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I. NOTES OF INTEREST

A. Vegetable Crops Calendar.


II. COMMERCIAL VEGETABLES

A. Spices add Variety to Life.

While we in Extension have a lot of information on herbs, we seldom receive much about spices. Therefore, I want to share with you some of the highlights of a report by Peter J. Buzzanell of the USDA, entitled 'The Spice Market in the U.S - Recent Developments and Prospects,' Oct., 1993. The American Spice Trade Association (ASTA) defines spices as "any dried plant product used primarily for seasoning."

Herbs and spices are similar in many respects, but generally a herb becomes a spice when the whole plant or plant part is ground, dehydrated, or altered in some respect from the whole plant. For example, ASTA does not consider fresh ginger a spice, but does so the altered forms: ground, sweetened, candied. Also, the artificial spice flavorings which so far are merely in the testing stages, are not included in the spice trade - as yet.

The USA is both a producer and exporter of spices. In 1992, a record 338 million pounds of spices was produced in the U.S.; however, this amounted to only 39 percent of total spices consumed in the U.S., meaning 61 percent were imported. Total consumption in 1992 was about 856 million pounds.

U.S. Production

While the USDA's statistics on domestic spice production is incomplete and overlaps herb production, we can still get a fair picture of the current situation. In the U.S., the main spices grown are capsicum (red pepper and paprika, which are produced mostly in California, New Mexico, Louisiana, the Carolinas (over one-half of which is consumed in the U.S.), Montana and the Dakotas are among several states which grow mustard seed. Most of what we use is imported from Canada.

California is responsible for much of the herbs which become spices, such as dill, fennel, basil, mint, parsley, and thyme. Hawaii is becoming an important spice producing state, with such crops as ginger (11,000,000 pounds in 1992), basil, parsley, and cilantro. It is notable that Florida is not listed as a major supplier for any of the spices. As an exporter, the only two significant spices from the U.S. are dehydrated onions and garlic.

U.S. Imports

The U.S. imported almost $400 million worth of spices in 1992, but this is only a small part (1.6%) of all agricultural imports, which were $24.6 billion in 1992. Of the 40 plus primary types of spices imported each year, about 75% of the total annual value is composed of seven items: vanilla beans, capsicums, black and white pepper, sesame seed, cinnamon, mustard, and origanum. These come from over 50 countries, the leading ones being Indonesia, Mexico, Malaysia, India, Canada, and Pakistan (2/3 of the annual value).

Here are some of the leading spice imports:

- Black pepper (Piper nigrum).
- Vanilla beans (Vanilla planifolia).
- Capsicums peppers (Capsicum spp).
- Ginger (Zingiber officinalis).

Mustard seed (Brassica juncea). Origanum (O. vulgare). Others: anise, basil, capers, caraway seed, cardamon, celery seed, coriander seed, cumin, curry (a blend of spices), dill, fennel, laural (Bay leaves), thyme, mint, poppy seed, sage, and oleoresin (spice concentrate).

Table 1. U.S. Imports and Exports of Spices, 1992.

