Proceedings of the 1994
Program of the Research
Center Administrators Society

February 7 and 8, 1994, Nashville, TN

This Society is affiliated with the Southern Association of Agricultural Scientists and has membership from each of the member states. The Executive Committee is composed of one representative from each state, the current officers and the immediate past President, who is Chair of the Executive Committee. These are the voting members although any member can attend meetings.

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Membership
Research Center Administrators Society
Southern Association of Agricultural Scientists

Dear Members:

The Research Center Administrators Society has made great strides in recent years. We have improved the quality of our programs and increased membership. Recently, representatives of the Kansas Agricultural Experiment Station joined our Society. This was largely due to the quality of our programs and the information we share among ourselves. This is the purpose of your Society - to respond to your needs and to facilitate sharing information that allows each of us to perform our job better.

Even though significant progress has been made, I feel that further improvement is possible. We can do better. I urge each of you to become active in your Society. Contact your state representative and provide him with your ideas. You can recommend topics and speakers for future programs and suggest ways that our Society can be more responsive to the membership's needs. Also, remember that involvement extends beyond suggestions. Be willing to step forward and accept responsibility. We need everyone's involvement and willingness to accept responsibility to move the organization forward.

We have an excellent organization devoted to addressing the needs of its membership. However, the Society can only be as good is its membership. Working together, we can make improvements. I enjoyed serving you as President and look forward to working with you in the future for the betterment of the Research Center Administrators Society.

Sincerely,

Joe A. Musick
Resident Director
1993 - 1994 President

/kgg

Acknowledgements

I extend my thanks to the speakers for providing copies of their text, Dennis Onks, program chair, who developed the program and provided me texts of most all of the presentations, Jim Reinert for preparing and updating the directory, Ben Kittrell for preparing the biographic information of James Riley Hill and Bill Webb for his contributions on historical aspects.

This is the seventh volume of the RCAS Proceedings and will be the last to be assembled by this editor. Next year Dennis Onks will handle all aspects of the publication of the Proceedings and I am sure he will do a good job. I ask that you give him the support and cooperation you have given me during these seven years. I have very much enjoyed this service to the Society and I thank all of you for giving me this opportunity.

This will also be the last year Rosa Maese will be involved in transcribing, typing, copying, collating, sending to the binder and sending copies to each state representative. She has done a tremendous amount of work in your service over the years and is a primary reason the Proceedings have been published.

Howard L. Malstrom
Dennis Onks
Editors

The Society has back issues of the following volumes of Proceedings:

1987 - 1988	New Orleans
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Back issues can be obtained from:

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Executive Treasurer
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WELCOME TO TENNESSEE

Dr. Don O. Richardson
Dean and Director
Tennessee Agricultural Experiment Station
Knoxville, TN 37901-1071

It is a pleasure and privilege to address the Research Center Administrators because we have 11 branch stations in Tennessee and several of our people are actively involved in this organization. I know the quality of the people involved and am aware of the responsibility that you have. In essence, I am addressing the people who are really involved in the grass-roots action phase of developing and executing Agricultural Research Agendas.

I am pleased to welcome you to Tennessee. The University of Tennessee is celebrating its Bicentennial, 200th birthday, this year (1994). This is a special occasion for Tennessee and it is even more interesting that The University of Tennessee was established even before Tennessee formally became a state. We have a long heritage. Those of us in agriculture are very proud of the land grant part of that heritage and we are committed to continuing to strive to meet the objectives of that land grant.

In addition to taking a few minutes to welcome you, I am going to share some of my philosophy. It is obvious from my experience that the structure of state universities and higher education varies widely from state to state. There are two systems for higher education in Tennessee. There is a Board of Regents system and a separate University of Tennessee system. The University of Tennessee system, is a multi-campus institution, with the primary campus at Knoxville, with about 25,000 students. About 1,200 of these are enrolled in the College of Agricultural Sciences and Natural Resources. In addition to the primary campus, the institution has major outlying campuses around the state. The UT Martin campus is another major unit with an enrollment of about 8,000 and has a College of Agriculture. In addition, agriculture curricula are taught in four of the Board of Regents universities.

In addition to those two UT campuses listed above, there is a more traditional liberal arts campus in Chattanooga as well as a medical unit in Memphis. There are also three major Institutes associated with the University. One of those is the Institute of Agriculture headed by a Vice President who answers directly to the President of the University. Therefore, agriculture is in a very prominent position within the structure of the University. Within the Institute of Agriculture are four major divisions: 1) the traditional College of Agricultural Sciences and Natural Resources, 2) the College of Veterinary Medicine, which is tied in closely with the remainder of agriculture, 3) the Agricultural Extension Service, and 4) the Tennessee Agricultural Experiment Station.

The Agricultural Experiment Station has programs in nine departments. Eleven branch experiment stations are distributed around the state and are an integral part of the total ag program (see map). Many of the superintendents in charge of those stations are in attendance here this morning. The nine department heads and 11 branch stations compose our middle level management team and they are largely responsible for developing the research agenda to fulfill our mission.

We define part of our mission to include the development of technology—which enhances Tennessee's Agriculture Industries—through research. Further, we want to do this in a sustainable manner while also promoting quality rural life. I really believe that this is a part of the original land grant charge which was to develop technology to enhance the agricultural economy of each state.

We view the technology mission in the context of a customer mix that we are expected to serve. We divide that customer mix into the three general categories. The first is composed of the owners and operators, the decision-makers associated with our farms, timberland, nurseries and greenhouses. The second is the agribusiness complex, the firms that supply production agriculture, that process and market products. The third element, the professional peers, consists of the agents and specialists of the Extension Service, the professional consultants who package and transfer technology to the production people, and the regulators and policy makers. Thus, this complex is made up of the people who utilize the technology we develop—our direct customers.

That doesn't mean that the ultimate beneficiary is not the general public. I can't think of a more dramatic way to illustrate the success of this overall system than to reflect back when I was in college in the 1950s. Then about 25 percent of the per capita disposable income was spent on food. Today that amount is less than 12 percent. That is a ringing endorsement of our system and it clearly demonstrates what we have helped achieve.

About five years ago, we initiated a program to review our branch station programs in a systematic manner. We have reviewed about two per year, utilizing panels of 8 to 10 scientists and others. The review panels have consisted of our own scientists, superintendents from other states, people in agribusiness, farms, and others. We have benefitted greatly from the reports from those review committees. I would like to share some of the general findings with you.

One of the most obvious points was that those involved with branch stations serve as role models. For instance, if we recommend a no-till culture, we should use this approach in our farming operations at the branch station. I think that is important. Another important point which I am sure is of interest to scientists and managers alike deals with measurement of effectiveness. We, in academia, tend to look at scientific productivity in terms of publications, especially those peer-reviewed articles targeted to our fellow scientists. Comments from farmers in one of our early reviews really put this in

perspective. We were told that we existed to solve problems and, if we could do that in a good way, with good science, we could naturally get publications. But, they emphasized problem-solving, saying emphatically that we do not exist solely to develop technology for publication purposes. We exist to solve real life problems and find opportunities in the ag sector.

The third point that was made by producers was to remind us that they want to know all of the aspects of the problem. They don't want us to simply explain the biological, physiological, or chemical relationship, they want us to relate these aspects to practical solutions, how it will affect them. They want to know the economic consequences and environmental issues that might be raised. In short, they want us to talk their language and discuss the entire scope of the issue. Most farmers are enterprising young business people who often have a college education. They talk in terms of the cost to produce a bushel of corn or a bale of cotton. Our scientists need to talk their language.

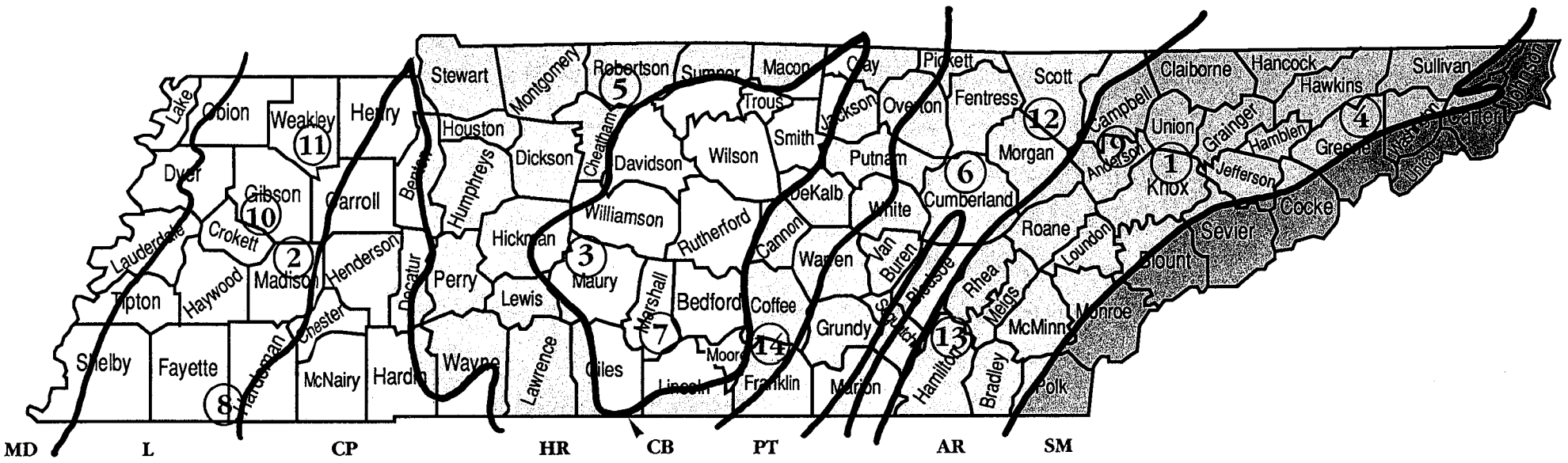
The fourth point of emphasis is grantsmanship. We stress that aspect in Tennessee because soft money or grant contract dollars has become a very important part of the support of our operations. Often, the public perceives profits in that. They question our allegiance and wonder who we are working for under those circumstances. We have to be very careful to explain that we still control our research agenda. Although private companies may provide resources to address a problem or situation, we undertake that mission only when it is compatible to our overall mission, which is serving agriculture. Sometimes we put ourselves in a "hole." We talk about such-and-such company's research when in reality it is not their research, it is our research. We have to be careful to convey to the public that our integrity is not for sale because that is the most important commodity we have.

In conclusion, let me state that I appreciate that you probably have similar situations, similar philosophies, and similar thoughts in your state agricultural network. However, we all exist to serve the agricultural economy of our states. We are delighted to host you in Tennessee and we hope you have a productive and enjoyable meeting. We want to help you in any way we can.

The University of Tennessee

Tennessee Agricultural Experiment Station (TAES) and Unit Locations

Tennessee Land Resource Areas



Station and Unit Locations

1. **Knoxville Experiment Station,** Knoxville
2. **West Tennessee Experiment Station,** Jackson
3. **Middle Tennessee Experiment Station,** Spring Hill
4. **Tobacco Experiment Station,** Greeneville
5. **Highland Rim Experiment Station,** Springfield
6. **Plateau Experiment Station,** Crossville
7. **Dairy Experiment Station,** Lewisburg
8. **Ames Plantation Experiment Station,** Grand Junction
9. **Forestry Experiment Station,** Oak Ridge
10. **Milan Experiment Station,** Milan
11. **Martin Experiment Station,** Martin
12. **Cumberland Forest Unit,** Scott and Morgan Counties
13. **Friendship Forest Unit,** Hamilton County
14. **Highland Rim Forest Unit,** Tullahoma

Land Resource Areas

MD	☐	Mississippi Delta
L	☐	Loess
CP	☐	Coastal Plain
HR	☐	Highland Rim
CB	☐	Central Basin
PT	☐	Cumberland Plateau and Mountains
AR	☐	Appalachian Ridges and Valleys
SM	☐	Smoky Mountains

The University of Tennessee
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FORGING NEW REGIONAL COALITIONS IN THE CUMBERLAND-SHENANDOAH TREE FRUIT REGION

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Interstate cooperation has always been important to successful research and extension programs throughout the country. A recent survey of land grant universities (Foster, R.E., Purdue Univ., personal communication, 1993) showed that in Cooperative Extension Service CES), a vast majority of CES administrators encourage interstate cooperation. Cooperation was/is accomplished indirectly either by verbal encouragement by administrators or by elimination of the various roadblocks that inhibit positive interactions. More concrete support was given to faculty by CES administrators through the granting of travel funds and through the creation of formal cooperative agreements with neighbors. The printing of multistate recommendations has been a driving force to continued and enhanced cooperation between states extension programs. Administrators, both CES and experiment station, will especially encourage cooperation if it costs the home institution little or nothing and/or if the activity realizes monetary gains for the partner institutions.

Many land grant administrators -- teaching, extension and research -- today are looking more closely to their sister institutions within and outside their states to see where cooperation will help partners achieve their missions more fully. A major force in this re-shaping of the way we do things is the realization that today's (and probably tomorrow's) funding sources are exceedingly finite. Research and extension program administrators for tree fruits in the four-state area of Virginia, West Virginia, Maryland and Pennsylvania are among those seeking to draw more closely together.

Within the four-state area -- loosely referred to as the Cumberland-Shenandoah Region -- are located four university tree fruit research labs (one per state) and one USDA fruit research facility (located in West Virginia). Faculty at these units have had a long history of coordinating programs through the Cumberland-Shenandoah Fruit Workers Conference, through the exchange of speakers at grower meetings, and through the production of joint recommendations and production guides.

Factors driving this increased current effort at regionalizing programs in the Cumberland-Shenandoah Region are 1) generally flat state/federal appropriations for each facility with no strong prospects of near-term (or long-term) funding increases, 2) grant support that is either flat or increasing only slightly, 3) grant dollars that may not be directed necessarily at perceived priority areas in each state, 4) lowered prospects of replacing faculty and staff as vacancies continue to occur naturally, 5) the complexity of the problems facing the industry thereby requiring a multidisciplinary regional approach,

6) the possibility of one state's industry supporting research in another state where the desired expertise resides, and 6) the emerging realization by industry and the university/USDA partners that regionalization provides new opportunities for sustaining the tree fruit industry in the region.

The current effort of continuing and enhancing regional programming began with a tour by the research and extension administrators in April 1993 of all five tree fruit facilities. The programs at each facility were summarized and the human resources tallied. At all stations, program growth had peaked in many topic areas, and some program erosion was evident because of personnel attrition (retirements, deaths, etc.). This initial meeting was followed with a large meeting in June involving research, extension and industry delegations from each of the five units in the four-state area. The decision to engage the tree fruit industry in all deliberations was quickly made at the April meeting realizing that the collective wisdom of all partners was a necessary element in discussions on regionalization. A discussion paper was drafted following that June meeting to help crystallize the issues and to define possibilities of regionalizing programs in the future. In November, the same representative group reassembled to finalize the discussion paper and to set in motion a timetable of events for the future.

