

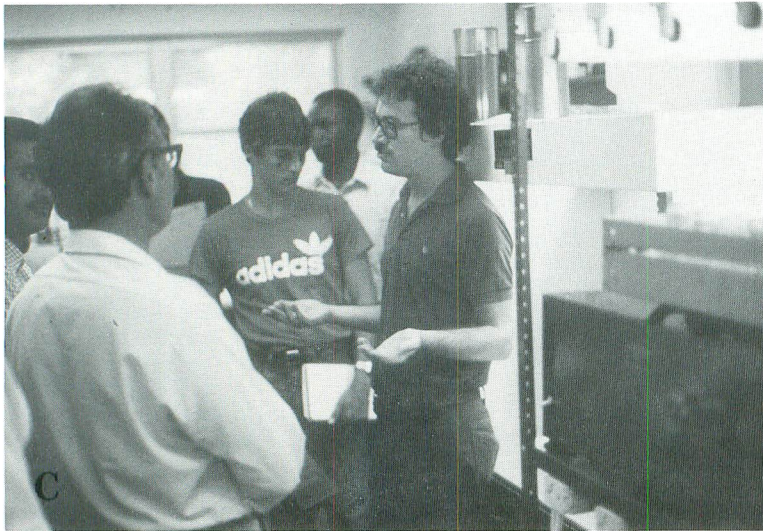
THE TROPICAL RESEARCH AND EDUCATION CENTER
Institute of Food and Agricultural Science
University of Florida, Homestead



A



B

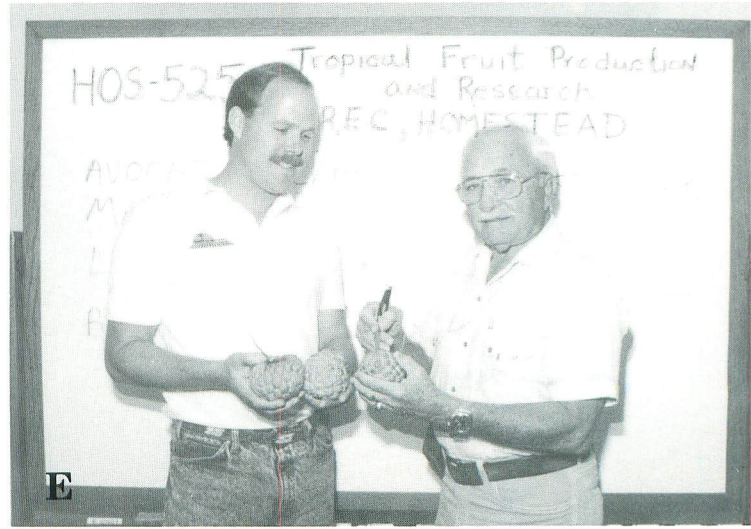


C

The Tropical Research and Education Center (TREC) located in Homestead, Florida, was established in 1930. The Center is situated on 180 acres in a marine subtropical climate unique in the continental United States. There are 14 faculty including entomologists, pathologists, plant physiologists and horticulturists who conduct research on traditional and tropical vegetable crops and tropical fruit crops. Graduate students from all over the world, mainly Western Hemisphere, study toward advanced degrees under Gainesville and Homestead faculty supervision.



D



E

A. Courtyard of new buildings (L-shaped, background) of IFAS Tropical Research and Education Center, Homestead, Florida. B. IFAS entrance sign. C. Dr. Richard Litz speaks to students on tissue culture of tropical fruit plants. D. The J. R. Brooks and Son, Inc., grading and packing line, largest marketer of tropical fruits, southern Florida, Homestead. E. Dr. Jonathan H. Crane (left) and IFAS Emeritus Extension Professor, Seymour Goldweber, teach a May/June course in tropical Fruit Culture to fruit crops students. (Dr. Crane assisted in assembling all cover photographs with Bill Mattila, IFAS graphics, Dade County; Proceedings front cover this year is courtesy J. R. Brooks and Son, Inc.)

PROCEEDINGS
OF THE
103RD ANNUAL MEETING
of the
**FLORIDA STATE
HORTICULTURAL SOCIETY**

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Proceedings of the **FLORIDA STATE** *Horticultural Society* **1990**

Volume CIII

Printed June 1991

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AWARDS OF THE SOCIETY

Presidential Gold Medal Award



John Paul Jones

Award granted to John Paul Jones, Professor of Plant Pathology (Vegetables), University of Florida, IFAS, Gulf Coast Research and Education Center, Bradenton, for having contributed most to Florida Horticulture through work published in the Proceedings of the Florida State Horticultural Society over the preceding six-year period in the Vegetable Section.

Awards for Outstanding Papers

Awards for outstanding papers in Volume 102 of the Proceedings of the Florida State Horticultural Society presented at the annual meeting of the Society (December 17, 1990) by President Tom Sheehan.

