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Prepared by Extension Vegetable Crops Specialist

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TO: COUNTY EXTENSION DIRECTORS AND AGENTS (VEGETABLES AND HORTICULTURE) 
AND OTHERS INTERESTED IN VEGETABLE CROPS IN FLORIDA

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VEGETARIAN NEWSLETTER 72-7

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I. COMMERCIAL VEGETABLE PRODUCTION

A. Jubilee Watermelon - Availability of "Registered" Seed

Previous issues of this newsletter carried items explaining the loss of fusarium wilt resistance originally available in the Jubilee variety of watermelons and our effort to resurrect this valuable wilt resistance by going back to foundation stock for seed production. Dr. J. M. Crall, the breeder of Jubilee, Mr. Jack Oswald, Manager of the Florida Seed Foundation, and the Extension Service have cooperated in this program. Seedsmen who plant Jubilee foundation seed in the Western states or in Florida can obtain a "Registered" label for the first generation seed. It is this "Registered" label seed which will have wilt resistance similar to the original level found in Jubilee shortly after it was released in 1963. This was well demonstrated in field tests where we planted the "new" alongside commercial lots of Jubilee in Marion and Levy Counties. The difference in wilt resistance was very obvious to anyone who looked at them. Growers were very enthused that now Jubilee seed would be available with the original level of wilt resistance.

Growers interested in the production of Jubilee watermelon next year should book their Registered Jubilee watermelon seed as soon as possible. Remember that certified seed of Jubilee may not be resistant to wilt--it must have a "Registered" tag. Registered Jubilee seed will cost more than certified seed since it costs more to produce it.

Seedsmen who bought foundation Jubilee seed for the production of Registered seed are as follows:

(1) Northrup, King & Company, 1500 Jackson Street, Minneapolis, Minnesota, 55413
(2) Charter Seed Company, Twin Falls, Idaho, 83301
(3) FMC Corporation, Box 3091, Modesto, California, 95353
(4) S & M Farm Supply, Inc., Mt. Dora, Florida, 32757
(5) Otis S. Twilley, Salisbury, Maryland, 21801
(6) H. M. Taylor Seedsman, Quincy, Florida, 32351
(7) Asgrow Seed Company, P. O. Box 716, Gonzales, California, 93926
(8) Hillhite Melon Seed Farms, Poolville, Texas, 76076
(9) Burrell Seeds, Inc., 405 North Main, Rocky Ford, Colorado, 81067
(10) Hollar and Company, Inc., Rocky Ford, Colorado, 81067

(Montelaro)
B. Growers Conducted Field Tests

Vegetable growers in Florida are being supplied with large amounts of technical information on crop varieties, fertilizers, pesticides, cultural practices, etc. It comes from many well-trained and experienced technicians working for governmental agencies and private industry. This vast amount of information is of great benefit to the grower.

In spite of all the help growers receive from the outside, a practice involving a change in varieties, pesticides, fertilizers and cultural practices should be evaluated on the farm by the grower. This evaluation does not require any special skills and does not have to be costly. It can, however, save the grower from making costly mistakes.

The evaluation or grower test can and should be done in two steps as follows:

(1) When a new practice looks promising from information developed by research, the grower should test it on a small-scale basis in the beginning. This does not have to be more than one or two rows or small plots in one or more locations in a planting where the old standard practice is being used.

(2) When a new practice looks good and is incorporated as a standard practice, reverse the testing procedure by including one or two rows in one or more places of the "old practice" for comparison with the "new practice."

The above suggestions should be part of the process of change in a vegetable farming operation. Some of the best demonstrations observed on vegetable farms are those conducted purposely by the grower or developed accidentally through oversight, error, breakdown of equipment, etc.

Some production practices are not easy to evaluate in a vegetable operation. Some disease control programs fall into this category for the simple reason that differences are not always readily obvious to the human eye. However, other production practices lend themselves quite well to grower testing. These include varieties, fumigants, certain fertilizer sources, rates, placement and timing, foliar feeding, herbicides, insecticides, fungicides, cultivation and many others.