<table>
<thead>
<tr>
<th>Spice</th>
<th>Exports (lbs)</th>
<th>Imports ($)</th>
<th>Imports (lbs)</th>
<th>Leading Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anise (or Badian seeds)</td>
<td>83,335</td>
<td>$2,235,000.00</td>
<td>2,265,000</td>
<td>Turkey</td>
</tr>
<tr>
<td>Capsicum peppers</td>
<td>7,221,239</td>
<td>$60,400,000.00</td>
<td></td>
<td>India, Pakistan, China and Mexico</td>
</tr>
<tr>
<td>Caraway seed</td>
<td>53,572</td>
<td>$3,007,000.00</td>
<td>7,206,000</td>
<td>Netherlands</td>
</tr>
<tr>
<td>Cardamom</td>
<td>59,745</td>
<td>$778,000.00</td>
<td>372,000</td>
<td>Guatemala</td>
</tr>
<tr>
<td>Cassia and Cinnamon</td>
<td>1,276,000</td>
<td>$26,000,000.00</td>
<td>33,170,000</td>
<td>Indonesia, Sri Lanka, China</td>
</tr>
<tr>
<td>Cloves</td>
<td>61,290</td>
<td>$1,503,000.00</td>
<td>2,547,000</td>
<td>Madagascar, Brazil, Indonesia</td>
</tr>
<tr>
<td>Coriander seed</td>
<td>85,540</td>
<td>$1,497,000.00</td>
<td>5,101,000</td>
<td>Canada, Morocco</td>
</tr>
<tr>
<td>Cumin seed</td>
<td>264,000</td>
<td>$12,596,000.00</td>
<td>14,187,000</td>
<td>Pakistan, Turkey, China</td>
</tr>
<tr>
<td>Curry</td>
<td>157,410</td>
<td>$1,511,000.00</td>
<td>1,028,000</td>
<td>India, Japan</td>
</tr>
<tr>
<td>Fennel</td>
<td>14,990</td>
<td>$3,300,000.00</td>
<td>6,956,000</td>
<td>Egypt, India</td>
</tr>
<tr>
<td>Garlic, dehydrated</td>
<td>6,000,000</td>
<td>$2,649,000.00</td>
<td>5,858,000</td>
<td></td>
</tr>
<tr>
<td>Garlic, whole</td>
<td></td>
<td>$7,790,000.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ginger</td>
<td>2,818,000</td>
<td>$9,800,000.00</td>
<td>19,800,000</td>
<td>Fiji, Indonesia, India</td>
</tr>
<tr>
<td>Mace</td>
<td>127,200</td>
<td>-</td>
<td>485,000</td>
<td>Indonesia, Singapore, Netherlands</td>
</tr>
<tr>
<td>Mustard seed</td>
<td>1,671,545</td>
<td>$15,000,000.00</td>
<td>122,847,000</td>
<td>Canada (99%)</td>
</tr>
<tr>
<td>Mustard, prepared</td>
<td>9,880,455</td>
<td>$8,000,000.00</td>
<td>-</td>
<td>Canada, France</td>
</tr>
<tr>
<td>Nutmeg</td>
<td>100,750</td>
<td>-</td>
<td>3,715,000</td>
<td>Indonesia, Singapore, Leeward Islands</td>
</tr>
<tr>
<td>Onions, dehydrated</td>
<td>32,593,130</td>
<td>$1,619,000.00</td>
<td>2,653,000</td>
<td></td>
</tr>
<tr>
<td>Pepper, Black/white</td>
<td>4,417,180</td>
<td>$50,090,000.00</td>
<td></td>
<td>Indonesia, Brazil, India</td>
</tr>
<tr>
<td>Pepper, Black only</td>
<td>-</td>
<td>$41,700,000.00</td>
<td>89,486,000</td>
<td>Indonesia, Brazil, India</td>
</tr>
<tr>
<td>Poppy seed</td>
<td>105,800</td>
<td>$3,126,000.00</td>
<td>10,762,000</td>
<td>Australia, Spain (96%)</td>
</tr>
<tr>
<td>Saffron</td>
<td>12,785</td>
<td>$3,173,000.00</td>
<td>7,048</td>
<td>Mexico, Guatemala, El Salvador</td>
</tr>
<tr>
<td>Sesame seed</td>
<td>2,761,950</td>
<td>$42,700,000.00</td>
<td>77,146,000</td>
<td>Spain (thyme)</td>
</tr>
<tr>
<td>Thyme and bay leaves</td>
<td>203,046</td>
<td>$4,504,000.00</td>
<td>3,930,000</td>
<td>Turkey (bay)</td>
</tr>
<tr>
<td>Turmeric</td>
<td>95,680</td>
<td>$4,000,000.00</td>
<td>5,744,000</td>
<td>India, Indonesia, China</td>
</tr>
</tbody>
</table>
Spice      Exports (lbs)      Imports ($)      Imports (lbs)      Leading Sources
Vanilla beans - $65,700,000.00  2,781,000  Indonesia, Madagascar
Allspice (pimenta) - $1,700,000.00  1,900,000  Jamaica, Honduras, Guatemala
Origanum - $11,700,000.00  12,200,000  Turkey, Mexico, Greece
Basil - $3,038,000.00  4,746,000  Egypt
Capers - $5,891,000.00  2,593,000  Spain, Turkey
Paprika - $6,054,000.00  6,784,000  Spain, Morocco, Hungary
Celery Seed - $1,599,000.00  5,877,000  India
Dill - $764,000.00  1,592,000  India
Mint - $444,000.00  640,000  Egypt
Parsley - $730,000.00  500,000
Sage - $5,567,000.00  5,324,000  Albania
Others include Marjoram, Rosemary, Savory, Tarragon