Citrus Section

L. W. Timmer, H. A. Sandler, J. H. Graham, and S. E. Zitko. "Phytophthora Feeder Root Rot of Bearing Citrus: Fungicide Effects on Population of *Phytophthora parasitica* and Citrus Tree Productivity."

Garden and Landscape Section

Timothy K. Broschat, "Potassium Deficiency in South Florida Ornamentals."

Krome Memorial Section

M.E.B. Joyner and Bruce Schaffer, "Flooding Tolerance of 'Golden Star' Carambola Trees."

Handling and Processing Section

G. Eldon Brown and John O. Craig, "Effectiveness of Aerosol Fungicide Applications in the Degreening Room for Control of Citrus Fruit Decay."

Ornamental Section

B. K. Harbaugh, V. F. Cooper, and T. A. Nell, "Cultural Practices Influence Yield and Incidence of Non-Flowering *Gypsophila*."

Vegetable Section

C. A. Sanchez, H. W. Burdine, V. L. Guzman, and R. B. Beverly, "Management of High pH Histosols for Lettuce Production."

Presidents Industry Award

Stephen Cross, "Membrane Concentration of Orange Juice."

Council Memorial Tomato Research Award

David J. Schuster, "For work with the most potential to further the fresh market tomato industry."

Graduate Student Award

D. I. Leskovar with D. J. Cantliffe, "Does the Initial Condition of Transplants Affect Tomato Growth and Development" (from the Vegetable Section).

Presidential Gold Medal Awards

R.C.J. Koo	W. Grierson	C. A. Conover
R. A. Conover	Paul F. Smith	A. H. Rouse
J. R. Orsenigo	T. W. Young	J. O. Whiteside
W. E. Waters	James W. Strobel	C. R. Barmore

J. F. Morton	W. S. Castle	J. F. Price
S. J. Locascio	C. W. Campbell	L. A. Risse
C. A. Conover	R. M. Craig	A. G. Smajstrla
J. H. Bruemmer	V. L. Guzman	W. B. Sherman

Derek G. Burch

Presidents of the Florida State Horticultural Society from 1888 to Present

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1949	Frank Stirling	1967	Ed. H. Price, Jr.	1986	Al H. Krezdorn
1950	Leo H. Wilson	1968	J. R. Beckenbach	1987	Richard F. Mathews
1951	G. Dexter Sloan	1969	G. M. Talbott	1988	T. T. Hatton
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		1971	O. R. Minton	1990	Tom J. Sheehan

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Brown, Arthur C.	1952	Hume, H. Harold	1927	Rolfs, Mrs. P. H.	1921
Burgis, Donald S.	1980	Jamison, F. S.	1962	Ruehle, George D.	1958
Camp, A. F.	1956	Johnson, Warren O.	1965	Sharpe, Ralph H.	1974
Campbell, C. W.	1988	Koo, R. C. J.	1978	Shaw, Miss Eleanor G.	1927
Carlton, R. A.	1962	Krezdorn, A. H.	1979	Showalter, Robert K.	1984
Chase, J. C.	1939	Krome, William H.	1973	Singleton, Gary	1962
Chase, S. O.	1939	Krome, William J.	1927	Skinner, L. B.	1931
Clayton, H. G.	1956	Krome, Mrs. Isabelle B.	1960	Sloan, G. Dexter	1964
Colburn, Burt	1970	Lawrence, Fred P.	1973	Smith, Paul F.	1972
Commander, C. C.	1952	Lipse, L. W.	1924	Smoot, John J.	1986
Cooper, W. C.	1981	Logan, J. H.	1965	Spencer, E. L.	1962
Dickey, R. D.	1968	Lynch, S. John	1975	Steffani, C. H.	1958
Edsal, R. S.	1967	MacDowell, Louis G.	1968	Stevens, H. B.	1934
Everett, Paul H.	1986	Magie, Robert O.	1977	Swingle, W. T.	1941
Fairchild, David	1922	Mathias, A. F.	1972	Taber, George L.	1914
Fifield, Willard M.	1955	Mayo, Nathan	1940	Tait, W. L.	1962
Flagler, H. M.	1903	McCornack, A. A.	1986	Talbott, George M.	1980
Floyd, Bayard F.	1944	Menninger, Edwin A.	1964	Tenny, Lloyd S.	1956
Floyd, W. L.	1939	Miller, Leon W.	1972	Thompson, Ralph P.	1962
Ford, Harry	1985	Miller, Ralph L.	1972	Thompson, W. L.	1962
Forsee, W. T., Jr.	1973	Montelaro, James	1985	Thullbery, Howard A.	1962
Gaitskill, S. H.	1909	Morton, Julia F.	1989	Veldhuis, M. K.	1972
Gardner, Frank E.	1967	Mounts, M. V.	1958	Ward, W. F.	1962
Garrett, Charles A.	1957	Mowry, Harold	1950	Webber, H. J.	1941
Goldweber, Seymour	1984	Murdock, Del I.	1984	Wedgeworth, Ruth S.	1965
Grierson, William	1979	Newell, Wilmon	1940	Wenzel, F. W.	1973
Guzman, Victor L.	1987	Norman, Gerald G.	1967	Wilson, Lorenzo A.	1934
Harding, Paul L.	1968	Norris, Robert E.	1962	Wiltbank, William J.	1987
Hart, W. S.	1909	O'Byrne, Frank M.	1962	Winston, J. R.	1960
Hastings, H. G.	1939	Overman, A. J.	1988	Wolfe, H. S.	1964
Hatton, Thurman T.	1987	Painter, E. O.	1909	Young, T. W.	1978
Hayden, Mrs. Florence P.	1934	Peterson, J. Hardin	1950	Yothers, W. W.	1955
				Ziegler, L. W.	1976

