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I NOTES OF INTEREST

A. Vegetable Crops Calendar.


II COMMERCIAL VEGETABLES

A. What are mineralization rates of composts in south Florida?

Composts as soil amendments have many beneficial effects which include improving soil biological, physical, and nutritional properties. As a result, the use of composts for crop production is becoming more and more attractive to growers in Florida. Commercial applications of compost range from less than 20 to over 200 mt/acre in vegetable crop production systems. The nutrient concentration and availability of composts varies considerably depending on the mineralization rates of composts. Compost mineralization is the biological reaction of converting organic nitrogen into inorganic forms (NH$_4^+$-N and NO$_3^-$-N) which are available forms for plant uptake. Mineralization of compost depends on the compost composition, maturity, and the soil conditions (moisture, temperature, etc.). Compost mineralization rates are essential to determine proper compost application rates and application frequencies and to predict potential effects on N uptake by crops and off-season N losses.

Estimates of nitrogen mineralization are often based on incubation methods either in the laboratory or in field conditions. Probably the laboratory approach that most closely simulates a field situation is the incubation/leaching method. A soil or compost is packed in a plastic column, moistened, incubated, and periodically leached with 0.01 M CaCl$_2$ solution to remove mineralized N. The most commonly used method in the field condition is the incubation of samples within sealed polyethylene bags buried in the soil. A second method is to incubate samples in plastic or metal columns, which are inserted in the soil and covered to prevent leaching of nutrients. The difference in inorganic N concentrations between the compost at the beginning and the end of the incubation is the net mineralization.

Nitrogen mineralization rates of three composts produced in Florida were evaluated using both of laboratory leaching and field incubation methods during 1996-1997 in Fort Pierce. The three composts were produced from biosolids (sewage sludge), municipal solid waste (MSW), and yard waste. Results from the experiments are presented in Table 1. Mineralization rates are closely related to C/N ratios of composts. As C/N ratio of compost increases the mineralization rate decreases. A C/N ratio of compost <20 is commercially acceptable and presumably considered as the dividing line between immobilization (transformation of inorganic N into organic forms) and release of nitrogen from organic materials. When a compost with a C/N ratio higher than 20 is applied, there is immobilization of soil nitrogen during the initial decomposition process. For ratios less than 20, there is a release of inorganic nitrogen during decomposition.

Mineralized N from compost similar to inorganic fertilizer will move downward in the soil profile with rainfall and irrigation. High application rates of composts with high mineralization rates may cause leaching of nutrients into groundwater, particularly on soils vulnerable to nutrient leaching.

Table 1. Carbon contents, total nitrogen, and C/N ratios of three composts and their mineralization rates after 6 months and 12 months incubation during 1996-1997 in Ft. Pierce.

<table>
<thead>
<tr>
<th>Compost</th>
<th>C %</th>
<th>N %</th>
<th>C/N ratio</th>
<th>Laboratory leaching (6 months)</th>
<th>Vegetable field incubation (6 months)</th>
<th>Citrus grove incubation (12 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biosolids (sewage sludge)</td>
<td>28.3</td>
<td>4.9</td>
<td>6</td>
<td>18</td>
<td>22</td>
<td>33</td>
</tr>
<tr>
<td>Municipal Solid Waste (MSW)</td>
<td>28.9</td>
<td>1.9</td>
<td>15</td>
<td>5</td>
<td>7</td>
<td>16</td>
</tr>
<tr>
<td>Yard Wastes</td>
<td>11.0</td>
<td>0.3</td>
<td>37</td>
<td>1</td>
<td>2</td>
<td>13</td>
</tr>
</tbody>
</table>

(Yuncong Li, Vegetarian 98-08)

The vegetable summary for 1996-97 has been released by the Florida Agricultural Statistics Service. According to the summary, during the 1996-1997 production year, 346,550 acres of vegetables were planted in Florida. This was down 6 percent from the 369,600 acres planted during the 1995-96 season. Producers showed increased 1996-97 plantings for snap beans, sweet corn, and strawberries.

The value of vegetables, watermelons, potatoes, and berries produced in Florida during the 1996-97 season totaled $1.61 billion. This was a 7 percent increase from the 1995-96 value of $1.5 billion. All values of production increased except for snap beans, potatoes, radishes, and other vegetables.

The largest planted acreages were: sweet corn (44,000), potatoes (43,500), tomatoes (37,500), watermelon (33,000) and snap beans (31,300). The leading crops for 1996-97 by total harvested value were: tomato at $462.5 million, pepper at $230.9 million, strawberries at $146.1 million, and sweet corn at $123.8 million.

The following table gives planted acreage and total harvested value of Florida vegetables by crop.