Imports total all spices (1992): $368,656,000
549,400,000 lbs

Total all spices consumed in U.S. (1992): 856,548,000 lbs

YSource: U. S. Dept. Commerce, as reported by Peter J. Buzzanell, 10-93.
(Stephens, Vegetarian 93-12)

B. Will Deeper Planting of Watermelon Transplant Influence Yield?

Last year, pepper growers were encouraged to plant their transplants a little deeper based on research generated at the Southwest Florida Research and Education Center and Extension demonstrations in Hillsborough, Manatee and Palm Beach counties. More recently, Ken Shuler, Palm Beach County Extension Vegetable Agent, noted that based on his field demonstrations with deeper pepper transplant plantings, over 2,000 acres of pepper land was "converted" this fall to deeper plantings!

Furthermore, research from North Carolina in the late 1960's indicated larger yields in once-over-harvest cabbage can be obtained with deeper transplants. So might deeper planting of watermelon transplants prove beneficial for FL growers? To answer that question, studies were conducted over three spring watermelon crops to assess transplant depth effects on yield. Due to variability (legginess) within the transplants from year to year, we used the physical positions of the top of the root ball and the cotyledon (seed leaves) as depth markers.

Table 1 presents first harvest and total yields for Crimson Sweet watermelon. In only one of the three years studied did deeper planted watermelon transplants result in a significant yield difference and then only at first harvest (p=0.07). Visitors to the spring 1993 SWFREC vegetable field day will attest to the added vigor and greatly increased size displayed by the deeper planted plants, however dramatic yield differences were not apparent. As with pepper transplants, deeper planting of watermelon "tends" to
advance plant maturity resulting in greater early yields, with no apparent effect on total yield. No differences in individual fruit weight were noted in any year, therefore the increased yield was a result of more fruit.

Deeper plantings seem to reduce the stress exerted by wind on young plants. This factor may explain the increased growth in vine and foliage noted in the field. More vigorous growth in the first 30 days or so may also be an advantage in combating early disease. While all of the 1993 plants went through the "Storm of the Century" with few losses, the deeper plantings seemed to recover more rapidly.

This transplant depth work has not received the broad geographical testing seen with the pepper study. While the data are not convincingly strong to warrant wholesale conversion to deeper planting watermelon growers statewide are encouraged to try a block of cotyledon depth planting. Commercial transplant growers generally do a good job of keeping plants short and stocky. However, should your plants prove to be "leggier" than you would like, do not hesitate to plant them deeper. Studies so far have not tested even deeper plantings (first true leaf or greater), but this is on tap for the coming season.

Table 1. The effect of watermelon planting depth on yield in CWT/A.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>1st Harvest</th>
<th>Total Harvest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring 1990</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deep</td>
<td>175a</td>
<td>832a</td>
</tr>
<tr>
<td>Standard</td>
<td>162a</td>
<td>726a</td>
</tr>
<tr>
<td>Spring 1991</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deep</td>
<td>300a</td>
<td>--**</td>
</tr>
<tr>
<td>Standard</td>
<td>293a</td>
<td>--</td>
</tr>
<tr>
<td>Spring 1993</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deep</td>
<td>169a</td>
<td>296a</td>
</tr>
<tr>
<td>Standard</td>
<td>135b</td>
<td>315a</td>
</tr>
</tbody>
</table>

* Values followed by the same letter are not significantly different by LSD=10%.
** Losses to gummy stem blight resulted in only one harvest.