*Date year award made.



THOMAS J. SHEEHAN
Gainesville
PRESIDENT OF THE SOCIETY—1990

PRESIDENTIAL ADDRESS

Challenging The 90's

THOMAS J. SHEEHAN
Department of Environmental Horticulture
University of Florida
Gainesville 32611

One of my pet peeves is having to sit through long winded presidential addresses. Consequently, I have no intention of attempting any endurance record today. I would like to spend a little time discussing with you what I feel are some very challenging times in store for horticulture in Florida.

The great deal of media that has focused on the international crisis has overshadowed some of the more mundane problems facing us here at home, and especially those issues that are confronting horticulture's future in Florida. We are faced with challenging times ahead, many of which will present our industry with the opportunity to develop innovative ways to assure an adequate supply of horticultural products in Florida.

What are some of the most pressing challenges? I would say (a) surviving population growth and (b) conforming to environmental constraints top the list. There are more, but these two are of vital concern to all of us.

Let's look at population pressures. Florida is growing at a very rapid rate and soon will be the 3rd most populous state in the U.S.A. Naturally, people opt for warmer areas, the same areas preferred by horticulturists and usually the people win out. The horticulturist then has to seek new land which is usually cooler and often poorer land. In Singapore where population pressures are extremely high, farms are relocated and land is not only poorer but the farmer only gets half as much land. Let us hope that never occurs in Florida. If you say it fast—cooler, poorer land—it doesn't sound too bad, but if you study it for awhile you see some of the challenges. Cooler land could mean potentially more and earlier frost and the need to develop or find more cold hardy varieties. Herein, the breeders have a challenge to develop these new lines or to work with the biotechnologists and develop techniques to incorporate cold hardy genes into existing cultivars. True scientists, like Charlie Guy in our Department, are already beginning investigation into transferring cold hardy genes from spinach to petunia. Conceivably, a similar technique could be worked out for citrus and citrus groves might spring up as far north as Lake City. We don't want to be too successful and have oranges replacing peaches in Georgia, but just hardy enough to reach the northern boundary of Florida. The potential in these techniques and their implementation, shall we say, are already here or on the drawing board and many of us will probably see some of the results in our life time.

The poorer soils offer another array of challenges for researchers to be innovative. Poorer land is often equated with the need for increased fertilization to sustain the crop. This is just the opposite of the national emphasis to reduce chemical input on our crops. How then do we maintain the same production per unit when we move to poorer land and have to reduce our fertilizer application? This is another opportunity for the researchers and practitioners to be innovative. Can they meet the challenge? I'm willing to wager they will.

Let's not forget that water use and run off problems will continue to confront us. The widespread lack of rainfall over Florida for the past few years coupled with increased consumption, has our water boards scurrying around trying to determine how to limit agricultural consumption without having a deleterious effect on the crop. Unfortunately, information on the minimal water requirements to safely produce many crops does not exist. This too is an area that presents horticulturists with challenges of minimizing water use and its effect on growth and nutrition. The homeowner has been challenged to develop xeriscapes and extension has an Environmental Landscape Management (ELM) program both of which addresses the problem of water use and chemical reduction in the landscape. Is xeriscape horticulture in Florida's future? I am sure the water boards would give a resounding "yes" as far as they are concerned. Water restrictions are destined in the future. With preliminary restrictions already in place, and the potential that these will become permanent soon, will we be ready to meet them? The challenge is there.

We could also spend considerable time discussing nitrates leaching into surface water supplies as it is a pressing problem right now. However, we are fortunate—as several scientists are already engrossed in this area. Knowing Florida's horticulturists, I know we will find a way to solve these problems.