<table>
<thead>
<tr>
<th>Crop</th>
<th>Planted Acreage</th>
<th>Total Value ($1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snap beans</td>
<td>31,300</td>
<td>58,039</td>
</tr>
<tr>
<td>Cabbage</td>
<td>8,100</td>
<td>42,745</td>
</tr>
<tr>
<td>Carrots</td>
<td>6,800</td>
<td>16,361</td>
</tr>
<tr>
<td>Sweet Corn</td>
<td>44,000</td>
<td>123,762</td>
</tr>
<tr>
<td>Cucumbers</td>
<td>9,400</td>
<td>58,982</td>
</tr>
<tr>
<td>Eggplant</td>
<td>1,800</td>
<td>13,399</td>
</tr>
<tr>
<td>Escarole</td>
<td>1,700</td>
<td>6,938</td>
</tr>
</tbody>
</table>

Bell peppers 19,650 230,925
Radishes 12,700 17,840
Squash 9,500 28,246
Tomatoes 37,500 462,526
Other Vegetables 1 81,500 244,174
Watermelon 33,000 54,750
Potatoes 43,500 97,671
Strawberries 6,100 146,119

Total 346,500 1,601,753

1 Other fresh and processing vegetables and cantaloupes.
2 Does not include blueberries valued at $6,005,000.

The 1996-97 Vegetable Summary also contains monthly production and values by crop and area for many vegetables. The vegetable summary is a Florida Agricultural Statistics Service Publication. They have a release distribution policy which states that FASS publications are provided free of charge to all Florida agricultural producers and other FASS survey respondents. Also entitled to free FASS publications are news media that use agricultural statistics in the publications, cooperating State agencies, and other USDA agencies that have an essential need for this information. Publications picked up at the FASS office (1222 Woodward Street, Orlando) will be provided at no charge. Other persons or entities will be assessed a nominal charge to receive individual publications or to be placed on distribution list for future FASS publications.

Most publications are available on the Internet. Users may access and download these reports from http://www.nass.usda.gov/fl.

(Stall, Vegetarian 98-08)
C. Digital cameras may provide help to agents.

In March of this year, 6 agents met with specialists at the request of Larry Halsey, CED Jefferson County, and myself to discuss the possibility of using digital pictures as a method to assist county agents in receiving quick responses to crop problems that arise in the county. The method involves using a digital camera to take a picture and then send it via e-mail to a specialist, who can identify the problem and send a response in a matter of minutes. These 6 agents received low cost Kodak cameras provided by Fedro Zazueta, IFAS Information Technologies, to implement a trial. Since this initial meeting, Larry Halsey, Russ Mizell, N. Fl. AREC, and myself have visited the Brooks County extension office, one of 30 initial Georgia counties to implement a digital camera pathology project. They received field cameras and in-house office cameras to capture images from microscopes and stereoscope. Their system is set up to send image samples only to UGA Extension Plant Pathology. Their system does not provide a method for electronic response nor does it provide an archiving feature. This was something we felt would be a benefit to the agents and the system.

Once our Agents started sending digital pictures, several things were discovered. First, images being sent went well beyond the targeted cooperators and went beyond diagnosis of insect and disease pests. The target cooperators specialists list has been modified to include 11 specialists representing Information Technology, Entomology, Herbarium, Pathology, Hort Sciences, and Agronomy departments at the University of Florida. Second, e-mail as a vehicle was too slow to send files plus it did not provide an easy method for archiving photos. To solve this problem, Jiannong Xin and Howard Beck of Information Technologies created a draft form to submit the digital samples more efficiently. The form also provides a way to capture images and data sent by the agents then route it to a selected specialist for diagnosis. Once the diagnosis is made, the result is sent to a collating site and the agent is notified that the result can be obtained at the site. Larry and I have tested the software and made some recommendations to Xin and Howard who are refining the software. The group of agents and specialists have recently met to view the new software and provide more information to assist with the refinement. We hope to have the software in the cooperators' and specialists' hands in the next few weeks. Our goal is to provide the easiest, most efficient method of identifying problems to support agents in their counties. If you would like more information on this project, contact me at (850) 973-4138 or Larry Halsey at (850) 342-0187.

(Jim Fletcher, CED Madison County & Larry Halsey, CED Jefferson County
Vegetarian 98-08)

D. Sweet corn variety trial, Spring 1998.

A supersweet (shrunken-2 gene) sweet corn variety trial was conducted at Long and Scott Farms, Lake Jem, FL, during the spring of 1998 growing season. The trial was limited to cultivars/breeding lines of the gene type homozygous shrunken-2 (sh2), i.e., supersweet, since these cultivars are considered the standard for large commercial growers. Yellow, white, and bicolor lines were included in the trial.

The kernels of the sh2 type sweet corn have at least 2-3 times the total sugars of the normal sweet corn at optimum harvest; conversion of sugar to starch is also much slower. This slower conversion facilitates a longer harvest and storage period along with an increased time for consumption. Consumer preference has also shifted toward the supersweet-type sweet corn. In light of widespread use of the sh2-type sweet corn, it is important to evaluate commercially available and advanced breeding lines for their adaptability to central Florida's growing conditions.

Seeds were planted by hand into an Immokalee fine sand on March 17, 1998; plots were single-row, 3' wide x 23' long with 9" in-row spacing. Four replications were arranged in a randomized complete block design. Cultural
A. Garden surplus helps the hungry.

