Vegetarian 96-10
October 18, 1996

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I. NOTES OF INTEREST

A. Vegetable Crops Calendar.

November 3-5, 1996. Florida State Horticultural Science Meeting, Clarion Hotel, Orlando, FL. Contact George Hochmuth.


(Answer: 459)

II. COMMERCIAL VEGETABLES

A. Bacterial Spot '96.

It's fall and bacterial spot is in the air!! Several growers have asked about the efficacy of different copper (Cu) formulations in controlling spot. So Dr. Jeff Jones of the Gulf Coast Research & Education Center in Bradenton was contacted for guidance. Jeff has been working with bacterial spot for over 15 yrs. and his work basically indicates the following:

- Cu can significantly reduce spot compared to no treatment
- No one Cu product is statistically more effective than any other when applied with mancozeb including Kocide, Citcop, Tri-Basic, Copper Count N, and Basic Cu
- Cu compounds used alone were less effective than when used with mancozeb
- Premixing Cu and mancozeb for up to 4 hrs. prior to spraying does not lessen or enhance spot control
- Applying Cu-mancozeb twice weekly provides better spot control than when applied once per week
- Only 22% (or less) of a Cu spray is available 5 days after spraying (this data came from a field study, so with frequently irrigated transplants one can assume a lower %)
- Dew collected from unsprayed transplants or those sprayed only with Cu allowed the bacterial spot organism to develop but those sprayed with Cu + mancozeb did not allow the bacterial spot pathogen to develop
- Bacterial spot Tomato race 3 (Cu resistant strain) is not resistant to Agrimycin.

A major problem in controlling spot in plant house production is the plant population itself. At 600,000 to 700,000 plants per house it's hard to get good airflow to dry foliage and overhead irrigation splash simply encourages spread. Suggestions for better control in the house include:

- Purchase clean seed (generally seed from "seed savers" and seed from less well established companies are more prone to carry spot)
- Do not allow plants to overnight with free moisture on the leaves (a good rule of thumb is 8 hrs. of leaf wetness increases the chance of disease)
- Overhead irrigate only when necessary (remember ebb & flow irrigation was developed to combat spot in FL!) and never irrigate if foliage cannot dry before night fall.
- Rogue affected areas thoroughly and avoid hand contact with plants whenever possible.

(Vavrina, Vegetarian 96-10)
Tentative Meeting Schedule

Sunday, Dec. 8

1:00 pm till 5:00 pm Registration
Pick up materials (afternoon on your own)
5:00 pm Gala Reception on the Beach
- international pepper cuisine
- live music

Monday, Dec. 9

6:30-7:30 Continental Breakfast
8:00- 5:00 pm Pepper Industry Tour
- transplant houses
- seed companies
- production fields (drip & seepage irrigation)
- packinghouse
- more
Dinner on your own
8:00 pm Capsicum Genome Roundtable

Tuesday, Dec. 10

6:30-7:30 am Continental Breakfast
8:00-11:59 am Oral Presentations
12:00 Noon Lunch
1:15-4:00 pm Oral Presentations
4:00-6:00 pm Poster Sessions
7:00-10:00 pm Reception/Banquet

Wednesday, Dec. 11

8:00 am Optional Tour*
* Tour is dependent on number of participants choosing this option...please contact Dr. Charles Yavrina if you would like to participate:
e-mail: csv@icon.imok.ufl.edu
fax: (941) 657-5224

Final Announcement

National Pepper Conference

8-11 December 1996
Naples Beach Hotel and Golf Club
Location & Accommodations

- Naples, FL
  - Naples Beach Hotel & Golf Club on the beach
  - Miles of beaches
  - Sunsets on the Gulf of Mexico
  - Golf course
  - Shopping

- Room Reservation by Nov. 8, 1996
  - 1-800-237-7600
  - 1-941-261-7380 (fax)
  - $90 single/double
  - mention Pepper Conference for special rate

Registration

- $150 (if by Nov. 12, 1996)
  - gala reception on the beach
  - international pepper cuisine
  - live music
  - banquet & entertainment
  - continental breakfasts
  - lunches & coffee breaks (2)
  - high tea daily
  - tour of FL's pepper industry
  - proceedings & mementos
  - mail in form today!

Sponsors

- Pickle Packers International Inc.
- American Society for Horticultural Sciences
- Florida Fruit & Vegetable Research & Education Foundation
- Seed Companies
- University of Florida

Educational Program

- Over 60 presentations
  - major areas: breeding, pest management, production, post harvest
  - 11 countries & 16 states represented
  - Capsicum genome roundtable

- Posters

- Bound proceedings published by Citrus & Vegetable magazine (a subsidiary of Vance Publishing).
  - completed manuscripts & diskettes due Sept. 20*

* For details contact:

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- Industry booth space
II. VEGETABLE GARDENING

A. Broccoli in Your North Florida Garden.

Run out of cabbage and collard plants? Then why not finish out that garden row with broccoli. This certainly is the right time of year to grow it, as broccoli requires cool weather for those great big tightly formed green heads.