Probably the area wherein we face our greatest threats and challenges is in environmental constraints. We have already eluded to water and water run-off problems which are definitely environmental problems. However, for our discussion today I am more concerned with the problems of pesticides and the potential for reduced use or even elimination of certain pesticides (probably many) over the next few years. Herein lie the challenges for our entomologists, plant pathologists and our herbicide specialists. We have for years enjoyed an abundance of pest free products on the market. Are we going back to corn with a worm in each ear? I hope not, but you know that is a possibility if restrictions continue to limit pesticide use, or if we lose more pesticides. We need to look to biological controls, newer less toxic pesticides and,

foremost, disease and pest resistant plants. The latter, of course, present a challenge to the gene splicer and biotechnologist. What would happen if we transferred the pyrethrum producing gene from *Chrysanthemum cinerariifolium* to *Zea mays*? Would we have a built in systemic for pest control in corn? A thought which may not be as far fetched as it may appear at first glance. After all, when one looks at what has transpired in scientific research over the last decade, the transfer of a pyrethrum gene doesn't seem far fetched at all. How many other plants are there out there that have a similar potential? I wonder if any of us have been thinking along these lines. We should be.

Horticulture is still alive and healthy in Florida despite freezes, citrus canker, gemmini virus and sweet potato white

fly, to name a few of our pressing problems. Even though we are often confronted with the disease or pest of the month syndrome, we have prevailed and our industry continues to grow in many areas and wax strong. All through these trying times our Society has played a leading role. If there are any doubters out there, all they have to do is peruse the 102 volumes of our proceedings; they tell our story.

The future is bright, the challenges are great. However, I have no doubt that this Society will rise to the occasion, as it has in the past. We will meet the challenges of the 90's head on and solve them, assuring an even brighter future for horticulture in Florida.

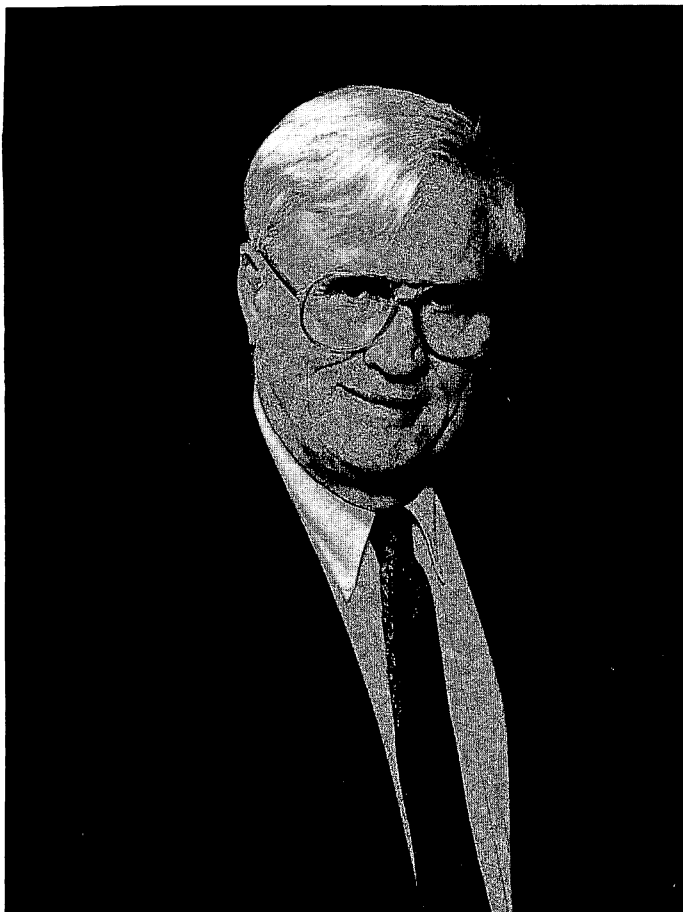
Thank you for your attention!



President Tom Sheehan is not only the retiring Chairman of the Department of Environmental Horticulture, University of Florida, but an International authority on orchids, often asked to judge state and National competition.

PRINCIPAL ADDRESS

Society Regulates Florida Horticulture



FRANK BOUIS

President

*Florida Fruit and Vegetable Growers Association
Orlando, Florida 32814-0155*

Introduction

It is an honor to be here and to have the opportunity to tell you some of the things I have learned, and some other things, I believe, that are important to us who work in Florida horticulture, to our State, and to our Nation.

The history of Florida agriculture, and especially horticulture, is one of slowly developing marketing channels, slowly developing production and marketing techniques, to supply fruits and vegetables to northern markets, that they could not get otherwise. That history is punctuated, again and again, by emergencies of climate and by market competition. All of these have been largely surmounted.

But now, I tell you, if you do not already know it, that there is a new source of emergencies: Government, both state and federal.

My daughter, Stephanie, says that being paranoid is no reason not to believe people are out to get you. I admit my paranoia, but still I don't believe government is out to get me—and us. Government, itself, is passive but it is used by

interests outside of agriculture to attempt to direct the way agriculture and agricultural trade are conducted.

