Vegetarian 86-07
July 16, 1986

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I. NOTES OF INTEREST

A. New Publications


B. Vegetable Crops Calendar


II. COMMERCIAL VEGETABLES

A. News From The Recent 19th National Agricultural Plastics Congress

The 19th Congress met in Peoria, Illinois June 16-19 this summer. Nearly 300 people participated in the meeting making it one of the largest meetings in the last few years.

Some Congress highlights included a lot of papers presented dealing with row covers. Actually, about 30% of the papers dealt with row covers which indicates the amount of work in this area compared with other agricultural plastic topics. There is quite a lot of variability in crop growth under covers around the country. Many northern areas that have prolonged cool springs are having success with many vegetables. There is a lot of work being done with row covers on strawberries. One interesting project is in New Hampshire where they are placing the covers over the plants in the fall and removing them in the spring. They get substantial yield increases compared to straw mulch. The temperatures are not affected so they think there might be moderation of plant desiccation by the covers. Our department presented results from work on row covers for strawberry freeze protection. We have had success protecting flowers and fruits, equal to overhead irrigation, down to 15°F. One point is evident: there are no single covers out there that can do the miracle. Most manufacturers realize the importance of going to the lab and designing covers for specific tasks.

Two whole sessions were devoted to hydroponic greenhouse production. Dr. Cooper from England and Dr. Schippers from Massachusetts are two of the foremost hydroponic workers in the world. They were on hand to discuss some of the latest technology and deal with some of the myths and facts concerning hydroponics. The group also toured the Archer Daniels-Midland Co. Hydro farm. This is one of the few large operating hydroponic operations in the country. They produce mostly lettuce but a few cucumbers, tomatoes, and herbs in 10 acres of greenhouses.

They use the waste heat generated by their corn fermentation process. ADM is a large grain processing company producing flour, corn syrup, vegetable oil, protein concentrates, and ethanol.

Several papers concerned vegetable production on mulch. One of the most interesting was one con-
cerned with quality of light being reflected from different colors of mulches, and the effect on tomato growth. Mulch color affected the type of plant (stocky or elongated) which suggested a role for reflected light especially the far-red to red light ratio. Shorter, stockier plants came from silver and white mulch which reflected a lower ratio of far-red to red light than black or red mulch. Although light mulches reflect more light than darker colors, it was the light quality that seemed to be particularly important in the internode length.

Meetings such as these are an important part in expanding our use of agricultural plastics. The association plans to become much more visible in between Congresses and actively seeks sponsoring industries and organizations. To our county faculty; talk it up with companies that you work with who deal in agricultural plastics and encourage them to become involved in the association. You should mention that the next Congress is in Oregon, August, 1987. I have information on it. Then be sure to tell everyone that the Congress will be in Florida in 1989 (probably late winter or early spring).

(Hochmuth, Veg. 86-07)

B. Easy Quality Preservation and Shelf-Life Extension? ... Not Yet

Recently the FDA approved low-dose irradiation of fresh vegetables and some regard this as a "cure-all," when in reality it may have questionable, or even detrimental value to the Florida vegetable industry. Several years ago extensive irradiation tests were conducted at UF and very few products could benefit from the process. The current approval of low-dose irradiation may benefit asparagus, mushrooms, and tomatoes. The process can be used for disinfection purposes, but shelf-life extension by delayed ripening, may be most beneficial. This major benefit of irradiation could very well be for importers. Basically, we don't need irradiation to ship tomatoes to our major markets, however, irradiated products can be brought into the U.S. from countries that would normally require a quarantine or extended times for shipment. An economic benefit of extended shelf-life to the importer would be the ability to ship a product by surface vessel rather than by air.

Conversely, shelf-life extension may allow development of export markets which previously have not been available. However, there may be the impediment of consumer reaction. The Japanese are one of the largest users of food irradiation in the world, in the form of potato sprout inhibition, however they are reluctant to accept other irradiated foods. Chile is already shipping irradiated foods all over the world. Many other countries are in varying stages of approved irradiation for foods. If the U.S. doesn't move ahead with irradiating fresh vegetables for export, other countries will develop these potential markets.

Consumers are very concerned about chemical residues on our food. Irradiation will not eliminate the use of pesticides in food production, but may add another dimension of concern. Scientific research for more than a quarter of a century has proved that irradiated foods are safe; "There is no confirmed evidence of adverse effects from eating irradiated foods." Irradiated foods are not radioactive.

Cost of irradiating foods is a large factor to be considered. Currently, cost of irradiating will run anywhere from 1 to 4.2 cents per
Facilities for food irradiation are expensive to build and some say they must be used continuously to be economical. Volume is also another cost factor; 2,500 pounds of fruits or vegetables per minute could make irradiation economically attractive to growers.

Low-dose irradiated fruits and vegetables are expected to be in the marketplace by 1987-88 and researchers are predicting FDA approval of higher dose irradiation. Should high-dose irradiation become a reality then its possible that many vegetables could be irradiated, blanched and vacuum sealed in air-tight packages and then stored at room temperature for extended periods of time. Don't expect these products to have the same flavor and texture as fresh vegetables.

Another "shelf-life extender" appearing in the industry is Air Repair - purple pellets in a bag. Essentially, these pellets are ethylene absorbers and most effectively must be used in a confined atmosphere (pallet cover, bag, etc.). Some products may benefit from ethylene removal. It is suggested that many of the benefits claimed by the manufacturer may result from the package, instead of the "Air Repair" product itself. Intentions are to check further into this "shelf-life extender."