CLIMATIC ADAPTATION Although broccoli is a cool season vegetable, cold weather can injure the plants, especially if they are tender and not well conditioned. Over at Hastings where cabbage is king, along with potatoes, commercial plantings of broccoli were wiped out one year by 30-36 hours of temperatures around 26 degrees F. Even when not killed, broccoli plants may be stunted by temperatures in the 30's for several days. To avoid chance of cold damage, it may be best to plant in Feb-March rather than in the fall or winter. In north Florida, best fall-winter yields are to be expected when broccoli is set out in Sept-Oct, and best spring yields occur from plants set in Feb-Apr.

VARIETIES Broccoli is closely related to cauliflower. Both form clusters of unopened flowers called heads. While broccoli heads are usually green and cauliflower white, there are varieties of cauliflower with purple heads. Also, there is a hybrid cross between broccoli and cauliflower known as "broccoflower". Its head is yellowish-green in color and is tightly formed like cauliflower.

Varieties of broccoli vary considerably in garden performance. The old standards such as were grown around here in the 1940's and 1950's were Waltham, Early Green Sprouting, and DeCicco. These oldtimers are still available in seed catalogs, but now share page-space with the newer higher yielding hybrids such as Atlantic, Green Comet, and Green Duke. Waltham 29 still leads the pack in popularity, but not in yields. In a Gainesville trial, the newer hybrids like Green Duke out yielded the old standard 4 to 1.

PLANTING Seeding directly into the garden row is not the best way to start your broccoli, as erratic stands of plants usually occur. It is best to seed into a transplant container, then transfer the most vigorous plants into the row. You may prefer to buy plants direct from a garden supply store as needed. As with collards and cabbages, select plants that are about 4 to 6 inches tall, dark green, and healthy (no disease spots). Space your plants about 18 inches apart in 30-36 inch-wide rows. If you are using the wide row system, plant 12 inches apart both ways. You may plant even closer (8 inches), thus increasing the number of plants in your plot. However, as plant population increases, the center head size decreases and fewer side shoots are produced. If you prepare a raised bed, I suggest you plant two rows of plants per bed. Since the same general care and cultivation requirements must be observed for broccoli as for other members of the cabbage family (crucifers), locate all members together in one area of your garden. Thus, if you have to spray for insect pests such as the cabbage worms, you can mix up a batch of BT and spray all these related crops at once.

Prepare your garden soil just as for other vegetables. Soil pH should be about 6.0-6.5, as determined by your soil test. Liming is necessary only if the pH is lower than 5.8. Sandy garden soil should be amended with compost, animal manure, or
other organic matter to improve its ability to hold water and fertilizer and to promote fertility. Regular garden fertilizer may be used in preparing the planting beds and for side dressing. Start out with about 4 pounds of 6-6-6 per 100 sq ft, then sidedress every two weeks with a little scattered along the row edge.

**HARVESTING YOUR BROCCOLI**
Cut the head when it reaches at least 2 1/2 inches diameter. Include a portion of the tender stalk (5-8 inches), along with attached leaves. Do not let the heads grow too large, as the flowers will begin to open and a “woody” texture will set in, making the broccoli less palatable. After the central head is cut, you may continue to cut the side shoots as they emerge. In commercial production, only 25 to 50 percent of the total harvest comes from the central heads. Of course, varieties vary considerably in the amount of side shoots that will be produced. Gardeners often inquire about the edibility of broccoli leaves. Actually they are quite palatable, although less flavorful than the collard, cabbage, and kale relatives. Here again, good seasoning is the key.

STORING Broccoli is one of the most perishable of vegetables. If you have extra amounts and wish to keep it from turning yellow, mushy, and moldy, be sure to place in the refrigerator’s cool area. You can keep it up to two weeks at 36 degrees, and one week at 41 degrees. Occasional sprinkling will also help to keep it fresh. If wrapped, be sure to ventilate the wrap.

**NUTRITIONAL VALUE** Broccoli ranks very high nutritionally, and increased consumer awareness of healthy eating habits has led to a greater demand for broccoli as both a cooked food dish and more notably as a fresh salad item. Broccoli is a great source of vitamins and minerals. A normal serving provides more than twice the daily requirement of vitamin C and about 80 percent of vitamin A. And, it has a low 32 calories per 100 grams, so munch away!

(Stephens, Vegetarian 96-10)