Changes in National farm policy, as they affect operation methods, are now largely directed by environmental and consumer interests. Because of consumers concern over pesticide residues on fresh produce, this is probably more pronounced in horticultural products than those of other branches of agriculture. I suppose the process began 10 or so years ago when direction of agricultural chemical usage was given to the Environmental Protection Agency instead of the United States Department of Agriculture. It has continued on until today these non-ag groups use the media and the courts to require the Administration to interpret the laws as the consumers/environmentalists prefer. They are in direct contact with the Agriculture Committees of both houses of Congress and have direct input into the Farm Bill and other agricultural legislation.

Changes in National farm policy, as they affect trade, are largely directed by the interests of business and finance, other branches of agriculture, and even foreign governments. This process is not new. What is new is the globalization of production, marketing and financial interests.

Each of these groups have full time staffs in Washington with large budgets. Some of them are even supported by federal agencies such as the State Department and the Department of Agriculture.

It is tempting, and I know I have done it, to believe in a kind of "big brother" in Washington or Tallahassee that is going to look out for me. Logically, to us, any governmental body with the word "agriculture" in its name should be pro-Florida horticulture, but it just is not so. Government responds to political and financial pressure almost every time. The interests of government go where the influence or the money is, and, of late, that has been consumer and environmental groups, business and bankers, and other agricultural interests.

In recent years, maybe the last 2 to 4 years, horticultural associations in Florida and some sister states, especially Texas and California, have increased their efforts toward government and its influence. There is still room for increased cooperation and still a need for greater activity and thereby, greater effectiveness. But there is no real reason to believe the horticultural associations alone will get the job done.

Remember, farmers brag that they are only 3% of the population. Remember, too, that the farm gate value of the raw food is only 10 to 30% of the eating value. There are many more people involved in agriculture, including all of you here, and all of them, who need to get involved.

A pretty good case can be made that commercial Florida horticulture is about 100 years old. Although that seems a long time, and maybe it is, lots of us sitting in this room have seen half of that time come and go. Thinking of the events of the present, time seems to move slowly. One seems to be stuck in the present. But thinking back over what has been, counting up the years, and noting the changes made, then we realize what a flashing thing time is. That's relativity for farmers. Lewis Carroll, not Albert

Einstein, first stated the principle. The Red Queen said, "You have to run as fast as you can, just to keep up. You have to run even faster, to make a little progress".

A hundred years ago, commercial citrus shipments were just beginning. The Florida Experiment Station had not started, but entrepreneurial farmers were experimenting with ways to control the pesky pests; whitefly, scale and rust mite. Fertilizer was not a problem. Minor elements were, but no one knew it. Varietal experimentation was all the rage, as were pet systems for packing fruit in barrels and boxes. Winter vegetable production really had not begun. Ornamentals and foliage were not commercial but did brighten up the house.

By fifty years ago, things had changed a lot. Science was in, capital investment was in, market organization was in. Vegetables and flowers were in, and out-of-state competition was heavy. Practically the whole industry was in that band of Florida lying between Ocala and Sebring; citrus, vegetables, melons, flowers, foliage, and all. Except for the new-fangled Florida Citrus Code, and not everyone agreed that was a good idea, there were not any outside agencies to prevent a guy from doing just about the way he wanted. Except for the Isle of Pines, and competition from California, Florida just about had the market to itself. There was trouble with freezes, and if not that, with overproduction and flooding the market so badly that the goods would not even pay the freight.

And now, wow! You would not even think it is the same state. Oranges are for juice, and half of the orange juice comes from Brazil, or Honduras, or Mexico, or Belize. We are still doing well with grapefruit, but Dancy tangerines have gone the way of the rag and bone man. Flowers have gone to Colombia, and elsewhere, but foliage seems to be holding its own. Melons have gone south or north but are no longer in central Florida. Vegetables have left the central sands of Sanford and Sumter and are concentrated on the mucks of Apopka and Okeechobee, and the salad areas of southwest and southeast Florida. And they are getting heavy competition from Mexico and California, plus Texas. A fellow just cannot depend on anything.

To make matters worse, this new administration in Washington wants to give a lot of our good things away to other countries. There is the Caribbean Initiative that will encourage those countries to grow fruits and vegetables for export here. There is the proposed Mexican Free Trade Agreement which may make it easier for Mexico to compete with us for the winter vegetable and citrus markets. There is the US GATT proposal which is a complex thing but certainly would be bad for oranges even though it might be good for grapefruit and vegetables. There is the Andean proposal that tries to make it more attractive to those farmers to grow fruits and vegetables for export here than cocaine and marijuana for export here.

As if that is not enough, there are a whole flock of people that want to tell you how you can grow your crops, how you must use your land, use your water, deal with your workers. Not only do they want to tell you, they jolly well are going to do it.