(Montelaro)

C. Blossom-end Rot of Watermelons

A rather severe outbreak of blossom-end rot of watermelons in central and north Florida this season resulted in many calls to the Vegetable Specialists for information on what could be done to control the problem. Once blossom-end rotted melons are observed in a field, it is too late to do anything to save them. However, something can be done to help the remaining crop and to alleviate the problem in general. First and foremost, the blossom-end rotted melons should be removed from the vines as soon as possible to lessen the "load" on the plants. The reason for this recommendation can be found in the following discussion.
The exact cause of blossom-end rot in watermelons has not been completely resolved. Based on our research and experience with this and other crops affected by this disorder, we can give some suggestions which will tend to lessen the occurrence and severity of the problem. Briefly stated, we feel that blossom-end rot of watermelons is associated with:

1. Temporary deficiency of calcium in the watermelon plant, and

2. Temporary plant-stress situations caused by: (a) an excess but more frequently, by a deficiency of water; (b) cool temperatures; (c) foliar diseases, etc.

Something can certainly be done to lessen the severity of blossom-end rot of watermelons. Detailed explanation for each suggestion is omitted for the sake of brevity. Just remember that each in some way is associated with the two situations listed above. The practices are:

1. Lime to pH 6.0 to 6.5.

2. Apply at least two units of nitrate-nitrogen in the basic application of fertilizer.

3. Use low-salt index fertilizer materials.

4. Use split applications of fertilizer to reduce chance of rapid salt buildup.

5. Maintain a uniform supply of moisture.

6. Develop and maintain a good root system through use of rotation, soil fumigation and other soil pest controls, cultivation, etc.

7. Control foliar diseases.

8. Obtain good pollination.

9. Sidedress with nitrate-nitrogen and calcium depending on rainfall and needs.

(Montelaro)

D. Surface Active Agents (Surfactants)

The terminology used by formulation chemists include such items as surfactants (wetting agents, spreaders, and penetrants), stabilizing agents (dispersants and emulsifiers), co-solvents (coupling agents), hygroscopic agents, deposit builders (stickers), and activators. Many of these types of compounds are only of concern and available to the formulator. However, various compounds are available to the grower for utilization as tank mixes in combination with pesticides. Most commonly, these materials are all referred to as "surfactants" whether or not they truly fit the chemists definition.
Generally, these compounds are wetting agents, spreaders, stickers, and penetrants. Their use is becoming more widespread in an attempt to increase effectiveness, or in some instances, to decrease the needed effective rates.

The types of surfactants are classified by the nature of the molecules in solution. The classes are non-ionic, anionic, cationic, and amphoteric. Non-ionic surfactants do not form charged particles when they are in solution. The anionic materials have negative charges and the cationic materials positive charges when in solution. The amphoteric materials are capable of exhibiting either charge, depending upon the pH of the solution. The non-ionic and the anionic materials are the most widely used surfactants.

Surfactants are utilized with herbicides primarily as aids in obtaining penetration of the spray material into the plant tissues. However, there may be added characteristics such as emulsifying, sticking, activating, or dispersing abilities which can render some surfactants adaptable to other pesticide applications.

The surfactants generally act by making the spray material more favorable for transport through the surface tissues of the leaf into the plant or in some manner alters or breaks down the surface tissues so that penetration is achieved.

The use of surfactants is based on the assumption that a general enhancement of activity or effectiveness from the spray material will result. However, a detrimental effect of reducing the effectiveness or activity of the material is also a possibility. The surfactant should be selected as carefully as one selects the spray material to be used. Often, whether or not a surfactant should be used and what kind and type should be used is given on the label of the spray material. The label of the surfactant container lists important details on mixing, compatibility with other chemicals, and information on sensitive plants. Both should be consulted before using combinations of the two.

(Kostewicz)
II. VEGETABLE GARDENING

A. Halloween Jack-O'-Lanterns

What is the largest vegetable? Probably the pumpkin (squash). Some have been grown weighing over 300 pounds. To most people, however, the word pumpkin conjures up visions of pies and jack-o'-lanterns.

Florida gardeners who wish to grow jack-o'-lantern pumpkins must rely on northern varieties. Most of these are very susceptible to mildew and other leaf diseases so common in the warm, humid Florida climate. In spite of the problems, many pumpkins suitable for jack-o'-lanterns are grown down here. Since most of them are large vining, adequate space must be provided (about 50 square feet per hill).

