Vegetarian 88-12

December 12, 1988

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I. NOTES OF INTEREST

A. Calendar

Jan. 7, 1989. Suwannee Valley Vegetable and Greenhouse Vegetable Shortcourse and Tradeshow. 8:00 am to 3:00 pm (Field vegetable program), 3:00 pm to 8:30 pm (greenhouse vegetable program). Programs held at Suwannee County Agricultural Center and Coliseum in Live Oak. Lunch and dinner tickets $5.00 each. (Contact Bob Hochmuth, Live Oak AREC (904) 362-1725).

Jan. 30, 1989. Watermelon Institute. Farm Bureau Building Auditorium. 12:00 noon to 4:00 pm. (Contact George Hochmuth, (904) 392-7912).


B. Eighth Annual FSGSA-IFAS Seed Seminar: Agenda.

EIGHTH ANNUAL FSGSA-IFAS SEED SEMINAR
Feb. 8-9, 1989, Holiday Inn West, I-75
Gainesville, FL

FEBRUARY 8:

11:00 am to 5:00 pm Registration

1:15 pm Welcome - Danny Summers, President, FSGSA.

Session One: POLICY AND PROCEDURES FOR IFAS CULTIVAR RELEASES AND THE NEW FLORIDA SEEDS LAWS - Moderator: Rick Anderson, Peto Seed Company.

1:30 pm IFAS Cultivar Release Policy - J. M. Davidson, Dean for Research, IFAS.
2:00 pm New Wheat Cultivar Releases - Ron Barnett, IFAS Agronomy.
2:15 pm Jubilee II Watermelon - Jim Crall, IFAS, CFREC, Leesburg.
2:30 pm New Lettuce Releases for Florida - Vic Guzman, IFAS Everglades REC.
2:45 pm The New Florida Seed Law - Van B. Madden, Seed Section, FDACS.
3:00 pm Florida Laws Pertaining to Labeling and Interstate Shipment of Seeds When Treated With Pesticides - Steve Rutz, Bureau of Pesticides, FDACS Administration,
Seedsman Seminar Agenda continued

3:35 pm New Commercial Seed Enhancements for Vegetable Transplant Growers - Steve Cull, Peto Seed Company, Saticoy, California.

4:00 pm The Needs for Better Germination - Tom Youngs, Zellwin Farms.


6:00 pm Social

7:00 Dinner - Biotechnology: Monsanto’s Perspective, Dr. Stephen Muench, Product Development Manager Genetically Engineered Plants, Monsanto, St. Louis.

FEBRUARY 9


8:30 am Improving Plant Stands of Super Sweet Corn by Seed Treatment - D.J. Cantliffe, Vegetable Crops Department, IFAS, Gainesville.

8:45 am Realizing the Promise of Biological Seed Treatments - Dr. Gary Harman, Department of Horticultural Sciences, Cornell University, Geneva, NY.


9:45 am Transplant House Foliar Diseases and Insects - Galen Francis, Glades Crop Care.

10:05 am White Fly and its Control in the Plant House and on Young Field Seedlings - Dave Shuster, Gulf Coast REC, Bradenton.

10:45 am Session Four: SEED PRODUCTION OF AGRONOMIC CROPS IN FLORIDA - Moderator: Charlie Dean, Agronomy Department, IFAS, Gainesville.

10:50 am Field Corn - Ed Hamilton, Vegetable Production Manager, Duda.

11:05 am Opportunities and Limitations of Growing Seeds in Florida - Dr. Randy Jeppson, Cargill Hybrids, Minneapolis, MN.
C. **Strawberry Field Day Program.**

February 1, 1989. Dover AREC (13138 Gallagher Rd.)
Moderator: Dr. D. N. Maynard, Veg. Ext. Spec., GCREC Bradenton

1:30 - 4:00 PM SPEAKER PRESENTATIONS

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Presenter</th>
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<tr>
<td>1:30</td>
<td>Welcome and Introduction</td>
<td>Dr. W. E. Waters</td>
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<td>1:30</td>
<td>Overview of IFAS Research</td>
<td>Dr. N. P. Thompson</td>
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<td>1:30</td>
<td>Nematode Research</td>
<td>Mrs. A. J. Overman</td>
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<td>1:30</td>
<td>Insects</td>
<td>Dr. J. P. Price</td>
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<td>Weed Control</td>
<td>Dr. J. P. Gilreath</td>
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<td>1:30</td>
<td>Irrigation Research</td>
<td>Dr. C. A. Clark</td>
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<td>1:30</td>
<td>Varieties</td>
<td>Dr. C. K. Chandler</td>
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<td>1:30</td>
<td>Diseases</td>
<td>Dr. C. M. Howard</td>
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<td>1:30</td>
<td>Nutrition and Culture</td>
<td>Dr. E. E. Albregts</td>
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<td>1:30</td>
<td>Specialty Vegetables</td>
<td>Dr. D. N. Maynard</td>
</tr>
</tbody>
</table>