Gardening in Florida is a year ‘round hobby. Gardeners can "Plant A Row For The Hungry" and help others as they play in the yard. Each year, hundreds of our neighbors find themselves in unfortunate circumstances. Soup kitchens and homeless shelters help feed hungry families and poor individuals. Meals are delivered to senior shut-ins. Schools provide free or reduced cost meals for children.

Now, there is a national program promoted by the Garden Writers Association of America (GWAA), wherein gardeners can help feed the hungry. Jacqui Heriteau, Plant A Row (PAR) Coordinator, recently announced a campaign to help feed the hungry in our home towns.

"Learning that scaling back the food stamp program has emptied the shelves at the food banks, has prompted this very ambitious goal. But working with Master Gardeners, the American Community Gardening Association and just a handful of the 70 million gardeners in this country, I'm confident we can raise a million pounds of produce for food banks by the year 2000," says Heriteau.

In just three years, the garden writers campaign has documented delivery of over 200,000 pounds of garden produce to community food banks and soup kitchens nationwide.

The program calls for gardeners to plant an extra row of vegetables and set aside the harvest for local food banks or soup kitchens. Properly managed, every small effort helps the kitchen managers provide more nutritious and appetizing meals. Schools, churches, civic groups, garden clubs, businesses and Master Gardeners can join together to organize a local PAR campaign in Florida. Support materials and organizational tips are available from jacquiheriteau@msn.com or call Heriteau at (860)824-0794 or fax (860)824-0108. The GWAA has developed two promotional videos, with the help of T.V. gardener Jim Wilson, to help explain the program and generate interest in the PAR project.
While the GWAA can help in promotion, Extension's help is needed in organizing local efforts. You are familiar with the local needs. Your may know a club, business or church who will help sponsor a community garden for the project.

Extension has many resources to help gardeners have productive gardens, but we need your organizational help to grow the needed food crops. Flowers, herbs and fresh fruit are also needed to improve the quality of life for local families. Perhaps the Master Gardeners could help organize a county wide effort to recruit gardeners, get pledges, teach gardening, promote the program, help coordinate the record keeping and liaison with the local food banks, congregate meal sites and soup kitchens.

Fall is a great time to begin a garden in Florida. It would not take too long for a bountiful harvest for those who need it most.

If you are interested in helping start a PAR program in Florida, call Eleanor Foerste, Horticulture Agent with the Osceola County Extension office at (407) 846-4181 or E-mail to ecf@ce@gnv.ifas.ufl.edu.

(Foerste, Vegetarian 98-08)

B. Operation Green Thumb Miami community garden project.

Dade County Master Gardener Lee Allford reports on the following project.

The Miami project began with a meeting between Allford and the Urban Horticulture Master Gardeners Coordinator, The City of Miami Police Department, American Legion Post #29, and Sam Reno Apartment staff in September of 1995. Here is Allford's report. "The meeting was called to order and a discussion began to determine if a garden or park would best service the community. A vegetable garden was agreed upon by all present at the meeting. A Board of Directors and chairperson were elected to carry the mission forward. The Board members went to inspect the city-owned property and found overgrown weeds (5-6 feet tall), drug needles, crack pipes, whiskey bottles, and other drug paraphernalia on the site.

You could hear gun shots from across the street and loud, noisy members of gangs would hang out all day. We were informed by the police department that this area was one of the worst neighborhoods with drug activity, which caused major problems in the City of Miami."

"The Board formed a planning committee and wanted a well-organized garden coordinator. I was selected and agreed to service. Ms. Irma Abella, Assistant City of Miami Attorney met with the Board and after reading the by-laws and rules which govern the garden activity, an agreement was made that the property could be used for a community garden. We prepared and developed the site, installing a fence around the garden, and cleaning the site. We decided that 8x10 plots would serve the purpose. Landscape timber was purchased, plots were laid out, the soil tested, and mulch and soil delivered, which begin the planting of the garden."

"A flyer was passed out in the community about the garden between Biscayne Blvd. and 5th Ave. on Northeast 63rd Street as we began to work at the garden site. Problems began to cease in the area and citizens began to communicate with each other at the garden site, talking with myself as well as the police officers working at the site. We laid out 47 plots and the neighbors began to sign up for them. After they agreed to abide by the bylaws and rules, 42 plots were planted with vegetable, flower, fruit trees, and landscape plants. We also recruited 30 Morningside Elementary students to begin planting vegetables on a special plot for school children. A variety of vegetables and herbs have been planted and harvested each year for the past four (4) years, and the garden has, in many ways, improved the quality of life concerns in the area and without a doubt has been a true success."

According to Lee, the Board will meet August 5th and start planning for the 1998 vegetable garden. Here is their motto:

Getting together is a beginning,  
Keeping together is progress,  
Working together is success!
Lee wishes to acknowledge the help of the following people:

"Many thanks to the City of Miami Police Department, The American Legion Post #29, and Sam Reno Apartment staff.

Special thanks to Ms. Mary Schneider for obtaining seeds and plants donated to the garden. Thanks to Ms. Dianne Sapp (Board member) for the landscape timber, Master Gardeners, Roy Patrick and Darlene Martin. S. B. Welb, your contributions to this project has made it a successful community garden, and again many thanks to all of you!!"

(Stephens, Vegetarian 98-08)

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