Possibilities for the future were categorized as short-, mid- and long-term possibilities. Short-term possibilities were to 1) have each state horticultural association discuss regionalization (in the context of the discussion paper) during their January/February 1994 annual meetings, 2) establish a regional tree fruit advisory council composed of a coalition of industry personnel from the four states, 3) begin building a strong coalition with other partners -- government agencies, universities, environmental organizations, and the news media, 4) analyze the current research and extension project portfolio to identify areas of duplication and complementarity, and 5) expand discussions on sharing research and extension resources (personnel, funding and programs) across state lines.

A vital part of the short-term activities was/is establishing a steering committee (three delegates per state) to further define the purposes of the regional tree fruit advisory council and decide upon the number of industry members and the composition of the council. It is expected that the steering committee will be in place by end of February 1994 and that the first meeting of the council will be held by July 1995.

Positive outcomes of council deliberations in the mid- and long-term would be 1) a formalization of tree fruit industry needs, 2) assistance by the industry in setting program agendas for research and extension units, 3) the pooling of industry dollars to fund research and education projects for the whole region, 4) joint annual meetings of the state horticultural associations, 5) a demonstration and commitment by all partners to work together across state lines for the common good, and 6) expanding membership in the tree fruit coalition. The long-term outcome of regionalization will be the sustaining of the tree fruit industry in the Cumberland-Shenandoah Region.

INTERSTATE AND INTERDISCIPLINARY RESEARCH: PROS AND CONS

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BACKGROUND

Interstate and interdisciplinary research activities are not really new to the agricultural experiment station (aes) system, however, certain trends in today's research environment may lead to more and more dependence on cooperative activities in the future. The June, 1993 ESCOP "Futuring Conference" (1) concluded that public funding for higher education was waning and that state funding for agricultural programs has been generally reduced while demands have increased. This conference also concluded that integrated planning of joint programs across the functions of teaching, research and extension is growing, driven partly by increased external grant activities that result from reduced state resources.

Actually, there are already more interdisciplinary and interstate activities taking place than most of us probably realize. The results of an informal survey of cooperative activities taking place among southern region states were reported in the September, 1992 Minutes of the Association of Southern AES Directors (2). This report revealed 159 cooperative activities with a total of 266 scientist years (sy) of participation. The activities ranged from less than 1 sy to as high as 23 sy's per activity. Funding of these activities was estimated to range from zero to over $1 million with a total southern region aes investment of $36 million in collaborative activities. Total annual savings of about $15 million was estimated to result from these collaborative activities. To provide perspective, 266 sy's is a larger scientific resource than is contained in all but 2 or 3 of our southern aes's.

The trends of diminishing state resources, greater demands on the aes system, and more reliance on external grants have already pushed us far into the interstate and interdisciplinary collaborative arena.

INTERDISCIPLINARY ACTIVITIES

All of us have had some experiences with interdisciplinary research. The advantages of interdisciplinary research have been delineated by Dr. Kimberly Gwinn writing in the Fall, 1993 issue of Tennessee Farm and Home Science (3). Among the positive attributes of interdisciplinary teams are more effective and targeted planning, more comprehensive research approaches to agriculture's increasingly complex biological, economical and environmental problems, and team members that continuously inspire and energize each other. The team "accomplishes together what the individuals cannot." Many southern

aes's have instituted formal or informal interdisciplinary research team concepts to capitalize on these advantages in recognition that there are fewer and fewer problems that can be solved by one scientist or one discipline alone.

INTERSTATE ACTIVITIES

The most familiar interstate research activities that have been in place for many years are regional research projects. Regional projects have been most successful in focusing scientific and fiscal resources on problems of several states or, in some cases, of national interest. Regional research projects have probably been most effective in marshalling single-discipline resources across several states to solve problems of regional interest. True interdisciplinary and interstate collaborations have been less numerous, although not absent. Some external grant programs such as the southern region SARE program now put a premium on interstate cooperation by awarding additional credit during the review process to proposals exhibiting interstate cooperation.

PROS AND CONS

There are numerous advantages to interstate research and a few challenges to be dealt with. Following is a brief discussion of several of them.

More efficient use of resources: This advantage must be viewed from a system perspective rather than a single-state perspective. As budget constraints have increased, it has no longer been possible for each state aes to employ scientists to address all commodities with all pertinent disciplines. Thus, there is a distinct system advantage if a specific commodity-discipline scientist can work across two or more states. As a corollary, the interstate approach may actually allow more disciplines to address a common problem. For example, if a problem is of concern to 2 or 3 states and those states agree to pool their pertinent resources, there may actually be more disciplines applied than if each state attacked the problem alone with only the resources it had available.

Address common physiographic areas more effectively: Agricultural production areas with common commodities, soils, climate and problems usually cross state boundaries. Examples are the Mississippi River Delta areas of Arkansas, Louisiana and Mississippi, the southern coastal plain of south Georgia and north Florida, the Appalachian region of eastern Tennessee and Kentucky and western Virginia. There is more regional efficiency by pooling scientific resources to address the problems common to these multi-state production regions. Expertise available in one state may not be available in other states in the production region due to budget constraints or to priority decision. Interstate cooperation, in this case, leads to a more efficient and logical research approach to problems that cross state lines.

Involvement of non-aes resources: Interstate cooperation may allow the involvement of non-aes resources in selected situations. Examples of publicly supported and non-

governmental entities which have both scientific and fiscal resources that may be useful to the solution of some research challenges are ARS labs or locations, EPA labs, Winrock International, and the Kerr Center. The involvement of legitimate scientific resources outside the aes system allows a more logical and efficient research approach and may become more important if state funding continues to be constrained.

Quicker technology transfer and adoption: The current system is very effective in transferring useful technology across state and regional lines. However, developments in one state may need further verification and system integration, even in a bordering state, before broad adoption. When scientists from several states are involved in research planning and implementation, the appropriate verification and system integration can be put in place earlier and accelerate widespread adoption by 2 to 3 years or more.

Some of the perceived challenges to implementing interstate research activities are listed and discussed as follows.

Increased planning and logistic challenges: The logistic problems of detailed research planning involving scientists from several states and agencies are greater than when planning within a single aes. This is more of an inconvenience rather than an insurmountable challenge. Today's communication tools including teleconferencing, fax and electronic file transfer make multi-party planning and the logistics of conducting multi-site research possible given increased dedication of communicating and meeting deadlines.

Grant fund management: The process of awarding and budgeting grant funds, the proper fiscal management of those funds, and the necessary accounting, billing and reporting, can seem overwhelming. When multiple states or agencies are involved, a prime contractor must be designated along with one or more subcontractors. Each tier of the grant process must go through the same steps. Scientists and administrators must recognize that these are legal agreements and that their proper and timely execution is a necessary condition of receiving external funds to support their research. Similarly, granting authorities must recognize the tremendous time absorbed by legal, fiscal and technical accounting and not impose unrealistic expectations. Proper attention to planning, timely communication and adherence to realistic grant conditions will make grant fund management flow smoothly and greater productivity will result.

GENERAL COMMENTS

Although the planning and management of interstate activities poses some unusual challenges, the advantages outweigh the inconveniences. The agricultural research system will still need the most well-trained, intelligent and dedicated scientists who have outstanding research capabilities in their own right. However, these scientists will increasingly need to possess the mindset of team participation, both within their own aes and with scientists in other states and agencies. Some scientists will have to step forward to exercise leadership skills in organizing and implementing the team process.

Administrators will have to find innovative ways of supporting research teams and rewarding them for their successes.

CONCLUSIONS

The productive potential of interdisciplinary and interstate research outweighs the challenges that need to be overcome to effectively implement it. More efficient use of scientific and fiscal resources, the involvement of non-aes resources, and the increased ability to compete for external funding are positive attributes of team research. How far and how rapidly the aes system is driven toward interstate and interagency cooperation will be determined by the future funding levels in our respective states.

REFERENCES

1) Toward the 21st Century: A Multidimensional Transition of the State Agricultural Experiment Stations. Report of the ESCOP National Futuring Conference, June 15-16, 1993.

2) Minutes of the Association of Southern Agricultural Experiment Station Directors. September, 1992.

3) Tennessee Farm and Home Science. Fall, 1993 Issue. University of Tennessee Institute of Agriculture, Knoxville, TN.

A VIEW FROM BOTH SIDES OF THE FENCE: THE ROLE OF ACADEMIA AND INDUSTRY IN TECHNOLOGY TRANSFER[1]

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In academic circles, 23 years between achieving the ranks of Associate and Full Professor is considered to be an unusually long period. But when 22 of those 23 years are filled with stimulating responsibilities as the leader of R & D and technology transfer teams for a major manufacturer and supplier of farm inputs, a unique and useful perspective is obtained on the roles of both academia and industry in technology transfer. Hence this "view from both sides of the fence."

The Challenges

Academia: Simply stated, universities, and especially land-grant universities, are losing their credibility with the public on whom they depend for support. The public is discontent in many areas, but two major areas of focus stand out: (1) the perception that classroom teaching is being sacrificed for pursuit of research; and (2) knowledge and technologies are not being adequately transferred for the good of society.

"For the good of society" may sound out of place for this audience. I invite you to think in terms of economic development, increased competitiveness and even survival of clientele, and improved quality of life.

Increasingly, we in land-grant academia are considered to be elitist, self-serving, ivory tower types who are not meeting at least the short-term needs of those who support us. The negative perceptions of land-grant universities must be reversed or we are in danger of losing the unique and well deserved place that we have worked so hard to develop over the past century. We must renew the public's confidence and demonstrate that land-grant universities can make a difference.

Superimposed on, and partially a result of, the above challenges, funding levels and sources have stagnated or declined. Additionally, in many states there are state-wide, non-university technology and economic development organizations that are rapidly assuming increasingly broader responsibilities.

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[1]Presented at the 1993 College Livestock Feed Conference Board Meeting, Southern States Cooperative, Inc., Richmond, Virginia, September 14 & 15.

The single, unique function to which land-grant institutions alone have access is the infrastructure for program delivery that exists in Cooperative Extension. The challenge is to determine a way to utilize this delivery system effectively in an inclusive rather than exclusive way.

Industry: Meanwhile, on the other side of the fence, industries have gone and continue to go though wrenching re-structuring, driven by the realities of the market place. Corporations from Agway to Xerox are downsizing, reducing investments in R & D and support for technology transfer and technical service.

Public perceptions and misconceptions about the need for and role of profits and profitability create major challenges for those in business and industry. The fact that you "sell something" creates suspicion in the minds of many in academia, despite the reality that essentially every great teacher and researcher is a true "salesperson" - whether the product is knowledge, an idea, a concept, a thought, or themselves.

As university faculty members, we need to remember that profits in the private sector are what provide jobs and economic stability. And yes, even dollars in funding the ubiquitous proposals for research, teaching, and extension projects, as faculty respond to their university's expectations "to seek extramural funding aggressively."

Agriculture: Down on the farm and in the classrooms, laboratories, and field research stations of land-grant universities, agriculturalists face a major challenge - society's growing resistance to science and technology. There are substantial reasons to be concerned about the public's perceptions of science and technology.

To the extent these perceptions are "often in error but rarely in doubt," they have enormous implications for those developing, producing, and marketing products and programs, and for all who use the benefits of science and technology. In the latter group are farmers who have benefitted from science since the wheel was invented.

Technology - especially biotechnology - has become suspect in the minds of many people. Farmers, and those of us working with them, need to be concerned about public perceptions and face the very real possibility that they may lose the opportunity to decide for themselves whether they will adopt useful technology on their farms.

The decision on whether agricultural technology will even get to the point where farmers can decide for themselves may be made by people and groups who know little and care less about the role of agriculture in the food system.

Future Directions

The solutions to these and other challenges for effective technology transfer in the future will not depend on a single institution, company, or program. Perhaps the most

challenging issue is simply how to unite groups and individuals who have been accustomed to having their own separate programs. In the future "business as usual" won't work. Old ways will not be appropriate or effective. Both academia and industry are being held to new and higher standards of accountability by their various clientele (customers).

What to do?

1. Identify strengths and weaknesses. No company or institution can be all things to all people.

2. Develop new partnerships with other institutions, industry, or government.

3. Determine how telecommunications will be involved in transferring knowledge and training. Classrooms of the future will be in the home, in the factory, and on the farm. This represents major opportunities for the private sector. Universities need to be
involved or they will lose their traditional role.

4. Implement explicit programs for faculty and industry staff development. More mixing and sharing of positions and sabbatical leaves are needed between academia and private industry. Academic leaves need to be in tune with the times, i.e. they're easier to arrange for a quarter, term, or semester than for a full year.

5. Train undergraduate and graduate students to work in and with interdisciplinary team projects. It's very difficult to address BIG challenges with only one discipline involved and it's not a good sign for new college graduates to face an interdisciplinary project for the first time during the first week of their first job.

6. Encourage and reward faculty to work in and with interdisciplinary teams. In addition to the reason in number 5 above, this would establish important role models for their students.

7. Segment agricultural audiences/markets into categories such as traditional (way of life), business-oriented, or part-timers ("sundowners"). Tailor products and programs for their unique needs and wants.

8. Stamp out "assumacy". Don't assume that the public shares your view of production agriculture. Unfortunately, the public perception is that with only 2% of our population involved in farming, agriculture is not important - even in states that are agricultural giants. Why do we need farmers when we have supermarkets?

As we rapidly approach the 21st century, now only 6 1/2 years away, the agricultural industry will continue to have a two-pronged challenge; not only to seek out and develop new technology, but also to apply current technology. The need to increase

U.S. agriculture's competitiveness in a global environment will demand that the lag time between discovery and adoption of profitable technology be shortened. The major players on "both sides of the fence" will need to join forces where appropriate to help agriculture surmount this two-pronged challenge. In fact, the time is now to begin dismantling the fence.

THE ROLE OF PROGRESSIVE FARMER IN TECHNOLOGY TRANSFER

Jack Odle
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I'm certain nearly all of you are familiar with *Progressive Farmer* so I won't bore you with a lot of details on our publication. We are 108 years old and serve 750,000 subscribers in the south, southwest and midwest. That amounts to about 2 million readers each month.

In our pages you will find articles about the latest agricultural production technology, the profitable marketing of farm products, legislation and regulations that impact farm businesses, and a broad range of issues that affect rural life -- from health care to farm safety. In preparing our articles, the editors are constantly in contact with farmers. We visit hundreds of farms each year. These visits and contacts bring a realism to the articles -- make the articles believable.

But, we typically add another element to increase believability and credibility of the information on the pages of the magazine. That element is you and folks like you. You are considered an independent, unbiased source of information by our farmer readers. Thus, when we do a story on weed control, we will talk to farmers and to ag chemical representatives, but we also visit with extension weed control experts, university and USDA agronomists.