To be ready to grin on Halloween night, jack-o'-lantern pumpkins must be planted in the spring, or at least no later than July 4. Many varieties need 4 months to mature.

The standard variety for years has been, and still is, the Connecticut Field pumpkin. It is also known by other names such as Big Tom. The size and color make it just about right for a jack-o'-lantern. Its average weight is about 20-25 pounds, its diameter is about 14 inches, and its color is bright orange. Allow 120 days for it to mature.

A huge jack-o'-lantern may be made from the variety Big Max. Excellent results were obtained with this variety at the Experiment Station Farm at Gainesville. It will average well over 50 pounds and five feet in girth. Again, 4 months from seed to maturity should be allowed.

Some folks like smaller jack-o'-lanterns, especially since they double better for pies than the bigger pumpkins. The leading small-fruit variety is Small Sugar Pumpkin. It is round, slightly ribbed, and about 6-8 inches in diameter. It matures in about 100 days.

Other varieties to suggest for trial for jack-o'-lantern making are Spookie (small, 90 days), Jack-O'-Lantern (medium, 110 days), and Cinderella (medium, 100 days).

(Stephens)

B. 1972 State 4-H Horticultural Demonstrations

The 1972 finals of the State 4-H Horticultural Demonstrations will be held in Hume Hall (TV Room), University of Florida; Tuesday, July 25, from 8:00 a.m. to 1:30 p.m.

4-H members winning district competition and, thus, eligible to compete at Gainesville are as follows:
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<thead>
<tr>
<th>District</th>
<th>County</th>
<th>Name</th>
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<tr>
<td>I</td>
<td>Santa Rosa</td>
<td>Jed Knoblock</td>
<td>Plant Propagation</td>
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<td>II</td>
<td>Liberty</td>
<td>Wesley Crews</td>
<td>Home Vegetable Garden</td>
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<td>II</td>
<td>Liberty</td>
<td>Kim Lewis</td>
<td>Orchid Culture</td>
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<td>III</td>
<td>Wakulla</td>
<td>Marquetta Cowley</td>
<td>Cleft Grafting</td>
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<tr>
<td>III</td>
<td>Wakulla</td>
<td>Bill Harvey</td>
<td>How to Make a Jiffy Pot</td>
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<td>IV</td>
<td>None</td>
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<td>V</td>
<td>St. Johns</td>
<td>Angie Brock</td>
<td>Growing Herbs</td>
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<td>V</td>
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<td>Charlene Foster</td>
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<td>VII</td>
<td>Brevard</td>
<td>Karen Barber</td>
<td>Fruits and Dips</td>
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<td>Lake</td>
<td>Brian Goodwin</td>
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<td>Mary Alice Hurley</td>
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C. Allis-Chalmers Drops 4-H Horticultural Program

The national awards program in Horticulture, which includes vegetable gardening, is no longer sponsored by Allis-Chalmers. However, the traditional trip to Chicago and National 4-H Club Congress will be continued by other sponsors, at least for this year. Four county level medals will be provided. Hopefully, some national level sponsor will be found for this very popular program area. (Stephens)

D. New Vegetable Gardening Publications

Two new and one revised circulars on vegetable gardening have just been released. The two new ones are: (1) Circular 375, "Organic Vegetable Gardening," and (2) Circular 377, "Vegetable Planting Guide." Please note: In responding to a request for Circular 375, "Organic Vegetable Gardening," please include
Circular 377, "Vegetable Planting Guide," as a companion circular. However, the Planting Guide may be given out independently.

Circular 104H is a June, 1972 revision of the "Vegetable Gardening Guide"—a conventional guide for vegetable gardeners. All three circulars are available free upon request from the IFAS Editorial Bulletin Room, McCarty Hall, University of Florida, Gainesville, Florida.

(Stephens)

E. Know Your Vegetables - Kohlrabi

Kohlrabi, (Brassica oleracea var. caulo-rapa), is a Cruciferae (cabbage family). It is grown for the turnip-like enlargement of the stem just above ground level. Leaves arise from the top of the round, bulb-like stem. The enlargement is tender and succulent, if rapidly grown and harvested, but becomes tough and fibrous with age. For eating, the peel is removed, and the interior diced and boiled.

Propagation is similar to cabbage, with plant spacing about 4 inches. Kohlrabi matures in about 60 days.

(Stephens)