Vegetarian 96-11

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I. NOTES OF INTEREST

A. Vegetable Crops Calendar.


II. COMMERCIAL VEGETABLES

A. Vegetable transplant cells: the bigger, the better?

While touring transplant production houses this fall I was struck by something peculiar ... trays with only 150 or even 72 plants! A far cry from the industry standard of 242 plants per tray. At a time when most growers are cutting costs to the bone, why would some request tomato transplants in cells that add $35 or more to their cost per thousand?

The trend in modern tray design has been to pack more and more cells in a tray (i.e. smaller and smaller cell volumes) to increase the number of plants per house. More plants per house means greater efficiency for the transplant production facility.

So why then this move toward bigger cells? Let's look at what has been offered over the past 30 years by the scientific community. Table 1 lists nine notable studies where researchers compared growing transplants in cells of varying volume (bigger cell volume means fewer cells per tray). In 6 of the 9 studies, transplants grown in larger cells led to significantly bigger transplants at planting and increased early and/or total yield. The trend toward higher yield with larger cells was also noticed in the trials that did not show statistically based differences.

Some researchers noted that some cultivars respond less dramatically to larger cells, but that the trend was still similar. Also, whether the trays are plastic or styrofoam the trend remains the same. Field growth of plants grown from larger cells generally showed more rapid development and an ability to resist insects and diseases.

Why is “bigger” better? Researchers have suggested a general reduction in stress, greater availability of water and fertilizer, and unrestricted root growth as possible answers. Three of the trials cited here were carried out in Florida; however the data indicate this phenomenon holds true in Georgia, Indiana, Kentucky, Michigan, Minnesota, Missouri and Israel. We continue to compile data in Florida with trials presently in Palm Beach County (pepper) and Hendry County (tomato).

Economics may still play a role in the decision to grow transplants in larger cells, especially for crops like pepper where population densities are high. However, in crops such as tomato or watermelon the increase in yield and earliness should cover that small investment up front.
<table>
<thead>
<tr>
<th>Crop/Yr.</th>
<th>Cell Volume (cm³)</th>
<th>Transplant Height (cm)</th>
<th>Field Yield (tons/hectare)x</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomato/1964</td>
<td>2, 3, 4 inch pots</td>
<td>7, 8, 12 inch</td>
<td>1, 1.4, 1.8w</td>
</tr>
<tr>
<td>Broccoli/1985</td>
<td>04, 15, 31</td>
<td>3, 4, 5</td>
<td>12, 13, 15 total</td>
</tr>
<tr>
<td>Tomato/1986</td>
<td>04, 19, 39</td>
<td>10, 20, 21</td>
<td>08, 09, 18 early</td>
</tr>
<tr>
<td>Cabbage/1988</td>
<td>08, 28, 39</td>
<td>10, 09, 12</td>
<td>1.9, 2.1, 2.2v</td>
</tr>
<tr>
<td>Pepper/1988</td>
<td>06, 19, 39</td>
<td>19, 20, 22</td>
<td>1.6, 2.3, 4.3 early</td>
</tr>
<tr>
<td>Watermelon/1989</td>
<td>19, 39</td>
<td>-</td>
<td>53, 57 total</td>
</tr>
<tr>
<td>Pepper/1990</td>
<td>05, 35, 65</td>
<td>12, 16, 17</td>
<td>64, 60, 64 total</td>
</tr>
<tr>
<td>Watermelon/1993</td>
<td>19, 31, 66</td>
<td>-</td>
<td>49, 50, 52 total</td>
</tr>
<tr>
<td>Muskmelon/1996</td>
<td>07, 36, 70</td>
<td>25, 51, 69u</td>
<td>15, 27, 33 total</td>
</tr>
</tbody>
</table>

Contact the author for specifics on any or all the studies listed.

Not all data are represented in each study for ease of table format and presentation.

x tons/hectare x 0.446 = tons per acre

w lbs early fruit/plant

v lbs per head

u leaf area in cm²

(Vavrina, Vegetarian 96-11)
B. Growing organic through plowshares CSA.

What is community supported agriculture (CSA)?
A CSA is a community of consumers joining to support a local farmer to produce organically grown food for their table. This alliance assures the farmer of a prepaid local market for the crop while providing community members informed choices about their food. The CSA movement restores an age-old tradition whereby communities come together around the planting, tending, harvesting and eating of food.

How does plowshares CSA work?
A group of interested citizens have formed a working “core group” to organize and administer the CSA. In September 1996 the core group formed an alliance with Rose Koenig of Rosie's Organic Farm, 1717 SW 120 Terr., Gainesville, FL. The core group will work closely with Rose coordinating volunteer help in the garden, soliciting members, circulating a monthly newsletter, and keeping the books. Volunteer help, although welcome and needed, is not required of members. Many members are unable to devote significant time to working in the garden.

How much does a share cost?
At Gainesville, a share constitutes a weekly bag of varied fresh vegetables and specialty items such as culinary herbs, gourmet salad greens and ethnic vegetables during the 32-35 week growing season, from Jan. 1 to July 15, and Oct. 15 to Dec. 31. This is about 8-12 pounds of produce per week, enough to feed 2-4 people, at a cost of $400. A half-share weighing 4-6 pounds feeds 1-2 people and costs $225. A limited number of working shares at reduced cost will be available.

Where can food be picked up?
Shares are distributed locally at pick-up points as directed, such as farmer’s markets.