Thus, *Progressive Farmer* serves as a fundamental piece in the puzzle of technology transfer. We spend hours talking and visiting with ag researchers, extension specialists, and county agents to check out story ideas, to add an unbiased source to the article, and to help us understand the specific production problem. We use extension news releases, crops and livestock field days, and office visits to glean information that is of interest to our readers. Our only limitation on technology transfer is the number of pages in the magazine.

We have found in our surveys that our readers really don't want to work hard to read an article. They want clear and precise information that is written in a very simple manner. We run all of our articles through a computer program which tells us which grade reading level the article has. We try to minimize the paragraph length and the number of multi syllable words. We also have found that breaking things up and putting them in little highlighted boxes is a good way to get out information in an easy to read manner. People may not want to read an entire article but they may read what is in these boxes to either get the basic information they want, or to see if they want to read the entire article.

We try to write *Progressive Farmer* at between an eighth and tenth grade reading level. That may seem low, but the Wall Street Journal with all its financial information writes at a seventh to ninth grade level. Once they started writing in a more simple manner their circulation increased markedly. They became a national publication instead of just a business publication. This is an important aspect to remember in communication -- the simpler the better. People just don't want to work hard to get information.

There is another thing about credibility which is important in *Progressive Farmer* or any journal. The reader needs to know when the editors are talking and when the advertisers are talking to him. That is a constantly recurring problem in farm publications. There are many sections being put into agricultural publications that are not labeled as advertising, even though they are paid for and the information is reviewed by an agribusiness firm prior to publication. We won't do that at *Progressive Farmer* as long as I am editor. We will label it as advertising if it is advertising. I think your research and Extension people have an interest in that as well because I don't think you want to be used in an advertising section not labeled as such. In other words, you may not mind if they quote you in one of these sections, but you want it labeled as advertising so that the reader knows it has been reviewed by the agribusiness firm prior to publication.

There is one other role that we play that is important in the transfer of technology to the farm family. That's a public relations role. Besides transferring the production and management information via the pages of *Progressive Farmer*, we also need to promote the land grant university system to our readers. Readers are being covered up with information from federal government agencies, agribusiness groups, environmental organizations, farm organizations, etc. But, the only source that is truly unbiased is you. You are paid to be unbiased in the release of information. To keep you unbiased, *Progressive Farmer*, must at times shout your praises.

However, you as public servants must realize, as does *Progressive Farmer*, that the farm families are your customers. The *Progressive Farmer* gets about one million responses from our readers each year. Some request additional information about a story or subject and we forward this on to you - the individual involved. That could be considered reverse technology transfer.

We encourage response from our readers. We put my telephone number on the index page of the magazine. This is a little dangerous because all subscribers could call me but fortunately that has not happened. However, a particular article can elicit considerable response as did a recent article we wrote on ostriches. I didn't realize there were that many ostrich growers until the calls began to come in.

I want to illustrate how the *Progressive Farmer* with information supplied to us by you folks has changed some of the thinking in the farming community. If you had asked me five years ago whether farmers in the Mississippi Delta would take up the low-till or non-till practice I would have thought you were crazy. They enjoy getting on their tractors and

driving through the fields, even to the extent this has been called recreational tillage. But thanks to several articles written by some of you, we now see some dramatic changes in the way land is farmed.

Another interesting example of the influence of some articles concerned our story on an irrigation water filtering system in south Texas. We visited the site and took pictures of this system which was built by the local farmer. Later, on a tour in Kentucky, I saw this exact same piece of equipment. It was being used on sandy land were some vegetables were being grown. I asked the farmer where he got the system and he said it came out of *Progressive Farmer*. He saw the article in *Progressive Farmer*, called the originator, traveled to Texas to get more details, and built one himself.

Finally, I want to mention our Man of the Year or Woman of the Year Awards program. This is an attempt to recognize and honor individuals who have made significant contributions to agriculture during the year. If you review the background of the people who have received this award over the years, you will find many research, extension and other university employees represented. The reason for that relates to the importance of you to agriculture and to our readers. Much of the information you provide is what has helped make our farmers as efficient as they are today.

I want to say in summary that the *Progressive Farmer* is a periodical devoted to transferring information to the agricultural clientele users. The information that research and extension people provide to us and ultimately the users is very important. You are vested with a trust that dictates that you will be scientifically thorough in your investigations and unbiased in reporting results. Maintaining that trust is a great responsibility. Because you have done your jobs so well is a major reason agriculture has been so successful.

Future Economic Expectations From Agriculture

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There is always interest in the future economic expectations of agriculture, and this interest tends to intensify as the debate for farm legislation approaches. In fact, the debate preceding major food and agriculture legislation is heavily influenced by the current state of agriculture's economic health, especially for grains and other program crops. For example, the commodity portion of the Food Security Act of 1985 focused on bolstering export demand following the decline in agricultural exports during the early 1980s. When inflation is soaring, adjustments to loan rate and target price levels become the important issues. The following questions are usually discussed when considering the economic future of agriculture:

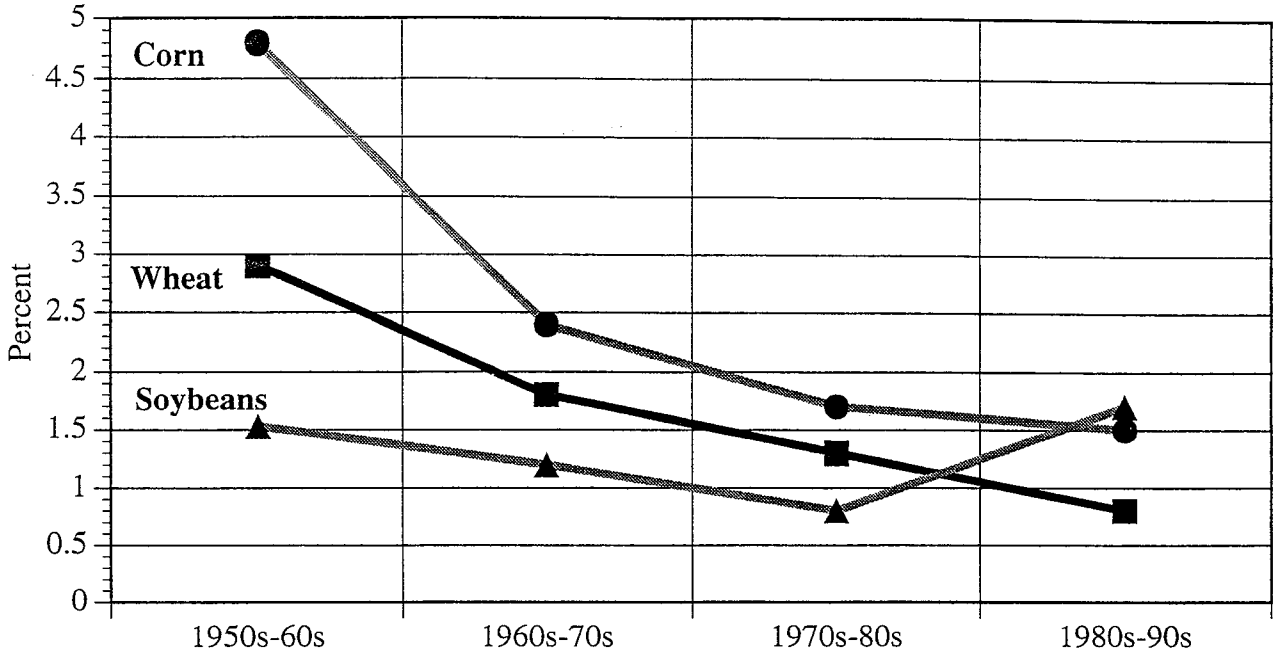
- What will be agriculture's ability to produce in the near and long-term?
- What growth can we expect in the demand for agricultural products?
- Will agricultural markets be export-driven or will domestic demands dominate?
- On balance, will agriculture generally experience "tight" or "slack" supply-demand conditions. How will farm incomes fare over the next few years?

This article is intended to discuss the economic setting in which those debating the 1995 farm legislation will find U.S. agriculture, and the questions above will guide this discussion.

Productive Capacity

Agriculture's ability to produce is determined by its resource base, the quantity of inputs applied, and the productivity of those inputs.

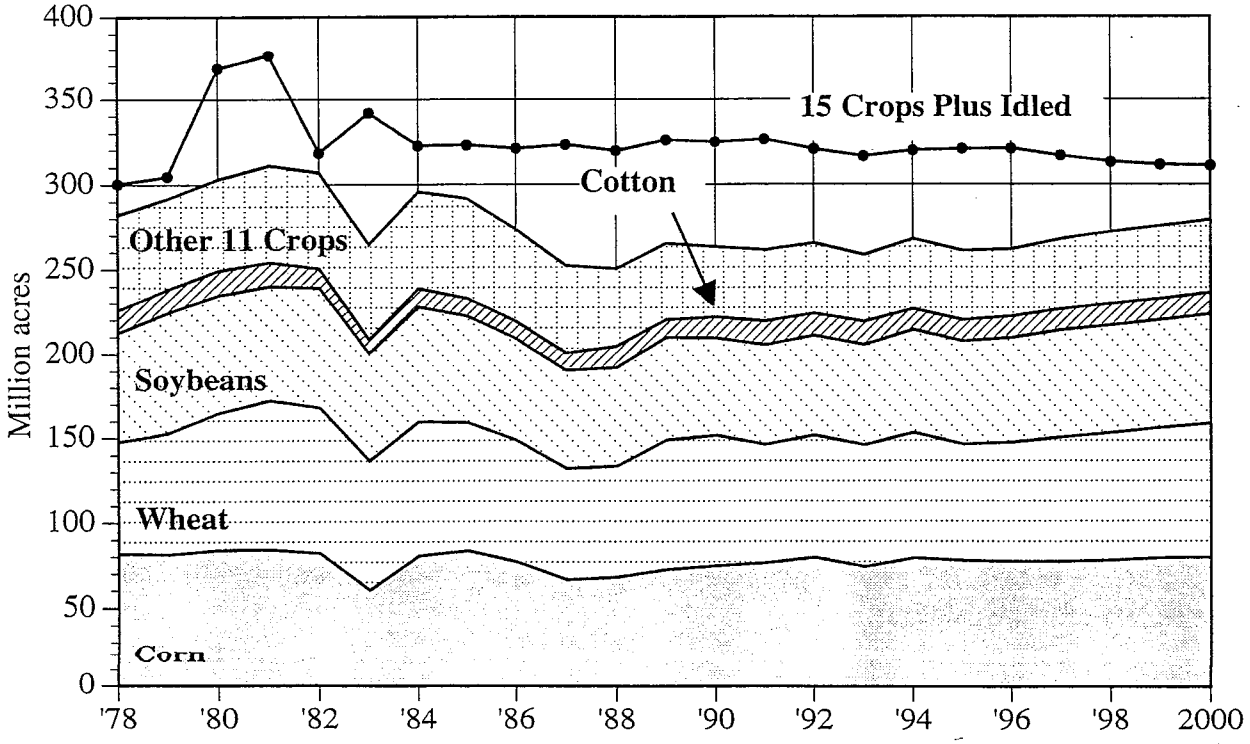
We know that crop yields, one measure of productivity, have increased over time, but have they been increasing at a slower rate? One way to examine the rate of increase is to compute the annual compound rate of change in yields between decade averages. Figure 1 shows a plot of such rates for corn, soybeans, and wheat. The average annual compound rates of change between decade averages of corn yields decline an average of about 5 percent annually from the 1950s and 1960s to less than 2 percent annually between the 1970s and 1980s. Rates of yield increases also have flattened for wheat, although yield increases for soybeans rose from the 1980s to the 1990s, due in part to the record crop of 1992. Using FAPRI projections (FAPRI, 1993) for the remainder of the 1990s, the annual average compound rate of change between the 1980s and 1990s for corn is projected to be 1.5 percent. The average rate for soybeans is projected to rise to 1.7 percent between the 1980s and 1990s, and the rate for wheat during that time dips to 0.8 percent.



Note: Data for the 1980s-90s comes in part from FAPRI projections.

Sources: USDA (as compiled in Ray et al.), FAPRI

Figure 1. Average Annual Percentage Yield Increases Between Decades for U.S. Corn, Wheat, and Soybeans Production



Sources: USDA (as compiled in Ray et al.), FAPRI

Figure 2. Changes in U.S. Planted Acres, Selected Totals for Fifteen Crops, Fifteen-Crop Total, and Fifteen-Crop Total Plus Idled, 1978-2000

Figure 2 shows that planted area for the 15 major crops[1] has declined considerably since the late 1970s. Some of decrease was in response to lower prices, but primarily it wad due to land diversion under federal farm programs, including the Conservation Reserve Program. A similar pattern is evident for acres planted to the seven major crops (corn, wheat, grain sorghum, oats, barley, cotton, and soybeans). Acreage planted to corn, wheat and soybeans generally declined between 6 percent and 11 percent between the averages for 1982-1985 (the tenure of the 1981 act) and 1986-1990 (the 1985 act period). A primary reason for these declines is that grain prices were pushed down by lackluster export demand and efforts to reduce grain inventories. The price declines led to increased use of short- and long-term land withdrawal programs.

Although increased plantings are expected for the major crops during the rest of the 1990s, FAPRI projections suggest agricultural output demand will not press available land resources. Diverted acreage is expected to decline from about 60 million acres during most of the 1980s to 35.8 million acres by 2000.

With fewer acres and lower crop prices during the late 1980s, farmers needed fewer inputs and could not afford to purchase as much machinery and other depreciable assets as they could during the 1970s and early 1980s. The use of mechanical power and machinery declined 13 percent during this time (figure 3). The use of nitrogen fertilizer and agricultural chemicals was about constant between the periods of the 1981 and 1985 farm acts, but with fewer acres harvested, the application rate per acre increased. No projections of input use are available for the period of the 1995 act.

Demand for Crops

Export demand was the driving force of grain agriculture in the 1970s and early 1980s, but it has not been the case during the past decade -- nor is it likely to be in the decade ahead despite policy changes designed to lower program crop prices and recapture lost export markets. World grain markets have a follow-the-leader market structure, and as the U.S. reduced prices beginning with the 1985 legislation, other countries followed suit, resulting in little change in export quantities but a further decline in the value of grain exports.

Figure 4 shows the change in the average value of exports for key program crops for the fiscal years covered by the 1985 and 1981 acts. Although the total value of agricultural exports rose 11 percent between the two periods, export values for program crops fell. The export value of wheat fell 18 percent; feed grains, 4 percent; and soybeans, 16 percent. Export values for major program crops generally remain well below their values prior to the 1985 legislation.