Back to the basics -(1) produce a quality product, (2) harvest at the proper time, (3) handle carefully, (4) proper precooling, (5) package it right, and (6) rapid distribution and marketing.

(Gull Veg. 86-07)

C. 1986 Florida Tomato Institute

The 1986 Florida Tomato Institute will be held on September 4, 1986 at the Ritz Carlton Hotel, Naples, Florida. Registration will start at 8:30 with the program starting promptly at 9:30. A preliminary program for the Institute follows.

Welcome - D. J. Cantliffe, Chairman Vegetable Crops Dept., Gainesville

Tomato Varieties for Florida - D. N. Maynard, GCREC - Bradenton

Advanced Tomato Lines for Possible Release - J. W. Scott, GCREC - Bradenton

Cold Hardiness - Future Possibilities - C. E. Vallejos, Vegetable Crops Dept., Gainesville

Consumer Quality - Where does it start ... and end? - D. D. Gull Vegetable Crops Dept., Gainesville

Comparison of Transplant and Direct Seeding Methods for Fresh Market Tomatoes - G. Odell, Vegetable Crops Department, Gainesville

Row Covers - Possible uses on Tomatoes - W. M. Stall, Vegetable Crops Department, Gainesville

Water Quality - Possible Consequences - A. G. Hornsby, Soil Science Dept., Gainesville

Comparison of Technologies between Florida and Mexico Tomato Production - An Extension Overview. P. Gilreath, Manatee County Extension Service

New Threatening Pests in Florida - Western Flower Thrips - S. M. Olson, NFREC, Quincy

New Threatening Pests in Florida - Tomato Spotted Wilt - T. W. Kucharek, Plant Pathology Department, Gainesville

Copper Moncozeb Combination Effects on Disease Control - J. P. Jones, GCREC, Bradenton
Prescriptive Approaches to Soil Pest Control with Methyl Bromide/Chloropicrin  
J. W. Noling, CREC, Lake Alfred

Affects of Alternative Fumigants, Comparisons to Methyl Bromide  
R. T. McSorley, Entomology & Nematology Department, Gainesville

Methyl Bromide Fumigation of Tomatoes for Insect Quarantine -  
Pluses and Minuses  
J. K. Brecht, Vegetable Crops Dept., Gainesville

(Stall Veg. 86-07)

III. HOME VEGETABLE GARDENING

A. 4-H Horticulture Institute

a Whopping Success

We have just concluded the fourth annual 4-H Horticulture Institute, and can report it to be the year's highlight for us in horticulture.

The week-long camp, held June 23-27 at Camp Ocala, was attended by approximately 80 4-H'ers from 21 counties and 20 adults. Ages of the 4-H'ers ranged from 8 to 16. It was the first time the camp was held at a site other than Camp Cloverleaf.

An enormous amount of energy went into the institute, both from the campers and the staff. Almost every waking moment was filled to capacity with activity. The camp combined fun events with learning experiences, as most 4-H camps do; however, the emphasis here was on learning about horticulture.

Classes of 45 minutes duration were held on 14 separate subjects, ranging from terrariums to tissue culture. Each subject was repeated as many as 4 times a day to allow the 4-H'ers to assemble in small enough groupings for hands-on teaching. Students carried away from classes a myriad of potted plants and assorted horticultural paraphernalia.

In the evenings there were the activities - plant judging, identification, demonstrations, and exhibiting. These were woven around several competitive events (contests).

On Wednesday, the group traveled to EPCOT for a behind-the-scenes look at the Land. The emphasis here was on vegetables and such futuristic production techniques as proembryonic mass regeneration and hydroponics.

Of course, there was time for swimming, dancing, foos-ball, and all the good-times banter that makes camping together so much fun. All in all, it was an intense week of focusing on horticulture. Perhaps now those who attended have a little better understanding of and feel for the meaning of the term "horticulture," and what it can contribute to their lives.

(Stephens Veg. 86-07)

B. Know Your Minor Vegetables

Parsnip - Pastinaca sativa L. Parsnip is related to the carrot, which it resembles, at least in the root and habit of growth. Unlike the orange colored roots of carrots, parsnip roots are creamy white on the exterior and white on the inside.

Parsnips are reported to have originated in the Mediterranean area, where wild forms were used for food by the Romans. By the 16th century, parsnips were cultivated in Germany, England, and then soon thereafter in the American Colonies. Even American Indians learned to grow and store them for eating in the winter.

Part of the attraction for the parsnip as a vegetable was its ability to be frozen in the ground, thawed out in the soil and then later eaten. Its adaptability to
The parsnip top more closely resembles road-leaf parsley than the carrot or celery. A popular variety in 1985 was 'Harris Model' parsnip, which developed good top growth but only spindly roots when planted in north Florida in September. In the fall of 1986, much better roots were produced in the same garden.

Start parsnips from seed and in a manner similar to that for carrots. Normally, about 120 days are required from seeding to root harvest. Seeds of this biennial are not expensive, even though they are not long-lived in storage.

Since parsnip roots tend to shrivel easily in storage, they are quite often heavily waxed when marketed in retail channels.

(Stephens Veg. 86-07)