(Vavrina, Vegetarian 93-12)
C. Florida Agricultural Conference and Trade Show.

FACTS - VEGETABLES
Coordinators: George Hochmuth and Don Maynard

PROGRAM 1 - PEPPER (Wed., Feb. 16)


9:40 - 10:05 Cultural Aspects - Bell Peppers. Ken Shuler, Palm Beach County Cooperative Extension Service, West Palm Beach, FL, and Charlie Vavrina, Southwest Florida REC, University of Florida, Immokalee, FL.

10:05 - 10:30 Tissue Testing - Bell Peppers. Jim Fletcher, Madison County Cooperative Extension Service, Madison, FL.


PROGRAM 2 - POTATO (Wed., Feb. 16)


3:15 - 3:45 Foliage Disease Management. Pete Weingartner, AREC, University of Florida, Hastings, FL.

3:45 - 4:15 Potato Breeding and Varieties. Kathleen Haynes, USDA-ARS, Beltsville, MD.
PROGRAM 3 - SWEET CORN (Thurs., Feb. 17)

9:00 AM - 9:20  **Sweet Corn Variety Trials in Zellwood.** Marion White, Central Florida REC, University of Florida, Sanford, FL.

9:20 - 9:40  **Update on the IFAS Sweet Corn Breeding Program.** Brian Scully, Everglades REC, University of Florida, Belle Glade, FL.

9:40 - 10:00  **Results of the Phosphorus Sweet Corn Trials in the Lake Apopka Hydrologic Unit Area Project.** Ed Hanlon, Soil and Water Science Dept., University of Florida, Gainesville, FL.

10:00 - 10:20  **Postharvest Handling of Sweet Corn: Consumer Packs and Precooling.** Jeff Brecht, Horticultural Sciences Dept., University of Florida, Gainesville, FL.


10:40 - 11:00  **Foliage Disease Management in Sweet Corn.** Richard Raid, Everglades REC, University of Florida, Belle Glade, FL.

11:00 - 11:20  **Insect Management in Sweet Corn.** Gregg Nuessly, Everglades REC, University of Florida, Belle Glade, FL.

PROGRAM 4 - SWEET ONIONS (Thurs. Feb. 17)

1:30 - 2:00  **Onion Production and Fertilization.** Dale Hensel, AREC, University of Florida, Hastings, FL.

2:00 - 2:30  **Onion Varieties for Florida.** Steve Olson, North Florida REC, University of Florida, Quincy, FL.

2:30 - 3:00  **Onion Disease Identification and Control.** Dan Chellemi, North Florida REC, University of Florida, Quincy, FL.

3:00 - 3:30  **Harvesting and Handling for Optimum Postharvest Quality.** Jeff Brecht, Horticultural Sciences Dept., University of Florida, Gainesville, FL.

(Hochmuth, Vegetarian 93-12)
III. VEGETABLE GARDENING

A. Composted Yard Trash - Energy Saving.

Studies at the Organic Gardening Research and Education Park, UF, Gainesville, have indicated that composted yard trash can be utilized effectively for amending soils in vegetable gardens. On an annual basis as much as 40 tons per acre can be incorporated without detriment, not including the animal waste that should be included with it. Since there are an estimated 7000 acres of vegetable gardens in Florida, some 280,000 tons of the state's 3 million tons of yard trash could be disposed of in vegetable gardens as soil amendment. An additional amount of 280,000 tons could be utilized as mulching material (ground surface use), for a whopping total of 560,000 tons recycled and kept out of landfills.

If all the 6-6-6 inorganic fertilizer were replaced with 1% nitrogen animal manure (280,000 tons), the equivalent amount of 6-6-6 would be about 46,000 tons. This is equivalent to 2,800 tons of synthetic nitrogen. Since one ton of synthetic nitrogen has an energy value equivalent to about 500 gallons of diesel fuel, this is like saving the BTU's from 1,400,000 gallons of diesel fuel! Think about it.

(Stephens, Vegetarian 12-93)