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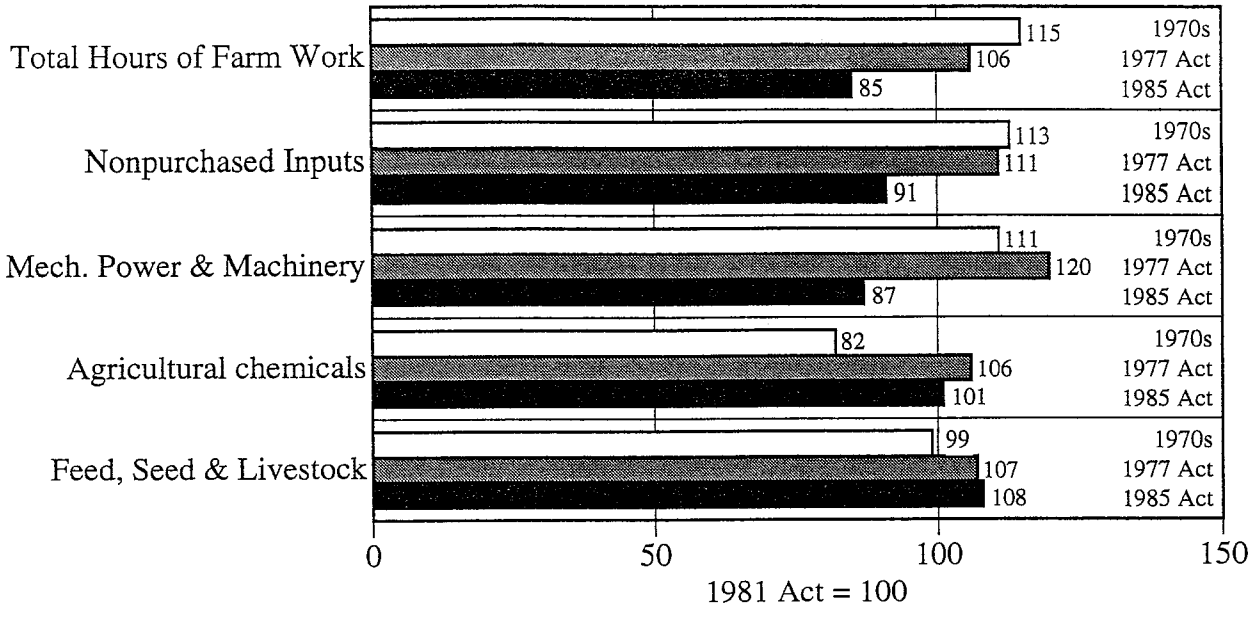
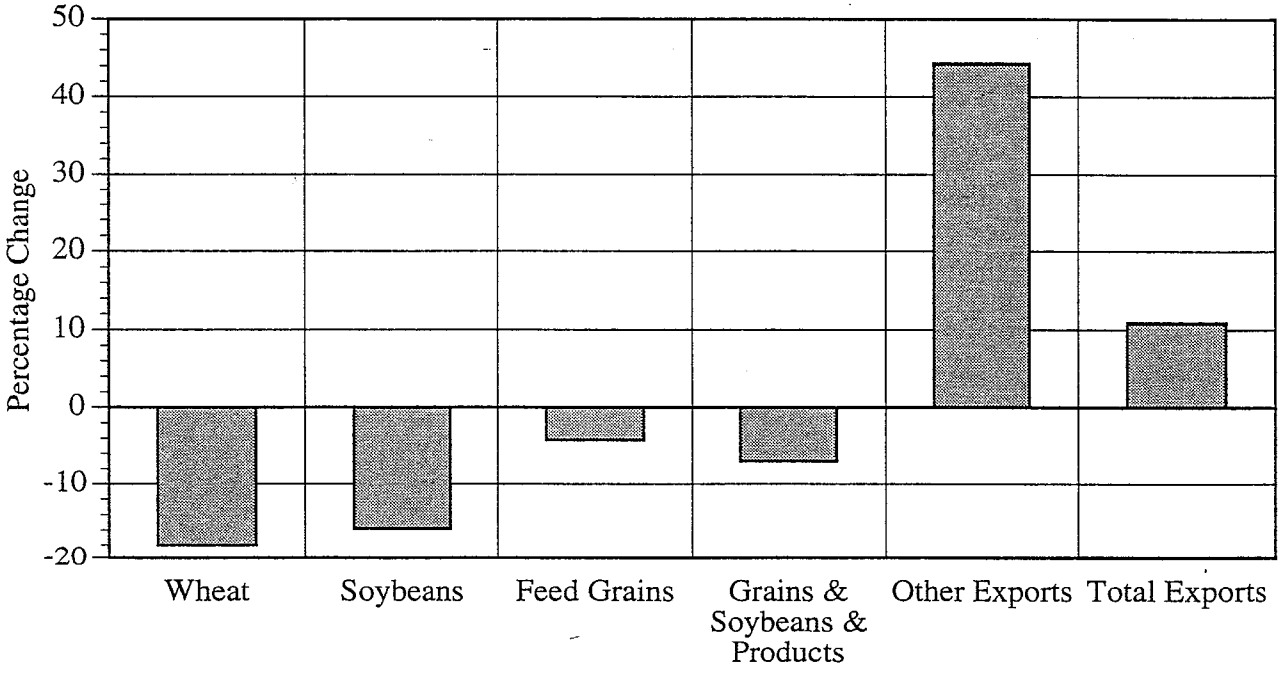
[1]The 15 major crops are corn, wheat, grain sorghum, oats, barley, cotton, soybeans, rice, sugar, sunflowers, peanuts, edible beans, tobacco, rye, and flaxseed.



Sources: USDA (as compiled in Ray et al.), FAPRI

Figure 3. Indexed Changes in U.S. Agricultural Input Use From the 1970s to Recent Farm Bill Periods, 1981 Act Period = 100



Sources: USDA (as compiled in Ray et al.)

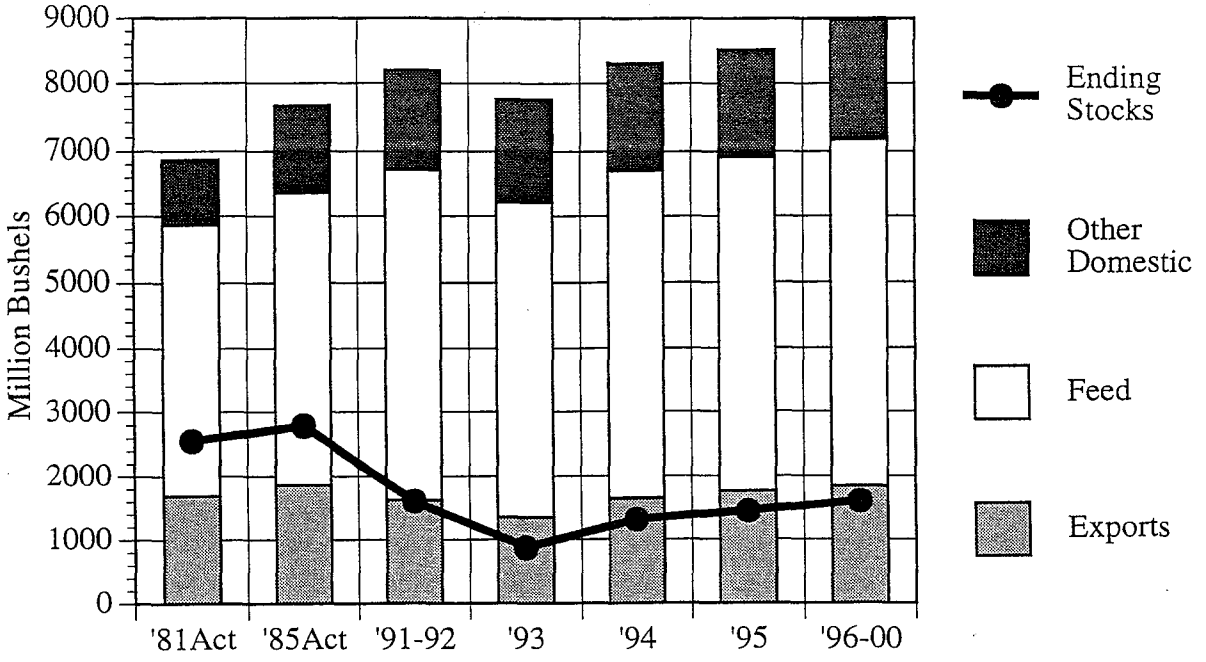
Figure 4. Percentage Change in Export Value of Selected Crops, Total and Other Agricultural Exports, U.S., Between the 1981 and 1985 Farm Bill Periods

To understand why the export expansion initiatives of the 1985 and 1990 farm and food acts failed, we need only recall why countries worldwide jacked up their productive capacity during the past two decades. The sudden demand explosion, price run-ups, embargoes, and feared shortages of the 1970s frightened the governments of many countries into investing in and encouraging mammoth increases in the productive capacity of their agricultural systems. Many of these countries had experienced widespread hunger during wartime. They also wanted to protect their rural social fabric of family farmers and small-to-moderate sized farms. Early on, the U.S. captured a large share of this export demand by rapidly bringing diverted land back into production. In other countries, the fruits of agricultural investments and incentives came on gradually at first, and they gained momentum in the late 1970s and 1980s. Both U.S. export competitors and customers increased production of major crops, leaving the U.S. with less demand for grains and oilseeds from importers and more competition for the remaining export market. Once countries made the long-term commitment to increase agricultural production, lowering the effective commodity prices through changes in U.S. policies had less of an impact on worldwide export supplies than many had expected.

While grain export demand has floundered, domestic demand has flourished. Increased domestic demand for grains has come from several sources, most of which are related to changes in consumer preferences and lifestyles. For example, the typical household eats an increasing share of its meals outside the home. Since most fast food and restaurant meals include meat, this trend has bolstered the demand for meat and, hence, the grain fed to livestock. Also, the increased popularity of high cereal diets and high fructose sugar and the increased use of ethanol to extend fossil energy and improve the quality of the environment all have worked to increase domestic grain demands. The movement toward natural fibers and explosion in denim jeans demand in the 1980s have jacked up domestic cotton demand.

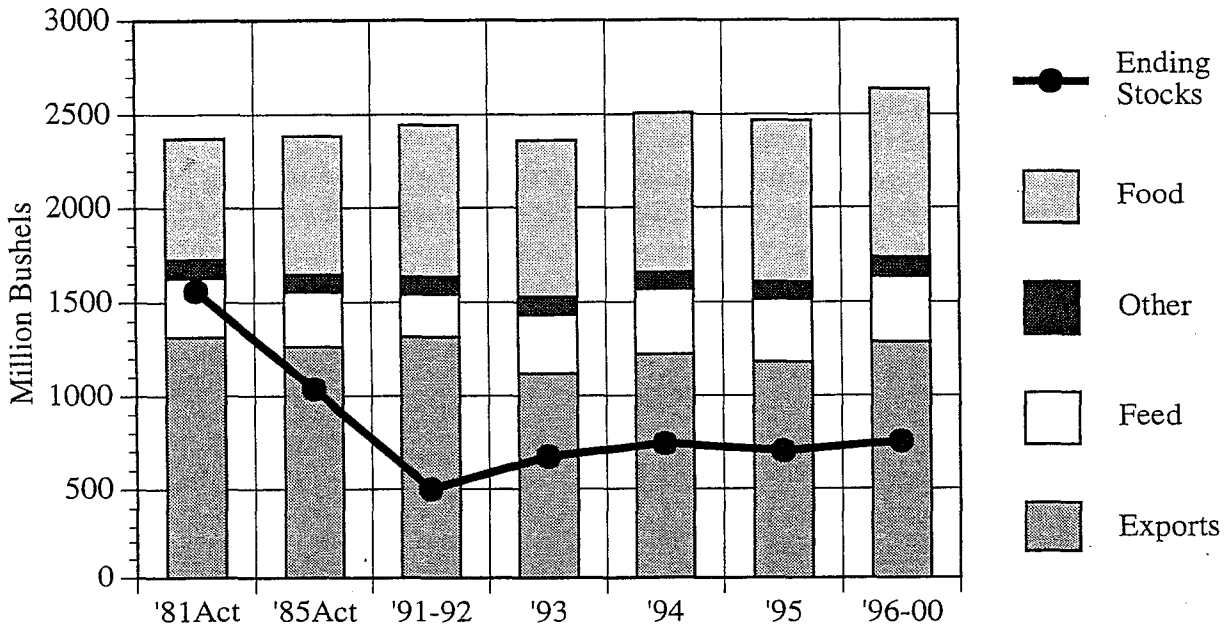
As figure 5 shows, most of the increase in total corn demand since the early 1980s has come and is expected to continue to come from growth in domestic demand. Corn feed demand increased from an average of 4.2 billion bushels during the 1982-1985 period (1981 act) to an average of about 5.1 billion bushes during the 1991 and 1992 crop years. Demand for industrial, food, seed, and other nonfeed domestic uses has also increased steadily. During 1993-95, corn export demand is expected to average 100 million bushels less than during the 1981 act years (1982-85), while domestic corn demand is expected to grow by 1.5 billion bushels.

Export demand has been particularly lackluster for wheat. Lower prices and export subsidies have not returned wheat export growth back to the glory days of the 1970s. In fact, wheat export quantities have been stagnant, while earnings have plummeted. During the period of the 1995 act (1996-2000), wheat export quantities are expected to regain pre-1985 act levels, but earnings may not (figure 6). Total wheat demand has been bolstered by a more than 20 percent increase in domestic food demand since the early 1980s. It is expected that total wheat food demand will grow 1.5 percent annually during the latter half of this decade.



Sources: USDA (as compiled in Ray et al.), FAPRI

Figure 5. Historical and Projected Demand and Ending Stocks for Corn, U.S., 1981 Farm Bill Period to 1996-2000



Sources: USDA (as compiled in Ray et al.), FAPRI

Figure 6. Historical and Projected Demand and Ending Stocks for Wheat, U.S., 1981 Farm Bill Period to 1996-2000

Soybean exports also declined during the period of the 1985 act and have increased only marginally during the tenure of the 1990 act (figure 7). Again, domestic use has grown faster than export demand in recent years. Crush demand is projected to increase annually by about 1.5 percent during the period of the 1995 act, while export demand is expected to grow by about 2.0 percent per year. But it should be noted that the soybean and grain export picture is particularly clouded right now. Adding to the usual precariousness of export projections are changes in European Community farm policy, credit problems with the former Soviet Union, unknown impacts of the North American Free Trade Agreement and the General Agreement on Tariffs and Trade negotiations, and uncertainties concerning the movement in Eastern European and other countries away from centralized markets.