4:00 pm - TOUR OF RESEARCH PLOTS

(Contact E. E. Albregts (813) 659-2801)

D. **Announcement and Invitation for Florida Growers to the 21st Congress of the National Agricultural Plastics Association.**

The 21st meeting of N.A.P.A. will be held March 6-9, 1989, at the Hyatt Orlando Hotel, Kissimmee, Florida. Program includes over sixty (60) papers, plus special sessions and workshops, and tours of agri-plastics applications. Conference Manager is Dr. George J. Hochmuth, Vegetable Crops Department, University of Florida, Gainesville, FL 32611.

N.A.P.A. is composed of approximately 50% researchers and 50% extension agents, and commercial producers of ag. plastics. The latter include makers of films, netting, fabrics, irrigation and other water management systems, glazings, horticultural containers, etc.

Mar. 5: Arrival, registration, evening reception.

Mar. 6: Plenary Session and breakout sessions in the am, breakout sessions and symposium on Plastics Degradability and Recycling in the pm.

Mar. 7: Tours by charter bus, (incl. lunch): A) Ornamentals Tour; B) Vegetable Transplants & Production Tour. Evening cash bar and Banquet.

Mar. 8: Breakout sessions, Industry workshops (Containers, Film), Trade Fair-FLORIDA GROWERS DAY all day.

Mar. 9: Breakout sessions, Trade Fair luncheon & business meeting, Adjournment.

N.A.P.A. would like you to come to the entire Congress, and offers the Florida Grower member's registration prices, however, Wednesday March 8th is set aside as FLORIDA GROWERS
DAY and admission is only $10.00. For a list of Papers or for registration forms please write or call N.A.P.A. headquarters at the address shown below. Or just show up at the Hyatt Orlando Hotel (at the entrance to Walt Disney World) on March 8th.

N.A.P.A., P.O. Box 860238
St. Augustine, FL 32086
Carl Hoefer, Executive Secretary
(904) 797-0299; FAX (904) 824-1018

(Hochmuth, Veg. 88-12)

E. New Newsletter on Greenhouse Vegetables.

Bob Hochmuth, at the Live Oak AREC, has begun a newsletter for the greenhouse vegetable producers. Although the original idea for the newsletter centered on the Suwannee Valley area, it should be of great benefit to greenhouse producers elsewhere in the state. If you would like to be placed on the mailing list for this new newsletter called "UNDER COVER", call Bob at (904) 362-1725.

(Hochmuth, Vegetarian 88-12)

II. COMMERCIAL VEGETABLES

A. Use of Transplants in Watermelon Production.

In most years higher prices are paid for early watermelons especially in North Florida with competition from early melons from Georgia and South Carolina. Many times even harvesting a week earlier can mean the difference between making or losing money.

Watermelons can only be transplanted using a containerized system. The older methods included using peat pots or growing in small pots and knocking out of the pots to plant. Both are very expensive systems to use and in case of the peat pots, the pot may provide a barrier to free root growth. With the advent of the new containerized systems using flats made of plastic or expanded polystyrene, costs for containerized transplants has been reduced. The shapes of the cells are of inverted pyramids or cones to allow for easy root ball removal.

Some of the advantages of using transplants for watermelon production are: earlier production; uses less seed, important in using hybrids; allow for precise hill placement and when growing seedless melon, it is necessary because of seed cost, poor vigor, emergence problems and precise germination temperature requirements (see Maynard, Veg. 88-10 for more information).

When planting, care must be taken to not disturb the root ball very much. Watermelons do not regenerate their root systems as easily as say tomatoes or peppers. Also the transplants must be watered in at planting or very soon afterward so that the roots can establish in the soil rapidly.