Yes, Virginia, we march to a different drummer, now-a-days. And that drummer is found in Tallahassee and in Washington from where the legislation comes. From Washington alone there are already the Federal Insecticide, Fungicide and Rodenticide Act; the Endangered

Species Act; The Clean Water Act; The Safe Drinking Water Act; the Resource Conservation and Recovery Act; the Superfund Amendments and Reauthorization Act of 1986; the Transportation Safety Act of 1974; the Occupational Safety and Health Act, and those are only the major ones.

Even in what we like to think of as ordinary times, agricultural enterprises rise and fall with astonishing rapidity. In these times, not only will changes come faster, but they will be brought about by consumers and environmentalists through well meaning, if ignorant, direction of the laws by which we produce, ship or market; or by competing business interests at home or abroad, through manipulation of the trade laws. It has been estimated a simple, unconsidered, Free Trade Agreement with Mexico would mean a loss of 40% of Florida's tomato market in the first year.

If Florida agriculture, and especially fruit and vegetable agriculture, is going to survive there is going to be far greater initiative, pro-activity, in Tallahassee and in Washington and far greater inter-communication with consumer and environmental groups **BEFORE LEGISLATION IS INTRODUCED.**

Florida Horticulture's Competitive Position?

Earlier I mentioned a number of Federal statutes. Among them were the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), the Endangered Species Act, The Clean Water Act, The Safe Drinking Water Act, the Resource Conservation and Recovery Act, the Superfund Amendments and Reauthorization Act of 1986. Each of these Acts was proposed by some well-meaning guy. Each of them had a worthwhile purpose. But agriculture, at least fruit and vegetable agriculture had little, if any, input into the formulation of them. And yet they are the laws by which all of our operations are carried out today. And they tremendously affect the costs of domestically grown food and the competitiveness of the American farmer.

Earlier also, I mentioned the Caribbean Basin Initiative, the proposed Mexican Free Trade Agreement, the US GATT proposal, the Andean proposal and most recently the proposal for hemisphere free trade. Why do these things happen? Are they National policy decisions based on National security, food or otherwise? Are they a result of foreign relations principles? Are they the result of special interests? A good case can be made for each of these but surely the issues should be debated and their impact on U.S. industries, including Florida horticulture, be known before the decisions are made. And their impact is, or potentially is, tremendous.

Today, people talk glibly about the globalization of agriculture. I studied economics under Professor Henry Hamilton at the dear old University of Florida. He said, "Your greatest competition is the man with the grove on the other side of the highway. You have to be able to compete with him!!" Today, I say, "Your greatest competition is the grower in Brazil, or Mexico, or Uruguay!!"

Florida has progressively lost either the markets or their market share in several commodities; oranges, tomatoes, flowers, melons, etc. Florida has seemed to hold its own, or gain, in some; e.g. grapefruit and strawberries. People give a number of different reasons for these losses,

including the famous freezes. Undoubtedly, all of these reasons have some element of truth but, also undoubtedly, Florida's competitiveness is diminishing.

Now, there are recent efforts to remove the protective tariffs that still exist. I say "still exist" because the largest, the orange juice tariff, is a fixed sum whose effectiveness has steadily diminished as inflation has reduced the value of the dollar.

This, if it happens, will lead to a new series of changes and adjustments. Loss of the orange juice tariff will greatly reduce the ability of orange growers to shoulder the risks of horticulture. Loss of the tomato tariff will result in an immediate loss of a major part of the production with all of the job consequences.

Fruit and vegetable producers, or at least Florida fruit and vegetable producers, seriously doubt their ability to continue to shoulder all the competitive burdens that have been, and are planned to be, laid upon them by our own government, as well as absorb the changes which the tariff issue may well bring. In addition, not only are there the cost factors, but there is also the growing possibility that the needed inputs of materials, land and water, may not be available so that economic production may not be possible at all.

Recent Legislative Events, Especially in Washington

Florida horticulture does not look out for its interests enough. But it does a lot, and it does more now than it used to. Although the environmental issues began to be raised several years ago, it was really the food safety issues, beginning with the deliberately set Alar scare a year and a half ago, that got everyone's attention; that hysteria and the subsequent move of some chemical manufacturers to withdraw support of the essential group of fungicides called EBDC's while at the same time EPA announced a stepped up re-registration process that did not seem to be warranted by the facts.

These events led to greater activity by the Florida agricultural associations, especially in Washington. At first, we feared no one cared about the domestic production of fruits and vegetables. As a kind of a test, a simple statement was proposed for the 1990 Farm Bill, the statement that domestic production of fruits and vegetables is an essential part of United States farm policy. Surprisingly, at least to me, that simple proposal ended by becoming a Fruit and Vegetable Title in the Farm Bill, the Food Security Act. This new title is not a tremendous thing, it does not direct the spending of billions as do some of the other Farm Bill titles, but it is now National policy. Another thing, it is a central place now that the proposals of other groups regarding fruits and vegetables have to go, and there they can be dealt with more effectively. They get a lot more attention.