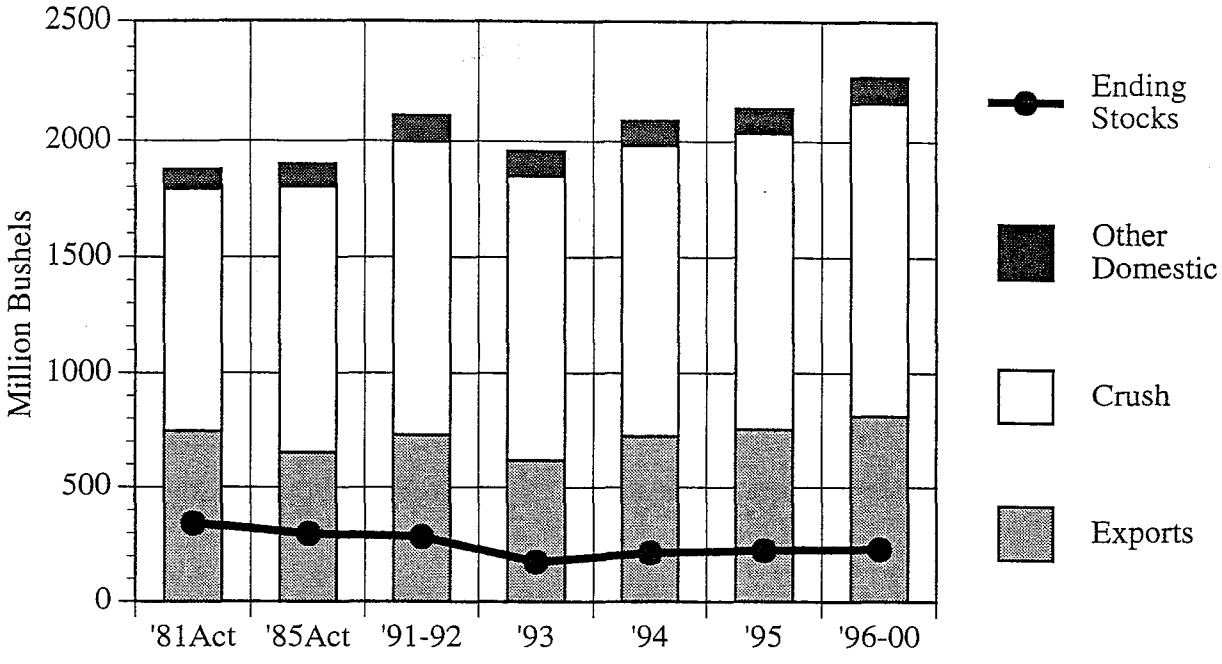
Domestic and export demand for cotton experienced relatively rapid growth during the late 1980s, both increasing about 4 percent annually during the period of the 1985 act (figure 8). The early 1990s has seen mill demand increase, but export demand has been flat. Domestic mill demand and export demand are expected to grow relatively slowly during the middle of the decade and increase moderately during the period of the 1995 farm legislation.

Supply-Demand Balance and Prices

Taken together, what is the expected result on farm and consumer prices, specifically price adjusted for inflation? It will take a few years to work through the effects of the flood and other 1993 weather events on grain and livestock prices. Over the longer term, it is reasonable to expect total demand for agricultural products to increase at between 1.2 and 1.4 percent per year while supply will increase at about 1.5 percent annually, based on estimates of the Council for Agricultural Science and Technology (CAST, 1988), FAPRI, and the Agricultural Policy Analysis Center (Ray, 1994). Of course, the demand and supply estimates are expected yearly averages, and variation is expected. But overall, supply is expected to slightly outpace demand, which will cause real (inflation-adjusted) prices to decline. As figure 9 shows, this would be a continuation of a historical trend of declining real farm prices. With the benefit of hindsight, it evident that the higher real prices of the 1970s and early 1980s were an aberration - not the beginning of a "new era from agriculture" which could be easily resuscitated in the late 1980s by adjusting export prices and policies.

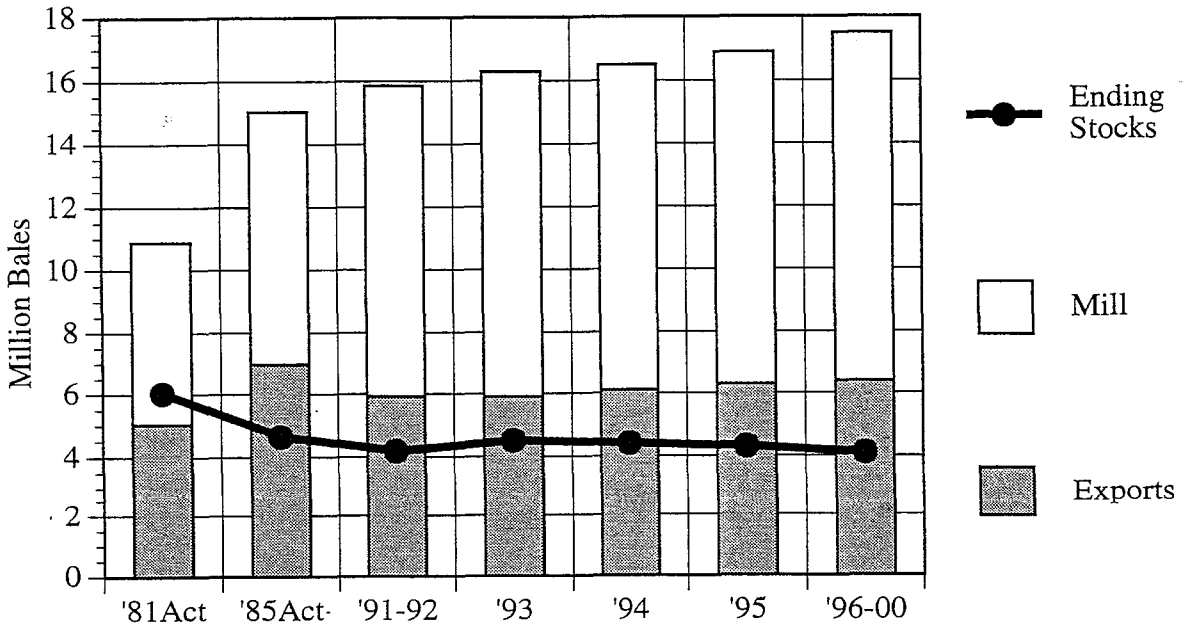
Incomes

Net farm income during the 1981 act slid to $23 billion and then rose to an annual average of $43 billion during the 1985 act, nearly a 100 percent increase. Government payments increased during that period by about $5 billion but the increase was almost exactly offset by lower market receipts for program crops. The $20 billion increase in net farm income actually stemmed from increased market receipts for nonprogram crops and livestock, as well as lower production expenses.



Sources: USDA (as compiled in Ray et al.), FAPRI

Figure 7. Historical and Projected Demand and Ending Stocks for Soybeans, U.S., 1981 Farm Bill Period to 1996-2000



Sources: USDA (as compiled in Ray et al.), FAPRI

Figure 8. Historical and Projected Demand and Ending Stocks for Cotton, U.S., 1981 Farm Bill Period to 1996-2000

Current projections suggest that total agricultural receipts will grow an average of 2.5 percent annually through the end of the 1995 legislation (FAPRI, 1993). During that time, government payments are expected to decline, so the bulk of the projected increase in receipts is expected to come from increased livestock and crop receipts (figure 10). Realized net income is expected to decline slightly, from $44.9 billion in 1993 to $47.6 billion by 2000. Net income is flat because production expenses are expected to equal gross income growth during the projection period (figure 11).

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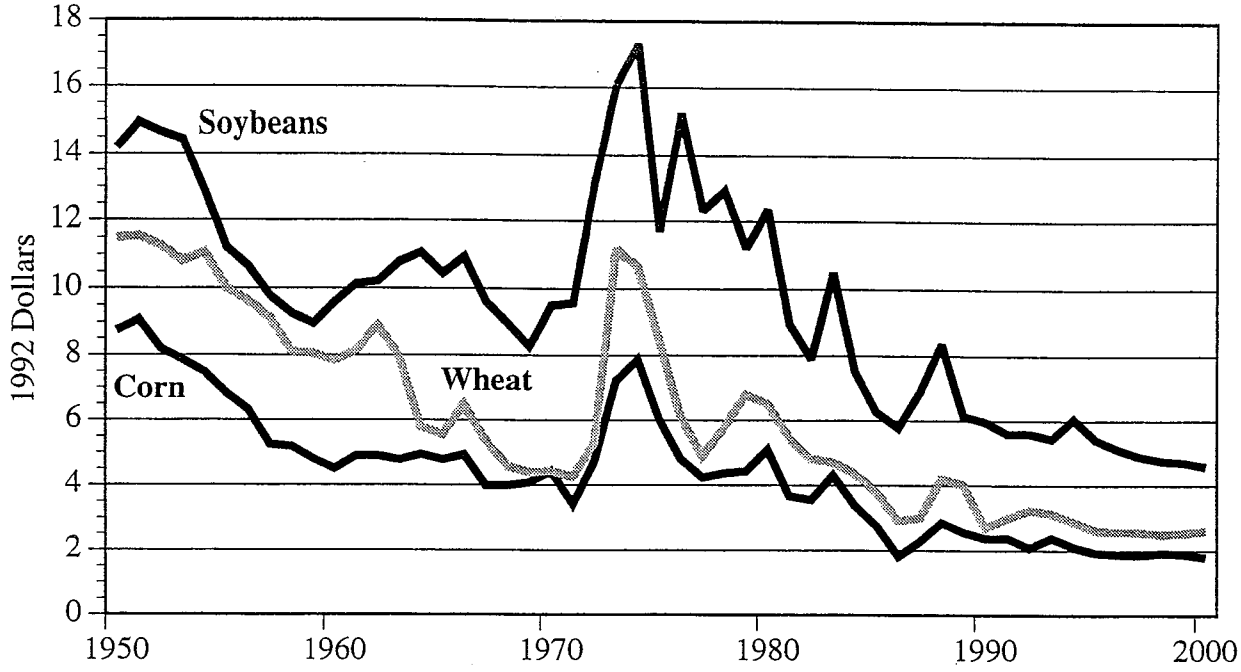
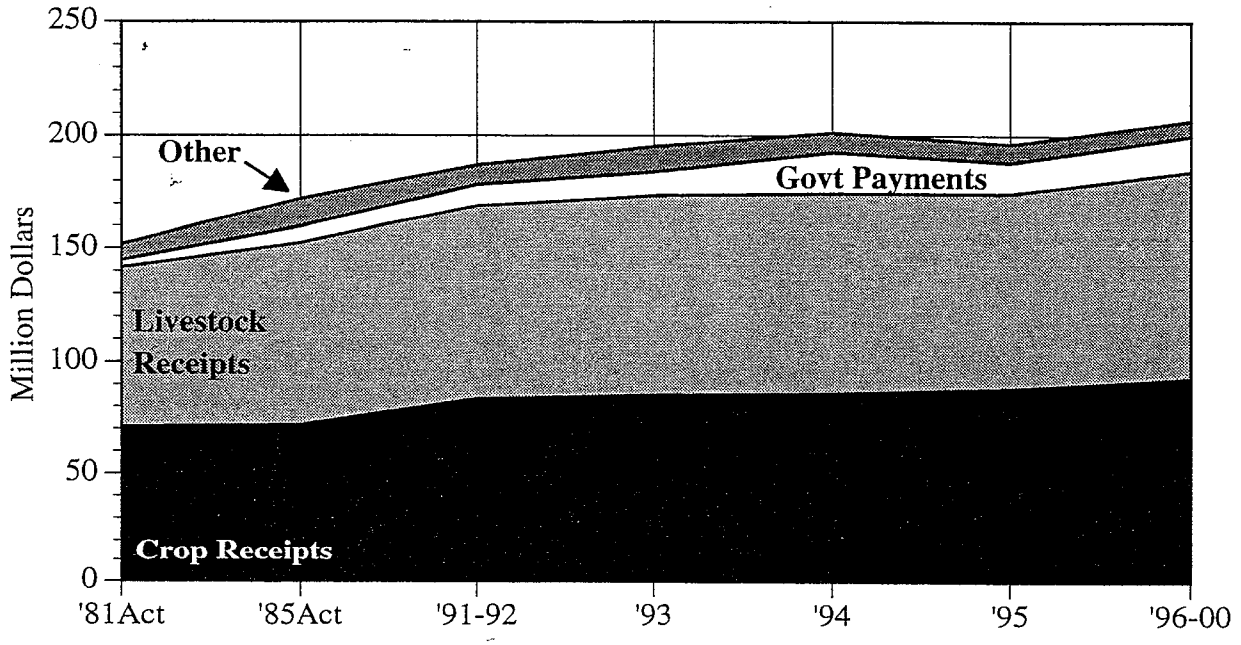


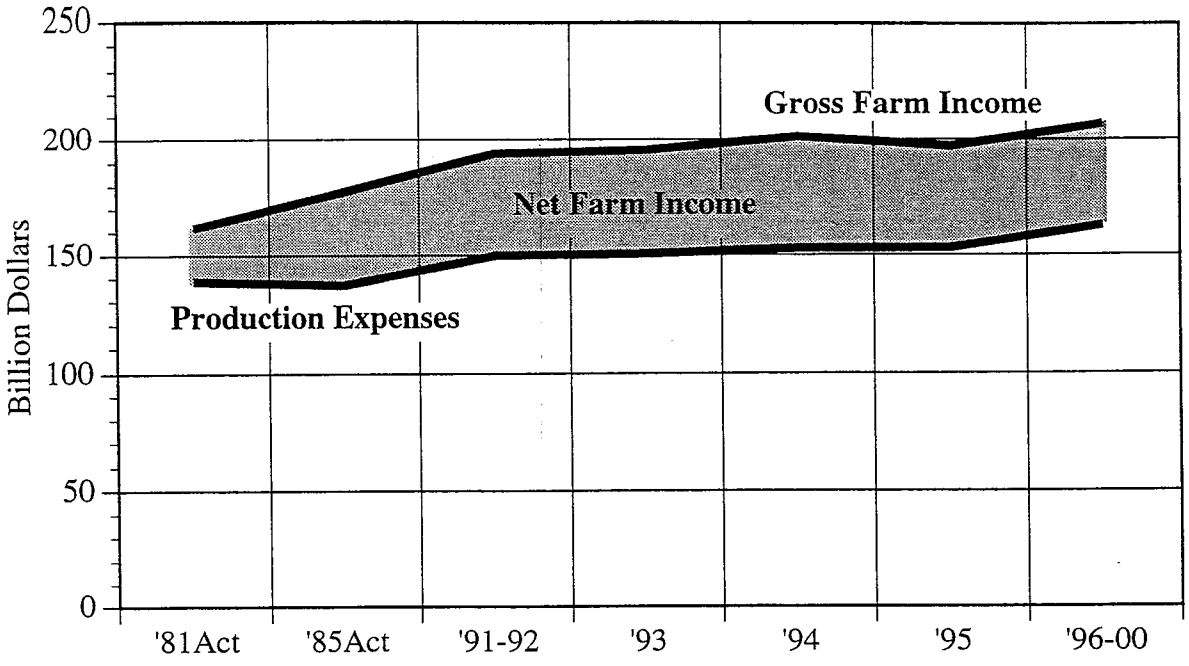
Sources: USDA (as compiled in Ray et al.), FAPRI

Figure 9. Real Agricultural Output Prices, U.S., 1950-2000, 1992 Dollars



Sources: USDA (as compiled in Ray et al.), FAPRI

Figure 10. Historical and Projected Components of Gross Farm Income, U.S. 1981 Farm Bill Period to 1996-2000



Sources: USDA (as compiled in Ray et al.), FAPRI

Figure 11. Historical and Projected Gross Farm Income, Production Expenses, and Net Farm Income, U.S., 1981 Farm Bill Period to 1996-2000

CONSTRUCTED WETLANDS FOR TREATMENT OF SWINE WASTE

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Crossville, AL 35962

The constructed wetland at Sand Mountain Substation in Dekalb County in North Eastern Alabama was constructed in 1989. Several agencies all of which were involved in studying and defining agricultural practices which impacted the water quality of Lake Guntersville have been involved in the construction and operation of the wetland. The constructed wetland has been utilized by the Alabama Agricultural Experiment Station, the Tennessee Valley Authority, the Soil Conservation Service, the Alabama Cooperative Extension Service and the Alabama Department of Environmental Management as a teaching, research and extension tool. People from a majority of the states of the U.S. and from approximately ten foreign countries have visited the facility.