Presented below is some data collected from 1984-1986 on effect of watermelon transplants versus plug-mix planted grown on black plastic mulch. The direct seeding was done at the same time as the transplanting. In all 3 years the transplanted melons matured 6-7 days earlier. The following table shows the difference between transplanted and plug-mix planted for early and total yields. The early yield is the first 2 of 4 harvests for transplanted and first of 4 harvests for plug-mix planted for 1985. In 1984 and 1986, only 3 harvests were made, yields were not as high as 1985 because of an infestation of Watermelon Mosaic II Virus.

As can be seen from the table, the early yields of the transplants in all 3 years were significantly higher than the plug-mix planted.
Only in 1985 were the total yields of the transplants significantly higher than the plug-mix planted melons. This year disease was very low and 4 harvests were made instead of 3. Also that year the average melon weight of the transplants was significantly higher than the plug-mix planted (24.6 lbs vs 21.3 lbs). In other 2 years there were no differences in melon weight.

### The Effect of Transplants versus Plug-Mix Planting on Early and Total Yields

<table>
<thead>
<tr>
<th>Treatment</th>
<th>1984 Early</th>
<th>Total</th>
<th>1985 Early</th>
<th>Total</th>
<th>1986 Early</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transplanted</td>
<td>316.8*</td>
<td>370.3</td>
<td>377.1*</td>
<td>603.3</td>
<td>153.1*</td>
<td>373.1</td>
</tr>
<tr>
<td>Plug-Mix planted</td>
<td>145.9*</td>
<td>353.8</td>
<td>156.0*</td>
<td>486.0</td>
<td>37.9*</td>
<td>383.8</td>
</tr>
</tbody>
</table>

*Significant at 5%; *First 2 of 3 harvests; *First 2 of 4 harvests; *First of 3 harvests; *First of 4 harvests; First harvest in plug-mix planted was at second harvest of transplanted.

(S. M. Olson, Vegetarian 88-12)

### III. PESTICIDE UPDATE

#### A. Third Party Registrations - Future for Vegetable Labels?

Third party registrations of herbicides is not a new concept, but is becoming increasingly important in obtaining new registrations and keeping existing registrations in minor crops such as vegetables.

A much simplified example of how a third party registration works is the case of the ethalfluralin registration.

Ethalfluralin was labelled for use on cucumbers, watermelons, and muskmelons under the trade name Sonalan for less than a year by Elanco. Due to perceived liability, even due to misuse in several instances, Elanco dropped the label for these crops.

Through some persuasion, particularly by North Carolina State, United AgriProducts (UAP) entered into an agreement with Elanco to be able to label and market ethalfluralin on the three commodities under their own trade name, Curbit. UAP obtained a state label for curb in Florida. Curbit is the only ethalfluralin product labelled for this use. Sonalan is not labelled.

Third party registrations may or have been obtained by companies such as UAP, as well as growers organizations such as an Arizona Chili pepper growers group. Third Party Registrations, (TPR) Inc., a company specifically incorporated by the Florida Fruit and Vegetable Association to handle third party registrations is also in the process of obtaining third party labels.

Third party registrations must be obtained due to the fact that several companies will not label a herbicide on a crop due to liability or will not relabel a compound due to the expense involved with little or no return.
The liability issue is a major factor in registrations. Through research, the company knows that the herbicide is efficacious on the weed spectrum listed and will not cause injury to the crop when applied correctly except when certain environmental conditions occur. Because many new herbicides are applied at ounces per acre and must be applied at exactly the proper growth stage, great care must be maintained to avoid misapplication. Also, if rain or too much irrigation is used, the herbicide that is applied to the surface can be moved into the seed germination zone. If this is coupled by cool soils when germination and growth is reduced, crop damage can ensue.

Third Party registrations may be obtained because the original company will negotiate with a third (party) organization to allow that group or company to label and in some crops market the formulation. In all cases, the third party must assume liability for that labelled use.

Clearly stated on the Curbit label is a warning of crop injury potential if excessive rainfall and/or cool weather follows application. To buy or use Curbit, a waiver of these and other risks must be signed by the grower.

When TFR Inc. receives labels, the grower must be a member of FFVA and sign a letter of indemnification before he will be issued the label for use for a specific crop. He will also be assessed by acreage used, the cost of labelling the material.

This coming year may well be a pivotal period in possible herbicide registrations on vegetables. Through IR-4 and company cooperation, tolerances are being established for labels that will be third party registration possibilities only. The vegetables that could be affected include peppers, carrots, lettuce, celery, melons, cabbage and other crucifers as well as others.