The Gainesville growers,
Rose Koenig and Tom Mirti started Rosie’s Organic Farm in 1993. They are certified organic, which means they annually go through a rigorous inspection process to ensure adherence to the rules and regulations of the Florida Organic Growers Assn. Organic growing means that only naturally occurring organic inputs are used in the farming operation. They employ practices such as crop rotation, cover cropping, introduction of biological control agents for insect protection, intercropping, composted manures and resistant varieties. The goal is to produce high quality vegetables and herbs in harmony with the natural environment and to promote ecologically sound agricultural practices.

Why buy certified organic produce?
Many people are not aware of what goes into the food they eat and where it is produced. Much of the produce sold in groceries is imported from countries that have little or no control over which pesticides growers use on their crops. Many of the pesticides banned in this country are legal to use in other countries. Certified organic producers must adhere to the rules of their certifying board. This gives concerned consumers control over what they eat and the peace of mind that the produce is pesticide free.

Risks Members of a CSA are making a choice to be involved in the production of their own food. By this choice they share the benefits of local fresh food along with the risks of variable weather and a reduced harvest. Experienced CSA’s report that losing a complete harvest is very unlikely. Diversified cropping and wise growing practices minimize the risk of loss.

( J. M. Stephens and Jim Ferguson
Vegetarian 96-11)
III. VEGETABLE GARDENING

A. Accomplishments of Florida’s Urban Gardening Programs.

During 1996 county Extension staffs in Florida assisted home vegetable gardeners in a variety of ways. The following accomplishments were reported by hort agents in some of the counties.

Miami - In a desperate attempt to thwart crime with positive imaging, the City of Miami police department asked Dade County Master Gardeners to start a community garden on a street having the highest crime rate in the city. The selected vacant lot had been the site of the recent slaying of two policemen, and of numerous citizens in the past. When Master Gardener Lee Afford and the Horticulture Agent proceeded to the lot on 62nd St. to plan the garden, they were accompanied by two policemen as guards. While they were there, a man was shot just one street away.

Two crack houses faced the lot. The project got underway with the clearing of needles from the lot, along with the usual assortment of inner-city trash. The Master Gardeners recruited gardeners by standing in the street and asking anyone who peered out their window to join the community garden. Many who lived along the street wanted to grow a garden as they had done back in Haiti. So they joined along with many others, and planted their assigned plots with herbs, tomatoes, tanniers, and other favorite crops. From a nearby school came 65 kindergarten children each Wednesday to be taught about gardening in the plots.

During the 1996 Spring gardening season, there were no serious crimes in the area of the project. However, as soon as the garden closed for the summer, two nearby shootings occurred, one in which a young Boy Scout was killed. Everyone connected with the garden or hearing about it are crediting the project with creating at least a lull in the violence and providing some hope that community pride can be restored for these citizens. A local farmer has volunteered to donate all of the supplies needed for this and other such gardens in the City, and local prisoners have agreed to raise vegetable transplants for all of these community gardens. As a result, the 62nd Street garden will resume in the Fall, and eighteen other communities have requested assistance from Extension to establish similar gardens in their neighborhoods around Miami.

Tampa - Likewise the community garden in Tampa started in 1996 was a success story. Called Weeds and Seeds, the garden in a low income area (dubbed “Suitcase City”) reached 50 minority citizens in a positive way. Through a grant of $13,000, agent assistant Linda Bell was hired to get the project underway. She found a location, established fencing and irrigation, built a storage shed, prepared and amended the soil, designed and laid out the plots, then recruited participants.

By Spring planting time the garden was 100% occupied by 50 low income gardeners. Juvenile offenders from the city worked in the garden to serve their time positively. A harvest fair day called “A Garden Blessing,” capped off the first season’s activities.

Jacksonville - In 1996 the Jacksonville Urban Gardening project dubbed Gardening Lots conducted community gardens at 20 locations in the city’s most improverished areas. These contained 198 plots, on a combined area of 313,200 sq. ft (7.19 acres). Based on a USDA formula of $0.60 per sq. ft, the estimated value of the produce from these gardens was $186,300.00. In addition there
were 20 school gardens, containing $75,000 worth of vegetables on 250,000 sq. ft (5.75 acres). Staff, including Master Gardeners, also worked with 257 home gardeners, with an area of 525,000 sq. ft (12 acres) and production value of $315,000.00. The overall project involved 3,657 participants and a produce value of about $576,000.00. The annual Harvest Fair featured garden exhibits for competition along with a wide assortment of educational seminars and events, including a largest-vegetable contest.

Orlando - In Orange County more people are gardening in response to Extension’s efforts there, and are changing practices for the better. Extension surveyed 20% of program participants and found 70% made these changes: used less toxic sprays (50%); could ID beneficial insects (36%); used organic amendments (73%); now use Florida varieties (79%); plant in correct season (79%); use animal manures (52%); and harvest at correct time (55%). Due to Disney’s sponsorship, 560,000 view Extension’s demonstration garden, called “Pamela’s Garden.”

St. Petersburg/Largo - The international vegetable gardens established by the Pinellas County Master Gardeners at the Ag Center featured 150 vegetable varieties displayed in an ethnic fashion (ie. American, South American, Mexican, Oriental, African, and Egyptian). Master Gardeners also worked with 4-H at the Ochs Center to create 80 plots there and at four other locations. They had a city grant of $1200 for this project.

Tavares/Leesburg - The Master Gardeners and Lake County Commissioners combined efforts on a demonstration garden at the Learning Center. From it they harvested 740 pounds of produce and donated it to the Leesburg Food Bank. After considerable TV coverage, area neighbors went out and collected produce from area backyard gardens and made further donations to the Food Bank. As a result of this year’s efforts by the Master Gardeners, plans are to establish a 2-acre plot from which all of the produce will go to the Food Bank.

(Stephens, Vegetarian 96-11)