What does a wetland do? There are several functions and as many reasons for using a wetland. A wetland is natures waste water treatment system. The man made or constructed wetland is designed to enhance physical, chemical and biological processes involved with the water passing within the system. A wetland contains a complex of aquatic type plants, microscopic organisms, aerobic and anaerobic substrates and a shallow meandering water flow. A wetland removes nutrients, organic compounds and metallic ions, it increases the oxygen and ph level of the water. From the standpoint of animal waste handling, the wetland can be a possible low cost alternative to irrigation and hauling. Or it can supplement other treatment methods such as lagoons. It can be used to reduce the acreage area needed for recommended nutrient irrigation applications. The wetland is not designed nor is it capable of treating water with a high per cent solid content.

At our location the constructed wetland is used to treat waste from a 64 sow operation. Approximately one half the pigs are sold as feeder pigs, the others are finished on site. Waste from the nursery and finishing house is treated in anaerobic lagoons. These overflow in a third lagoon which also serves as the primary lagoon for the farrowing house. During planning for this system there was concern that the ammonia concentrations in a swine lagoon could possibly kill the aquatic vegetation. Some evidence suggests that about 100 ppm NH_4-N could be toxic to certain species. Therefore, a small detention pond was placed between the lagoon outlet and the constructed wetland. This pond serves as a mixing cell to allow mixing of 70 parts swine effluent to 30 parts clear water. Approximately 1500 gallons per day is discharged by gravity from the mixing cell into each of the five upper tier of wetland cells. Upper cell size is 26 x 160 feet. Effluent from each of the upper tier cells passes into the cell below. The lower set of cells are 26 x 130 feet. Water depth is maintained at 4 to 6 inches.

Initial plans were to maintain the center pair (upper and lower) of cells plant free. One pair of cells was planted with cattails (Typha latifolia), one pair with softstem bulrush (Scirpus validus), and one pair with reed (Juncus. sp.). One pair was planted to a mixture of several species, including giant cutgrass (Zizaniopsis milicea), maidencane (Panicum hemitomon) common reed (Phagmites australis), water chestnut (Eleocharis dulcis) and bulltongue (Saggitaria sp.). The plants were well established before wastewater was first discharged into the cells in November 1990. Invading species since planting have primarily been Pennywort (Hydrocotyle sp.) and duckweed.

Two water wells were located near the wetland. An additional two wells were added before discharging effluent into the system. This was done to give some base line data on soil water contamination. Sixteen soil water lysimeters were installed in four of the cells to evaluate the potential for seepage at depths of 2 and 4 feet beneath the soil surface. The soil material for the entire wetland system was the native soil in the area. The porous cup at the bottom of each lysimeter is made of teflon rather than ceramic in an effort to reduce the potential for filtering bacteria.

When effluent was added to the system a sampling program was begun. Samples were collected at the inlet to the upper tier of cells (mixing cell effluent), at the inlet to each of the five lower cells, at the outlet from the lower tier of cells, and from a point at the lower end of the meadow area below the wetland cells. These samples were evaluated for Total Hjedahl Nitrogen (TKN) ammonia nitrogen (NH_3+NH_4-N) nitrate nitrogen (NO_3N), total phosphorus (TP) chemical oxygen demand (COD), biochemical oxygen demand (BOD5), total suspended solids (TSS), fecal coliform (FC) and fecal streptococcus (FS) bacteria. Lysimeter samples were evaluated for TKN, NH_4, NO_3, FS and FC. Results from flow samples for the period of November 1990 to August 1992 are shown in the chart below:

TREATMENT EFFICIENCY FROM NOV. 1990 - AUGUST 1992

	Wetland		Lagoon	
	Discharge	Inflow	Outflow	Decrease
Total Nitrogen	172	80	14	83
Ammonia Nitrogen	138	50	8	86
Nitrate Nitrogen	<1	<1	<1	-
Total Phosphorus	61	32	10	69
Biological Oxygen Demand	136	75	11	85
Chemical Oxygen Demand	606	336	104	69
Total Suspended Solids	345	140	30	79

Lysimeter samples have showed virtually no contamination at either depth. Most NO_3 readings were less than 1 ppm with the highest being 2.3 ppm.

During the growing months of the summer each cell set usually will have several days without any discharge from the cell. These time intervals are dependent upon the amount of evapotranspiration and the rainfall intervals and amounts. Our data to this point shows that the system continues to work even in the winter months when the plants are dormant. By varying the flow rates in a pair of cells in the summer of 1992 we were able to determine that the combination of retention time and loading rate influences the efficiency of the system. Nitrogen, Ammonia, COD and BOD treatment efficiency was decreased when loading rate was doubled.

Construction of facilities is presently under way to bring the final discharge from the cells back into the system. The water will be used to replace clear water added to the mixing cell and to help supply flush water for the farrowing house and nursery.

The constructed wetland has demonstrated that the system is not plant species specific. Effective and reliable treatment of swine lagoon effluent to acceptable wastewater standards can be accomplished for BOD, TSS, nitrogen and phosphorus. Fecal coliform and fecal streptococcus bacteria were reduced more than 90 per cent, but concentrations were still to high to permit discharge to a stream. Many unanswered questions remain concerning the long range effect of the system on total nutrient balance and projected life of a wetland.

PESTICIDE CONTAINER DISPOSAL/RECYCLING PROGRAM IN MISSISSIPPI

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The producers can't legally burn them, the landfills don't want them, so what can be done with them? The empty pesticide container disposal problem and the 1988 FIFRA amendments were the driving forces that brought together the National Agricultural Chemical Association, the Mississippi Department of Agriculture Bureau of Plant Industry, the Department of Environmental Quality, the Delta Council, Mississippi Farm Bureau, and the Mississippi Cooperative Extension Service to look at various disposal alternatives. In 1988 members of the these organizations formed a task force to develop a disposal program and look at various alternatives. The task force selected Washington County, a major row crop area of the Mississippi Delta, to conduct a pilot project on the possibility of recycling pesticide containers.

Eight aerial applicators in Washington County agreed to serve as collection sites with cotton trailers serving as receptacles. The Extension staff in Washington County conducted an educational program encouraging farmers to rinse empty containers by triple rinse procedures or use of pressure rinse nozzles donated by ICI Americas. Farmers then hauled the empty containers to one of the eight collection sites. The metal containers were sold for scrap iron and the plastic containers were transported to an old gin, compressed into bales, and shipped to a DuPont facility where a sample of containers--different brands, shapes and sizes--were analyzed for residue. The plastic was granulated, washed, pelletized, and recycled into pesticide containers.

Once recycling was determined feasible, the program began to expand. Guidelines for proper recycling of the containers and supporting educational materials were developed. A step- by-step procedure for establishing a collection/recycling program was provided to Extension staff in each county. Because of small amount of pesticide use in some counties, a recycling program was not economically feasible. However, these counties could still conduct educational programs on the necessity of proper rinsing of containers so that they would be rendered non-hazardous and could then be disposed of via landfilling. The Mississippi Department of Environmental Quality played an integral role in assuring the city/county landfill operators that this was an acceptable disposal method.

The following should be considered when establishing a collection/recycling program. No collection/recycling program can be successful without proper conditioning of the pesticide containers. This is foremost and always the most important step in establishing a successful pesticide container collection and recycling program.

Triple Rinsing - This method of rinsing is the most familiar method of rinsing containers. Its limitation is that it is much too time consuming.

Pressure Rinsing - This method of rinsing is much faster and has therefore been more readily accepted by the end users of pesticide containers. In addition, some early data indicate that this procedure is more effective in removing pesticide residue. In either case, pressure or triple rinsing, the container must be rinsed immediately following the emptying of the contents of each container. Dried material is very difficult to remove.

Label Removal - All labels and sleeves must be removed to further enhance the quality of the plastic. One exception is adhesive labels, which are difficult and impractical to remove.

Closure Removal - All caps or other types of closures that are made of materials other than high density polyethylene (HDPE) must be removed. This is necessary in order to maintain a high quality of pure HDPE resin.

Container Exteriors - It is important that the exterior of containers be maintained at a high level of cleanliness. This helps add to the life of the granulator blades as well as improve the quality of the resin.

Sodium Chlorate - Sodium chlorate containers must be segregated from other containers. This is because sodium chlorate may burn or explode if it is allowed to contact with certain other compounds.

The following assessments also are made based on experience in the region: (1) The satellite collection sites at aerial applicator locations seem to produce the maximum amount of containers in terms of total pounds collected. (2) Those counties that use only sites that are regulated by an authorized person being on the premises and actually accepting or rejecting the containers at the time that the containers are delivered result in cleaner containers but produce less pounds of plastic. In either case the containers are inspected by the Department of Environmental Quality or Mississippi Bureau of Plant Industry for cleanliness prior to granulating.

Each county should organize its own program to fit its individual needs. There should be a person or group of persons who bears responsibility for these activities. This group may involve the County Board of Supervisors governing board. To facilitate the organization and implementation of these collection programs the County Agent, Farm Bureau Board and any other interested individuals or groups must carry out their responsibilities.

Once the plastic containers have been properly conditioned and collected, it then becomes necessary to address how they will be processed. We know from the pilot project

experience in 1989 and 1990 that the answers do not come easily. We have progressed from bailing plastic containers generated by the Washington County Pilot Program in 1989 to the granulation process (using a portable granulator). The portable granulator is powered by a 25-horsepower electricmotor that will granulate about 800 pounds of HDPE per hour. This machine requires three-phase, 100-amp electrical current. This type power supply is very limited in its availability and can usually only be found at a commercial facility such as a cotton gin.

At present the granulated plastic is being blown into a cardboard container which has a holding capacity of about 1,000 pounds. This requires a fork lift to handle the container, which places serious limitations on site selection. However, these are technical problems that can be overcome.

Since the pilot program began in 1988, the expansion of the program has been impressive.

YEAR	AMOUNT RECYCLED	COUNTIES PARTICIPATING
1989	30,000 pounds	1
1990	115,156 pounds	10
1991	260,232 pounds	16
1992	376,711 pounds	20
1993	558,502 pounds	25

Currently 43 states are involved in similar recycling efforts. All states are being clearly monitored by Agriculture Container Research Council to ensure that the plastic end product is acceptable.

TRAINING AND DEVELOPMENT OPPORTUNITIES FOR TECHNICAL AND SUPPORTING STAFFS

John I. Sewell
Associate Director
Tennessee Agricultural Experiment Station
Knoxville, TN 37901

TRAINING GOALS

The Tennessee Agricultural Experiment Station (TAES) fully appreciates the necessity for well trained, competent, and highly motivated technical and supporting staffs at branch stations and departments. Major responsibilities of these employees are to assist and support research scientists (project leaders) in establishing and carrying out research studies, making observations, and recording and summarizing data for the scientists.

To meet these expectations and responsibilities, technical and supporting staffs must be well versed in establishing and maintaining research experiments, understanding the necessities for accurately recording data on a timely basis and in the manner prescribed by the scientist, and maintaining computerized data bases. Equally important, these employees must also be amenable to and effective in communicating with scientists and supervisors. Obviously, scientists and supervisors must, as well, appreciate the need for open and effective two-way communication.

Important indirect benefits of this training are pride in the organization, improved esprit de corps, and becoming better acquainted with peers assigned to other stations (11 stations at 14 locations) and departments. Also providing an enjoyable occasion for the technical and supporting staffs to visit substantially enhances morale and fosters communication.

SCHEDULED TECHNICAL TRAINING

Since 1991, the TAES has offered training programs for the technical and supporting staffs assigned to branch stations and departments. These programs have been tailored to meet the technical needs of the various research support personnel. A variety of training topics has been presented in programs held on various branch stations located throughout the state. Most programs begin shortly before or immediately after lunch on the first day and extend through noon of the second day. This usually requires only one night's motel lodging for most participants in travel status.

The primary audience for this training is research assistants/associates, technicians, foremen, herdsmen, plotmen, milkers, fieldmen, and unit head secretaries/bookkeepers. Usually a program development committee is appointed by the TAES Office. The

committee, with input from the TAES Office, develops the program theme, chooses training topics, and recommends instructors. Instructors may be research scientists, research assistants/associates, technicians, administrative assistants, secretaries/bookkeepers and any support-staff employees having the knowledge and technical ability to appropriately address training topics.

Research scientists are urged to present their materials at the level and in such a manner that the trainees can comprehend the material being presented. An effort is made to select the instructors in about equal numbers from research scientists, research assistants/associates, and the support staff.

Training has been divided between lecture/conference and "hands-on" practical experience. While some lectures are (or often appear to be) necessary, practical activities have almost always been best received and are most successful. Organizing and preparing for good practical exercises obviously requires more effort than preparing for lectures. Having a dean, superintendent, or department head make introductory statements and give general overview comments has been good; however, this can easily be overdone.

Choosing good instructors from the technical support staffs substantially enhances the degree to which the trainees accept and feel a part of the overall effort. Instructors are appointed by the Dean's Office in consultation with station superintendents and department heads.

Roundtable discussions led by capable members of the technical and support staff have been well received and are most beneficial. Conducting a free discussion session of about one and one-half hours' length is quite advantageous. Such discussion appears to be more successful when conducted in the absence of deans, superintendents, and department heads.

A dean's or superintendent's brief remarks, specifically recognizing the importance of the technical and support staffs and their substantial contributions to the Experiment Station's total program, can substantially enhance the staff's morale and self-esteem. We all like to be told by our leaders that we do a good job and that we are appreciated—in many cases TAES support staffs hear this message all too infrequently.

As a minimum, the evening meal of the first day, and often the lunch of the first or second day, is catered for the entire group. Experience indicates that the meals should be completely informal and have no speakers. This enhances fellowship and sharing of participants' ideas and experiences. Having a well-organized program, providing adequate refreshments, and serving a good meal contribute toward ensuring that the participants enjoy the occasion. Many participants tell us that fellowship with their peers from other locations with whom they do not often have the opportunity to interact may be the greatest of all benefits.