To be able to have third party labels, the grower must be willing to pay a little more for the herbicide. He also must be willing to acknowledge and assume the inherent risks of the use of the product. These facts are not only a commodity consideration, but a vegetable industry wide concern. If risk liability is not accepted and a claim or lawsuit is filed, the label can and most likely will be immediately withdrawn. That would not only cause the loss of that tool for the total growers of that commodity in the state, but would severely jeopardize any future third party labelling on other crops.

The present facts of life for vegetable producers are these:

1. Many large multinational chemical companies are not interested in registering many chemicals on low acreage, low volume use, high value crops.

2. Smaller companies and organizations are willing to label chemicals that have a need and use in vegetable production, only if they can pay for the registration costs and make a profit for their work.

3. Growers (as an industry) must accept the risks of the use of pesticides or lose already registered compounds as well as potential future tools for pest control.

(Stall, Vegetarian 88-12)

B. Curbit, EC label on cucumbers, melons and watermelons.

United AgriProducts, Inc. has received a 24(c) Special Local Need in Florida label for Curbit EC.
Curbit contains the active ingredient ethalfluralin.

Use rates in Florida are recommended at 3 pts. material or 1.12 lb ai/A. Curbit may be applied over the row as a surface treatment within 2 days of planting (preemergence to crop and weeds). Curbit may also be applied as a banded spray between rows prior to weed emergence.

Curbit is the only ethalfluralin product registered and legal for use on these crops. In 1989, growers must be willing to assume a measured amount of liability and sign a waiver in Florida to buy and use Curbit. Crop injury associated with the use of ethalfluralin has been rare when used properly. Injury has usually been associated with stress factors, such as excessive moisture or cold.

Crop injury associated with the use of ethalfluralin has been rare when used properly. Injury has usually been associated with stress factors, such as excessive moisture or cold.

Curbit is a third party registration. The company has informed me that continued registration is contingent on liability risk by the grower. One injury claim or lawsuit could mean the loss of this label.

(Stall, Vegetarian 88-12)

C.  Methyl Bromide Use on Watermelon.

The Environmental Protection Agency has granted a section 18 (emergency exemption) for the use of methyl bromide to control nematodes, fungi, and weeds on watermelon. The exemption, effective immediately, is subject to the following conditions and restrictions:

1. Only methyl bromide/chloropicrin products containing 98% MBr/2% CP or 67% MBr/33% CP, which are federally registered for food use may be applied. All applicable directions, restrictions, and precautions on the EPA-registered product labels must be followed.

2. A single application will be applied at a rate of 90 to 200 lbs. of methyl bromide per acre, the broadcast equivalent of 180 to 400 lbs for the 98%-2% formulation, and 270 to 360 lbs. per acre for the 67%-33% formulation.

3. A maximum of 17,000 acres may be applied by injection through chisels spaced 12 to 18 inches apart and 6 to 8 inches below the soil surface. Soil must be sealed immediately behind the chisels and covered with polyethylene.

4. All treatments will be made either by or under the direct supervision of certified applicators.

5. Injection of methyl bromide is not permitted within a 60 foot radius of a potable well in order that any entry of methyl bromide into groundwater will have a 30 day period in which to degrade or diffuse into soil/air prior to reaching well head.

6. The EPA must be immediately informed of any adverse effects resulting from use of Methyl bromide in connection with this exemption.

7. This exemption expires April 1, 1989.

A final report summarizing the results of this specific exemption will have to be prepared by October 1, 1989 indicating locations, rate and acreage involved. For additional information, contact:

Dr. J. W. Noling
CREC, Lake Alfred, FL
Phone: (813) 956-1151

(Noling, Vegetarian, 88-12)
IV. VEGETABLE GARDENING

A. American Horticulture Therapy Association.

Much useful information about horticultural therapy may be obtained from the American Horticultural Therapy Association (AHTA). It is the sole (to my knowledge) national organization concerned with the promotion and development of horticultural therapy. It was founded in 1973.

AHTA administers a voluntary professional registration program, operates a national employment project for disabled persons, provides educational program help, and conducts an annual awards program.

Much of what is going on around the country in the arena of horticultural therapy is reported in the AHTA newsletter. To receive this and other information from AHTA, I suggest you write to their address, 9220 Wightman Road, Suite 300, Gaithersburg, MD 20879, phone (301) 948-3010.

AHTA wants to hear from us about our horticultural therapy projects in Florida, so let them know what you are doing in Extension. A group of Master Gardeners in Duval County has an excellent on-going project which I will write about in an upcoming issue of the Vegetarian.

(Stephens, Vegetarian 88-12)

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