The Fruit and Vegetable Title got a sub-title addressing grade revisions as a means of reducing pesticide use. This radical proposal began as a very extreme description and got, without hearings, unanimous approval of the Senate Agricultural Committee. A hastily constructed coalition of farmer and trade groups succeeded in reducing the plan to one calling for research and education. Even so, the Sub-Title directs a research expenditure of \$4 million a year which could be better used elsewhere. Significantly, the Supervisory Committee installed is 1/4th non-profit

consumers, 1/4th non-profit environmentalists, 1/4th government and 1/4th farmers.

The research provisions of the 1990 Farm Bill show a continued decrease in appropriations for Land Grant Colleges and the Agricultural Research Service. There is proposed a great increase in appropriations for competitive grants. The Fruit and Vegetable Title will be very helpful in guiding the grant announcements into the fruit and vegetable field, but only if the lobbying efforts of Florida horticulture are continued and even intensified.

I think the Alar scare and the loss of hundreds of millions of dollars of fruit has frightened officialdom more than anyone has said. It should have. That, and the flap over EBDC's may have instigated a little known Presidential Office to do a study into what is called the minor-use pesticide problem. Florida agricultural associations have worked closely to produce a draft report which is the most innovative in years. We hope this report, in its final form, will become part of the basis for revision of FIFRA in the next session of the Congress.

Possibly as a result of this report a high level committee of USDA, EPA, and representatives of grower associations, are beginning discussions seeking their own solutions to the minor use pesticide problem.

In quick succession the Administration delivered four trade shocks to Florida horticulture. First, Secretary Yeutter and Ambassador Hills made it plain they did not intend to protect orange juice in the GATT negotiations. Soon after, there was a call by the President for a Free Trade Agreement with Mexico. Next, the establishment of the Andean Initiative and most recently, the President's proposal for hemisphere wide free trade.

The new legislative activity by grower groups put Florida in a position to react immediately to the Mexican Free Trade proposal. Even before Congress has responded to his request for "Fast Track" authorization, there has been written and face-to-face communication with the Senate Finance and Agriculture Committees, the House Ways and Means and Agriculture Committees, the State Department, Special Trade Representative, and even consumer and labor groups.

At present, at least, it is not appropriate to simply oppose. The better position is that fruit and vegetable agriculture, and especially that in Florida, have special conditions that cannot be molded into the rest of the United States. It is amazing how little known that fact is, as is the fact that fruit and vegetable agriculture does not get subsidies.

What's Coming In The Near Future

If you accept, and I hope you do, that Florida horticulture is a way of life for many, an occupation for many more, and enables a rural environment for many others, then I think you will accept that a lot more people than farmers should be concerned with its prosperity and survival.

In the coming months, especially in the Federal and State legislatures, several key issues will be debated and far reaching decisions taken. These will be issues very determinative of whether Florida horticulture will continue to be competitive.

One of these will be the re-enactment of FIFRA. This re-enactment provides an opportunity to address, legislatively, the minor-use pesticide problem. Re-registration

and lack of regulatory support by manufacturers, is leading to the loss of dozens of the chemicals we depend on. Often there is not any food safety reason for these losses. What the re-enactment will provide is arguably the most important feature of the upcoming Congress so far as Florida horticulture competitiveness is concerned.

Already there is deepening dialogue between producer states, United States Department of Agriculture, Environmental Protection Agency, appropriate Congressional Committees on these minor-use provisions including questions of how crops should be classified.

On the other hand there also will be an opportunity for groups that have a different agenda than feeding people to influence the future structure of FIFRA. You can be sure they will be heard. Are you determined that Florida horticulture will also be heard?

The Clean Water Act also is up for re-enactment. There is thought to extend the provisions of this act to agriculture. Plainly, I do not know just what that means, but the far-reaching effects this act has already had assures that its agricultural significance will be great.

Most Congressman are conscientious. But they do not know, from their own experience, the effects of legislative proposals. They want to know and they are receptive to legitimate information. The Clean Water Act issues are going to be very technical, dealing with what wetlands are and are not, and when wetlands are significant and when they are not. Spokesmen for producers are going to be thought of as biased. Spokesmen for environmental groups will be thought of as public spirited. So will scientist spokesmen.

We should not focus all our attention on the Congress to the exclusion of the State legislature and both of the Administrations. The 1990 Farm Bill instituted several programs of tremendous real and potential influence on Florida horticulture. Among them are a 5-year program of competitive research grants, a study of the health of horticultural agriculture, a study of the effects of revising grade standards as a means of reducing pesticide usage, a pilot program to advise buyers of the national source of imported produce. Just how these programs will be elaborated will be equally, or more important than their legislative enactment.

In the interest of time, I am not going to belabor the many Florida legislative issues. These will certainly include reenactment of the Florida pesticide statute, something to solve the complexities of comprehensive planning in rural areas, probably more issues of endangered species, maybe even the gopher tortoise.