Technical programs offered since 1991 follow:

1. Field Plot Layout and Establishment—offered separately at West Tennessee Station, Jackson, and Knoxville Station, Knoxville.

    a. Computer applications
    b. Experimental techniques
    c. Chemicals and their application
    d. Roundtable discussion

2. Agronomic Research Fundamentals—Knoxville Station, Knoxville

    a. Plot establishment and maintenance
    b. Observations, measurements, and data recording
    c. Applications of instrumented field-plot equipment (practical exercise)
    d. Computer applications

3. Animal Science Research Fundamentals—Highland Rim Station, Springfield

    a. Needs for accurately taking and recording research data
    b. Animal evaluation: condition scoring, soundness, fat (concurrent practical exercises for beef, swine, and dairy)
    c. Data recording equipment applications
    d. Communications and reporting of research data
    e. Animal well being
    f. Animal medications, techniques, withdrawal periods

4. Fruits Research Fundamentals—Middle Tennessee Experiment Station, Spring Hill

    a. Necessity for accurate research data
    b. Pesticide safety, rinsate and container disposal, records keeping
    c. Insect identification and control (practical)
    d. Fruit tree pruning (practical)
    e. Field-plot equipment operation (practical)
    f. Sprayer in-field rinsing system and calibration (practical)
    g. Panel discussion

5. Animal Records Keeping and Health Management—Middle Tennessee Experiment Station, Spring Hill

    a. Animal health management issues
    b. Computerized animal records keeping: concurrent practical sessions for swine, dairy, beef
    c. Breakout sessions: concurrent for swine, dairy, beef

6. Pest Control for Fruits and Vegetables—Knoxville Station, Knoxville

   a. Research planning and communication
   b. Strategies for controlling pests of fruits
   c. Strategies for controlling pests of vegetables
   d. Operation of spraying equipment (practical)
   e. Breakout sessions: concurrent for fruits and vegetables

7. No-Till Crop Production—West Tennessee Station, Jackson (full two-day program)

   a. Residue and cover crop management
   b. No-till planting equipment
   c. Weed and insect control in no-till corn
   d. No-till soybean production
   e. No-till planting equipment adjustment, maintenance, and modification (four hours - practical)

8. Computer Training—Knoxville Station, Knoxville

   a. Needs for accurately recording data and maintaining data bases
   b. Roles of technical support staffs throughout the life of a research project
   c. Concurrent practical computer operations breakout sessions (six-hour; each participant has computer):

      - Introduction to computer applications
      - Beef records systems
      - Dairy records systems
      - Swine records systems
      - Plant sciences applications and data bases
      - Computerized note taking equipment
      - Computerized plot harvesting equipment

Trainee attendance at these sessions has varied from approximately 20 to 65 (computer training) with an average of 35 to 40. The programs are now much better received than when initiated in 1991. The Agricultural Experiment Station feels that conducting these programs has made a greater contribution toward improving staff morale than anything else recently done by the Station. Most of the technical and support staff now look forward to opportunities to participate in this training.

SCHEDULED SECRETARIAL/BOOKKEEPING TRAINING

For four years, the Experiment Station has sponsored annual one-day training sessions for departmental and branch station secretaries and bookkeepers. These are held at branch station locations across the state. Emphasis has been on enhancing on-line computer applications and maintaining currency in the University's fiscal and personnel policies and procedures.

Not unlike other technical training programs, the atmosphere is kept informal with much "hands-on" work. Aside from increased technical competence, a valuable side effect has been increased collegiality among these key personnel including the recognition that a cadre of technical support personnel exists.

EXPERIMENT STATION FUNDED ASSISTANTSHIPS

In June, 1993, the TAES made available a program to support two M.S. and/or Ph.D. assistantships for managers and research assistants/associates having B.S. or M.S. degrees and who are full-time branch-station employees. The purpose of this program is to foster professional development among branch-station technical personnel. These employees, upon completion of advanced studies and having on-the-job experiences requiring additional responsibility and authority, would be expected to become viable candidates for leadership and scientific positions within the Experiment Station which might include branch-station superintendent or assistant, research scientist, or similar positions in extension and teaching.

The selection process will be competitive in that interested qualified personnel will apply through branch-station superintendents to the TAES Dean to be considered for receiving an assistantship. Selection will be made by the Dean based on the recommendations of an advisory committee, the qualifications of the applicants, the needs of the various Experiment Station units, and the degree to which the graduate program proposed by the applicant meets the technical needs of the Experiment Station.

Applicants must have completed the B.S. degree in agriculture or a closely related field and have been employed by a branch station in a research assistant (or equivalent) or higher position for at least four years after having received their latest degree. Persons eligible for this program must also qualify for admission to The University of Tennessee Graduate School.

Assistantship holders will be granted University educational leave for a period to allow completion of required resident course work. During this period, the Experiment Station will provide a stipend intended to help to defray the student's educational and living expenses.

The terms and conditions of the program follow:

Master of Science Program

1. Two consecutive semesters' (or three quarters') leave will be granted to enroll in residence to pursue an appropriate graduate program in agriculture.

2. Upon completing the course work in residence, return to the sponsoring branch station to execute the required field research studies.

Doctor of Philosophy Program

1. Four consecutive semesters' (or six quarters') leave excluding summers will be granted to enroll in residence to pursue an appropriate graduate program in agriculture. Summer periods will be spent on location at the sponsoring branch station.

2. Upon completing the course work and study in residence, return to the sponsoring branch station to execute required field dissertation studies.

Funding

1. During periods away from the branch station and in resident study, the Experiment Station will pay up to one-half the employee's base salary not to exceed a maximum of $12,000 per year.

2. The Experiment Station will pay the normal student fees.

3. During extended intervals between periods of resident study and while the employee is present on the branch station and performing normal duty assignments, the employee will receive full salary and benefits.

4. Arrangements will be made for the employee to continue to receive many staff benefits while in resident study.

The Agricultural Experiment Station assumes no responsibility for creating new or upgraded positions based on the attainment of enhanced educational qualifications. However, the Experiment Station will make available to those having completed degree requirements opportunities as they might develop to apply for other appropriate positions within the Experiment Station.

This program is expected to provide much-needed professional development opportunities for ambitious and capable staff-exempt personnel assigned to branch stations. The program is intended to enhance morale and provide qualified candidates for leadership vacancies in Experiment Station units.

While the Experiment Station has not yet received an application for support under this program, we understand that applications are likely to be received in 1994. The Experiment Station recognizes that pursuing this program would require substantial commitment on the part of the employee.

OTHER TRAINING OPPORTUNITIES

Superintendents are encouraged to arrange each year for some of their staff to attend the field day programs of other stations. Since TAES operates eleven branch

stations, each of which averages one program annually, ample opportunity exists for a variety of visits. Most branch station employees tell us that visiting other stations is enlightening and stimulating, as well as enjoyable.

Annually the Institute of Agriculture safety officer and the Experiment Station safety coordinator (usually accompanied by an associate dean) visit each station to present a two-hour safety training program, make safety audits of buildings and equipment, and offer safety consultations. This training is tailored to meet individual station needs. As these safety visits (as opposed to "inspections") are conducted from a constructive perspective, this program started 15 years ago has now become well accepted. The Station safety coordinator can always be scheduled for safety consultation or to present for any branch station or department practical safety training and/or demonstrations as needed.

Agricultural Extension specialists cooperate readily with superintendents in presenting on-site training and demonstrations to branch station staffs. Most recent training includes farm machinery operation and maintenance, sprayer calibration, pesticide application safety, and high-tensile electric fencing.

Branch stations periodically conduct their own ad-hoc meetings, with and without invited speakers, to provide information and training on such topics as staff benefits and retirement, farm machinery and motor vehicle safety, farm animal handling and diseases, safe pesticide practices, and the importance of the branch station's presenting a good public image.

CONCLUSION

The Tennessee Agricultural Experiment Station feels that its investment of time and financial resources in training for technical and support staffs has paid substantial dividends. No team is stronger than its weakest element. The TAES research team includes project-leader scientists, technical and supporting staffs, and administrators. If the Experiment Station is to fulfill its mandated mission of enhancing Tennessee's agricultural industry, all technical and supporting staff members, as well as administrators, must be integral and functioning parts of the team and appreciate that each of them is a valuable part of the team.

Major benefits include a better trained staff, improved communication and understanding of research objectives and procedures, improved accuracy of data recording, better understanding of University policies and procedures, greater tendency of employees to feel that they are an integral part of the Experiment Station's overall mission and program, and--probably most importantly--substantially enhanced staff morale.

Persons desiring information copies of the scheduled training programs and/or the assistantship program may contact the author at 103 Morgan Hall, P. O. Box 1071, Knoxville, TN 37901-1071, telephone 615/974-7105.

Panel Discussion Summary
Field Days
by F. T. Withers and Ed Worley

I think the overriding point to come from our group discussions is that as branch station leaders we have a significant role in communication. That is what the discussion session has been about this morning. How effective can we be with field days, producers days, etc?

Types of Field Days

We discussed at length the two types of field days -- general days and producers days. Recent trends at many stations have been to move from general field days to producer days. Regardless of the type of field day, the first priority is to transfer our technology to our clientele. If that is the objective, our discussions brought out that the most effective way to do it is with smaller groups or a specific producer day where you are targeting your clientele. The field day must be as informative as possible to accommodate the transfer of information.

When general field days are held, the main objective is probably public relations. The audience is so varied and the approach so general that it is almost impossible to try to transfer specific information. However, it is important at general field days to have people available to answer specific questions.

Target Audience and Advertising

Most of the time the branch stations are successful in getting people to attend. Even within a general field day, the station has to tailor the program to the dominant audience. For instance, in an urban area, the program needs to be directed toward the interests of the homeowner as opposed to a commercial producer. Sometimes within a producer/general field day concept a topic can dominate, such as no til farming. In Mississippi the Fall Vegetable Field Day has drawn as many as 6,000 people. These larger field days are special because they can cover everything.

We discussed the use of the media in helping to advertise and promote the field day. The print media, especially local newspapers, are a critical source of information. Television and radio can also be very useful if we target to our intended audience.

The talk on targeting audiences focused on the young people. Many stations presently target the elementary and high school students. These kids are at least one generation removed from agriculture and very few young people understand anything about agriculture. There are students in FFA and Boys Clubs who can be interested in food production. The vo ag system that remains has made some recent changes in emphasis.

There is a trend back toward basic science in much of the teaching. Of course many of the vo ag programs have been de-emphasized because of the relatively fewer people involved in food production but where they exist they can be an important target group.

Planning for field days

The panels discussed the importance of planning for field days. The primary objective is to plan for and communicate to the people who are targeted to attend the program. The planning of a successful field day has to be organized and coordinated with all agencies and organizations participating in the process. Extension, research, commodity and other contributing agency personnel should be involved and participating in the complete planning of the field day program. This type planning usually requires more work and coordination of efforts but results in a more effective and better attended event.

In summary, our discussion groups believe that field days of any form can be very effective if they are planned, targeted and conducted properly. The primary concern should always be to transfer the technology that we have developed to the appropriate user clientele. The fact remains that there also exists a need and a responsibility to communicate the importance of agriculture and agriculture research in the mission of providing food, fiber and a quality environment to the American people.

Panel Discussion Summary
Community Relations
by Ben Kittrell

In the discussion groups, several people indicated that they wrote weekly or monthly articles for local newspapers. Others asked how the problem of conflicting with Extension representatives was overcome under these circumstances. Suggestions were made that regular planning meetings be held with research and Extension people to develop a team approach and that it worked. Other suggestions indicated a need to really get to know news media people. Some used regular mailing lists to distribute periodic information. However, most in the groups believed that personal contact with a media person was the most effective means.

University - based media

Most all respondents indicated their university had some form of staff communications people. Most branch stations did not have a communications specialist on location. Generally, there were lots of problems with university-based media specialists. In some cases they only did print media and no TV. Others had trouble getting them interested in coming to branch stations, but some states require the university media to come to branch stations once a year to find out what was going on.

Media day and awards

Some of the branch stations sponsor an annual media day where local media are invited and briefed on the recent significant accomplishments. In the course of doing this the station personnel get to know the reporters and vice-versa, and thus, important contact people are identified on both sides. Many news reporters are transient and stay at locations for short time periods. Also many are new, freshly out of school, and know little about agriculture. It is important to communicate with and cultivate many of these people on a regular basis.

Programs to recognize members of the media with awards can help develop rapport. Many in the news business think that agriculture is not very glamorous. A system to recognize them and their work is novel and could create some genuine interest in the media.

Entertaining, accurate stories

Another area for improvement is to learn to tell our story in a more entertaining or exciting way. Many of the scientists speak too strongly in technical scientific language which is uninteresting to the average reader. Read the newspaper, see how news is reported and try to slant your news reporting somewhat in the same direction.

Be sure the news story is accurate -- get the facts right. Too often news reporters not familiar with the technical nature of our work misunderstand what we are trying to convey. One suggestion was to develop a one page fact sheet giving the correct high points. If you have farm shows or any radio/TV news talk shows, try to get on them.

Journalism interns

Provide an opportunity for interns in journalism to work at your station. Try to set up a program so they can spend a year or even a summer at your station, even if you have to pay the salary, and it will pay off. Use the popular buzz words so that the media think you are up to date. Try to be included in any commodity newsletter being published. Just a paragraph every so often will help get your work to the reading clientele.

Another suggestion was to invite legislative subcommittees to your station to hold hearings. This would give you good publicity and let the political folks see what you are doing. Overall, we must recognize that media people are very important in the context of things today and it is far better to have them as friends and supporters.

Panel Discussion Summary
Community Relations
by Carl V. Tart, Jr.

Community Relations are very important as they relate to outlying research and/or extension centers. Community support is the backbone of any organization and this has become increasingly more important as fewer and fewer people are involved in the production of food.

Based on these thoughts, we proposed that it is important to build strong relations with community leaders and the entire public sector. Our discussions brought out several problems that are inherent between the branch station and the surrounding community. We summarize several of those for your consideration.

Lack of understanding

The biggest problem defined by the discussion groups was the lack of understanding or appreciation for agriculture. Everyone eats but the discretionary spending for food is now about 10% of our income and food production is taken for granted. The second problem is the public perception that agricultural practices are polluting the environment. When members of the public see farm operations, especially spraying practices, they wonder what we might be doing to them.

Urban

Unless we develop effective mechanisms to reach the public, they will not only continue to be unaware of the positive aspects of our agriculture but also the contributions the research stations are making to ensure that success.

Urbanization is another big problem confronting agriculture. It is fairly common now to see farms and farmland engulfed by housing developments. It was pointed out in one of the sessions that a federal station in Arkansas is now within city limits. This brings about a situation where pesticides cannot be used, where cattle and the resultant odors, etc. can cause conflict.

