will be no publication available, the cost seems justified.

Another glitch to be worked out is the need to properly identify the origin and authenticity of the material. In-house printing at the county level will have a tendency to print only the meat of what information is needed, leaving off authorship, acknowledgements, and other bits of identity.

Materials for use in the Florida Master Gardener program are under transition to the CD-ROM delivery system. I suspect we will learn much from this initial trial. As more and more experience is gained, I am confident we all will applaud this new and potentially powerful addition to our arsenal of delivery methods.

(Stephens, Vegetarian 89-06)

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