Statistics and Publicity Guide Peoples Thoughts

We live in a lot of different "ages": the computer age, electronic age, and so forth. We also live in the communication age. People do not observe events so much as they receive thousands and thousands of pieces of information fed them by TV, newspaper, and other media. These are all propositions that are sent by someone for the purpose of selling some idea.

I am a technical type by early training and my anthropology studies were something of a shock. But I learned that facts are not reality. Facts are a social construct, they are what most people agree at the time.

Nowhere is this more significant than in the place of agriculture within the Greater Society, in the place of horticulture within agriculture and, most especially to us, the place of Florida horticulture within the greater field of fruit and vegetable production in the United States.

Your local newspaper, read by your legislator, gets much or all of its agricultural news off the wire services. Often, perhaps usually, this is produced by the news generators in the capitols who are the very same groups active in the legislative process. More importantly, perhaps, are the statistics and stories generated within the United States Department of Agriculture. These emphasize the conditions and concerns of grain and livestock agriculture.

An illustration is a recent presentation in a United States Department of Agriculture magazine. This described the top farm states by selected characteristics. Commodities represented were field crops, cattle and calves, hogs and pigs, broilers, and sheep and lambs.

This is understandable. That is where Farm Bill money is, where the money is, and there often is the heart. Last week there was a story that President Bush had approved a \$1 billion credit program for Russia to buy United States grain. The grain market dropped because the traders had actually thought the handout would be more than that. When did you ever hear of a billion dollar deal in fruits and vegetables?

And yet, in the U.S., fruits and vegetables represent about 25% of the food budget. Florida and California are the 2 largest crop states, if you subtract subsidies. We produce the commodities that the Surgeon General says are the single greatest provider of national health and that are needed in greater quantity.

Another illustration, a recent United States Department of Agriculture study of import and export subsidies in both the producer and consumer domains did not include fruits and vegetables nor sub-tropical countries.

And yet, we were in the midst of the GATT negotiations and the discussions with Mexico over a Free Trade Agreement had already been proposed.

Everything I have said this morning, I believe to be true, unnecessary, and undesirable.

Consumers and fruit and vegetable growers and their associates, and even the government, all have the same interests at heart. That interest is to produce more fruits and vegetables of better quality at lower cost to the consumer and to deliver them to the American table.

We need better communication to achieve the conditions that promote that common interest. The producer associations are striving for that end. Let's everybody get in.

It's Not Just A Farmer Problem

The globalization of agriculture has brought Florida horticulture into intimate contact with producers everywhere. In the same way, the globalization of communications has brought Florida horticulture into intimate contact with citizens all over the country.

Today, and for several years past, agricultural legislation has been driven mostly by consumer and environmentalist groups, by business and foreign interests. Even after the laws are enacted these groups continue their surveillance of the ways they are administered. Consumer and

environmental groups monitor how the world is progressing, and if they do not like it, they challenge, in the public press, in the courts, in the administration, and in the Congress.

Illustrative of these efforts, the National Audubon Society spends \$35 million a year; the National Resources Defense Council (Meryl Streep's organization), \$15 million; Public Voice for Food and Health Policy, who invented the attack on grade standards, \$800 thousand; and the Sierra Club another \$33 million. These efforts are all environmentally and food focused. Large corporations, foreign governments, labor unions and others maintain large staffs with substantial budgets. In contrast, the Florida horticultural associations have a total expenditure less than \$2 million on all their activities of this type. And yet, our Florida fruit and vegetable industry has an annual FOB value of at least \$3.2 billion. We don't do enough.

No, I don't think farmers do enough. But the issue of the future of Florida horticulture involves far more than farmers. This is an issue of the occupations of many in agriculture, and others in occupations closely related to agriculture, and even others less closely related. I include Ag researchers, teachers and administrators; chemical plant men, salesmen, and applicators; equipment manufacturers, salesmen and repair shops; even farm workers, truck lines and on and on.

Not only are there issues of occupation involved, but there are also issues of the social and demographic future of the state.

What I am doing is asking you to become involved. I am not asking you to take up the cudgels for something you do not believe, but rather to bring your special knowledge to the public debate. There are different ways this can be done. Each of you belongs to one, or more, professional associations. In those cases that an issue is in the field of an association, it is appropriate for that group to speak out. I could even maintain it is duty not to withhold the special knowledge possessed.

It is also appropriate for you to be involved outside of your professional associations. You might do that as an individual, or as a member of one of the producer associations. You could even be, perhaps you already are, a member of one of the consumer or environmental groups.

You see, I don't believe farmers, consumers and environmentalists are enemies. It does appear that the extreme positions they take when they try to influence government puts them in conflict. To bring these groups to a natural and desirable cooperation requires balanced input from many segments of knowledge and understanding.

For Florida's sake, get involved.