Negative perception/Lack of agricultural background

Perception of the state (government) employees by the community is another serious potential problem. Too often we are looked upon in a negative light. At the local store or gathering place comments on playing golf or partying while working are misguided but they can be a real problem if not addressed.

Another impediment we face is that the key leaders in the community, the legislators, school teachers, commissioners, have almost no agricultural background or

understanding. That means that we have an education and public relations challenge if we are going to get them to understand and appreciate us.

Personal public relations

The public relations challenge we have in the community cannot be adequately dealt with by the university ag communications or similar departments. They can help with general publicity and newspaper/TV coverage but they cannot get out in the community and mix on a personal basis. The personal contact, the one on one discussions, are the most effective way to deal with our community clientele. That really can be done only by us.

There are some specific approaches that can address these problem areas and some of these ideas will follow.

Proactive PR

Our panel groups believed that we could better deal with community relations through a proactive, rather than reactive approach. Too often, we have to react to a complaint such as that we sprayed someone's car or some similar situation. If we could develop educational programs that would explain many of our operations before hand and get this information out to as many people as possible, we might be able to avoid many bad situations. Development of a speaker's bureau is one excellent suggestion. The formalized speaker's bureau, complete with slides and handout information is a good way to educate our clientele in a comprehensive manner. Another is to fully educate and inform key people, who are often called when there is a problem that might involve us.

Active in Communities - Promptness of Response

To continue on the proactive approach, it is helpful for us as station leaders to be voluntarily involved in some of the community affairs. We can attend civic functions and to speak out on issues when warranted. We can join the prominent local service clubs such as Rotary or Lions. This helps us meet and communicate with the community leaders on a regular basis. We also need to be responsive and do it without delay. Outsiders think government agencies are slow and bureaucratic. If we can get them an answer quickly, they are impressed.

Safety

Safety is a big issue with everyone. We all have internal programs dealing with it. Build confidence among some of the less obvious target groups. Ask the local fire department to have a meeting at your facility. Show them your pesticide storage facility and that you have updated MSDS posted. Let them know you are complying. Try to get service clubs like Kiwanis, etc to hold a meeting at your facility. This will get many of the local leaders out there and will also give you an opportunity to say a few words. It will put your facility on the community map.

Good neighbor

Showing the good neighbor friendliness can also be very helpful to your cause. A case in point in North Carolina occurs regularly where one of our stations is at the edge of an urban development. The station director makes it a point to visit and welcome any new residents. This diminishes adverse effects of a station operation such as livestock because it immediately puts a positive impression in the newcomer's mind.

Youth

Cultivating the youth of a community is very important and has been mentioned by some of the other panels. There are the special field days, the petting zoos, etc. and programs which can be taken directly to the schools in some cases. A program I particularly like is called "adopt a vo ag program." Members of one of the station in Tennessee go out to the vo ag class in the local high school and teach or give information for a couple of days and in turn the classes visit the farm periodically. They rotate from year to year into the different vo ag programs so there is exposure along a broad front. The terminology, "adopt a program" is catchy and draws attention to it.

Attractants

Developing an attractant for your station is another means to involve the community. Some stations develop a flower garden or arboretum of sorts which become very popular with the local city folks. Some even have a weatherproof box where leaflets giving instructions and identification of plants can be used as a self-guided tour. People can come out during evenings and weekends and just look at the variety of plants and flowers that you have. When the people come out you have the opportunity to meet and mill with them and see your agricultural program.

Community relations and your station staff

A final point I extend for your consideration is how many of you have ever convened your staff and discussed the approach you as a group should be using in dealing with the community? Many times we find out that some of the negative images in the community are planted by our own staff. They don't know the positive way to approach individuals and human nature usually dictates that we complain. If our employees go home and complain about working conditions to their neighbor, it certainly will not leave a positive image of the station. Workshops and general discussions along these lines among our own staffs may ultimately be the most important approach we can take.

These are all a few of the ideas presented; however, they offer a representative sample of problems and solutions for promoting better community awareness and response to our programs. There are other ways such as field days as used in the past that should be continued. Our objective was to identify some unique approaches that could be used.

Panel Discussion Summary
Government
by Will Waters and Joe High

Because of the limited time, we focused discussions on how to deal with state legislatures and local politicians. One profound comment relating to positive relations with elected representatives was that if we did the best job possible and had productive programs, that would be the best public relations we could have. Additionally, an attractive general appearance of the facilities and grounds in the region is important.

University sponsored lobbyists

Most states employ a legislative liaison. This is usually a person in upper administration who lobbies for the agricultural programs, primarily at the state level. However, some states do not appear to have these people and so the process is wide open and the center directors do the best job possible on their own. Several people made the point that the upper level administration needs to be kept informed of all known legislative activity ongoing in the region and state. Likewise, upper administration needs to be kept apprised of plans, accomplishments and needs in order to assist with legislative support.

Interest groups

Most states have a formal budget process which includes operating, personnel and facility budgets. Often there are special interest groups who have their programs and sometimes their own budget proposals. It is very important that those of us out in the field where things are happening keep our supervisors informed so that these side deals do not surprise them or upset the overall strategy of the college or university.

Often we experience the situation where a commodity or special interest group may have their own agenda. They may want a special project in a local geographic region that might really be a problem to a state-wide unified approach to the legislature. It is always advisable to try to coordinate these efforts into the program of the university lobbyist so that it can be folded into the total program. This can be done through the dean or director's office. The important thing is to inform your administrators.

Strategies

Some of the strategies used by the various states involve inviting elected officials to field days or regional meetings, special center tours, and industry functions at centers. Invite them to speak or participate at special local functions. Also, the legislative aides are highly influential and should be invited for special tours and meetings.

News releases directed to the elected officials are important. It is especially important to inform them of new happenings such as a new variety release, new disease or

insect outbreaks in the region, new pest control techniques, and water management concepts.

What is the mechanism that most states use to keep inform with state-wide groups such as state farm bureau, trade associations, college advisory boards, agricultural boards, agricultural boards and other organized groups? This is usually done mainly through the Vice President for Agriculture or Dean where they actually do the interaction. This leaves the local center director out of the direct relationship other than to furnish information.

Coordinate efforts

One other important point is that in legislative dealings, the research center and the local extension office need to coordinate efforts. The advisory committees of each group should involve their counterpart so that each is aware of the issues and concerns of the clientele directly involved with that agency. Always try to be supportive toward each other. Invite the extension people to participate in field days, furnish them with research backup, speakers for meeting and other support. Always cooperate, coordinate and work closely with the local county agents to the extent practical. It will be especially beneficial to the research people because the extension people are much more closely connected to local officials because of the nature of their organizational structure.

In summary, probably the single most important point to be made is that none of us as local directors should try to go it alone. Use the people and services available at the main campus, use the extension people and above all, keep your administrators, informed of what you are doing and of other political activity in your region.

RESEARCH CENTER ADMINISTRATORS SOCIETY

Executive Committee Meeting Minutes
Jim Pitts Secretary/Treasurer
January 31, 1993
Tulsa, OK

Committee Members Attending: Randy Akridge, Brewton, AL; John Clark, Clarksville, AR; Emmett Carden, Fairhope, AL; Roy Constantin, Hammond, LA; David Calvert, Ft. Pierce, FL; Jonathan Edelson, Lane, OK; Tom Evrard, Keiser, AR; James Riley Hill, Blackville, SC; Bob Horsburgh, Winchester, VA; Joe High, Springhill, TN; John Hodges III, Knoxville, TN; Ben Kittrell, Florence, SC; William C. Loe, Hope, AR; Joe Musick, Crowley, LA; Howard Malstrom, El Paso, TX; Jere McBride, Shreveport, LA; Dennis Onks, Springfield, TN; Bill Peterson, Lexington, KY; Jim Pitts, Clanton, AL; Jim Reinert, Dallas, TX; Ron Robbins, Calhoun, LA; Bill Webb, Stillwater, OK; Will Waters, Bradenton, FL.

Chair Will Waters opened the meeting at 3:00 P.M. by allowing each person present to recognize themselves and their residence. The minutes had been passed out prior to the meeting and weren't read. Motion was made and seconded to accept minutes as presented.

Local arrangements Chair Jonathan Edelson previewed the meeting arrangements and plans. The tour for Tuesday afternoon would include a trip to the Oklahoma State University campus in Stillwater to visit the Noble Research Center and OSU campus Agricultural Experiment Station Facilities. A banquet and viewing of the Gilcrease Museum in Tulsa would conclude the tour. Edelson also mentioned he was able to have refreshments served in the meeting room to avoid abuse from other sections as requested at the fall executive committee meeting.

Proceedings Chair Howard Malstrom reported printing 200 volumes of the 1992 proceedings, some of which were sent to each library in the RCAS region. Because of demand he planned to print approximately 50 more volumes which would result in a total increase of 30% in requests over 1991. The cost for printing & binding was $4.47 per copy.

Several suggested that they would like to see the following items printed annually in the proceedings; a current membership directory, a copy of the current by-laws, minutes and programs from the previous business meetings, and a biography and possibly a photograph of current and previous distinguished award winners.

Chair Waters appointed **Bill Webb, Bill Loe, Jim Reinert, and John Clark** to acquire needed information from award recipients and send to Malstrom. Bill Webb will serve as Chair.

Dues Chair Jim Reinert, along with committee members Butch Whithers and John Clark, reported the results of a poll taken from active and regular members from each state in the RCAS region to determine whether the society would be in favor of annual dues for active

membership. Of the sixty Superintendents/Center Directors surveyed, thirty-two active and twenty-eight regular members, fifty-eight were in favor and two were not. After much discussion Jim Reinert made the motion that the Society approve a dues structure, Dave Calvert seconded. The motion carried by a show of hands with seven in favor and five opposed. Reinert then moved an annual dues of $10 be assessed each member for active membership. Dave Calvert seconded. After considerable discussion the motion passed by a show of hands, ten in favor, two opposed. President Hill stated that the existing by-laws distinguished between active and regular members. The start up time for dues is an item for discussion at the next executive meeting.

Jim Reinert handed out copies of the RCAS brochure and explained that they would be ready for distribution pending an affirmative vote by the Society for the office of Executive Treasurer at the upcoming business meeting. Chair Waters expressed his appreciation to Mike Schubert for his work in completing the brochure.

Awards Chair Jake Fisher was not present but had reported to Chair Waters that Bill Loe and Howard Malstrom would each be presented the Distinguished Service Award and be recognized and honored at the banquet on February 2.

Historical Chair Bill Webb requested copies of program agendas from past executive committee meetings for years: February 6, 1984, Nashville; September 19, 1984, Jackson; February 4, 1985, Bilox; October 6, 1987, Raleigh; February 1, 1988, New Orleans; February 4, 1991, Ft. Worth; September 24, 1991 Fletcher; and February 3, 1992, Lexington. Chair Waters encouraged members to check files for these programs and pass them along to Mr. Webb.

Nominating Committee members Will Waters, Ed Worley, and Bill Loe presented their slate of officers and moved they be accepted: James Riley Hill, Chair; Joe Musick, President; Dennis Onks, 1st Vice President; Jim Pitts, 2nd Vice President; and Jim Reinert, Secretary. Bill Peterson seconded. The motion passed unanimously.

Dennis Onks, Program Chair for the 1994 meeting requested permission to pursue the use of the University of Tennessee Center for Government Training personnel to present a program entitled a Team Approach to Problem Solving in a University Setting as part of the annual meeting agenda. He further requested permission to spend up to $1500 for procurement of materials needed by participants to take the course. Discussion was led by Chair Waters who stressed the need for controlled participation to Society members who had paid their RCAs registration fees. Jim Reinert made the motion that Dennis Onks should pursue arrangements for the program and be authorized to spend up to $1500 for program materials. Bill Peterson seconded and the motion was approved unanimously.

Bob Horsburgh, host for the next Executive Committee meeting in Winchester, Virginia, announced the meeting date would be October 6 and 7 , 1993.

Dave Calvert offered to serve as host for the 1994 Executive Committee meeting in Fort Pierce, FL. His offer was received but was tabled for action at the Executive Committee meets in Winchester.

RESEARCH CENTER ADMINISTRATORS SOCIETY
ANNUAL BUSINESS MEETING

February 2, 1993
Tulsa, OK

by Jim Pitts, Secretary

President James Riley Hill opened the business meeting and welcomed all Society members.

Secretary Jim Pitts read the minutes of the February 3, 1992 business meeting held in Lexington, KY as submitted by past secretary Dennis Onks. Minutes were accepted as read.

Treasurer Jim Pitts gave the financial report of the Society through the beginning of the 1993 meeting. The report was accepted and approved as presented.

President James Riley Hill read the qualifications of membership for Society as stated in the RCAS By-Laws. Particular attention was directed to Section 2 which recognized two classes of membership, active and regular. President Hill acting from the request made by the Executive Committee stated that active members will be charged $10 for dues each year. He explained that it was deemed necessary to charge this in order to give members who were unable to attend the annual meeting the opportunity to receive all provisions of members attending. It was stressed that these dues were not to pay for the annual proceedings.

President Hill acting according to the By-Law provisions and Society approval as of the February 3, 1992 business meeting, requested a vote for Jere McBride as Executive Treasurer. A voice vote was called and McBride was approved unanimously by Society. President Hill restates the need for such an office was for permanent banking account and membership list. President Hill expressed his appreciation to Jim Reinert for maintaining the current membership list to date.

Jonathan Edelson, local arrangement chairman, gave final instructions concerning tour and banquet. Bill Webb voiced appreciation to Rick Matheson and Chris Price for serving as tour guides for O.S.U.

Secretary Pitts read the list of retired and deceased members:

Retired
George Armstrong, KY
Alvin J. Adams, LA

Jerry Walker & Cat Taylor, OK
Gene Morrison, MS

Deceased
Johnnie Collins, MS
Woody Woodward, LA
Bob Hamilton, OK
E. L. Mayton, AL

Howard Malstrom requested names of each state representative:

AL, Larry Wells
AR, John Clark
FL, Dave Calvert
GA, Ed Worley
KY, Bill Peterson
LA, Roy Constantin
MS, Butch Withers
MO, Jake Fisher
TN, John Hodges III
NC, Cecil Tart
OK, Jonathan Edelson
SC, Ben Kittrell
TX, Joe McFarland
VA, Bob Horsburgh

The **nominations committee** report, **composed of Will Waters, chairman, and members Bill Loe and Ed Worley** was made by Mr. Waters. The committee nominated the following for officers of the Society for 1993-1994,

- James Riley Hill, Executive Committee Chairman
- Joe Musick, President
- Dennis Onks, 1st Vice President
- Jim Pitts, 2nd Vice President
- Jim Reinert, Secretary

With no other nominations being made from the floor, motion was made and passed unanimously.

President Hill expressed **appreciation to Jim Reinert and Mike Schubert** for their work on completing the RCAS brochure and distributed them out to the membership.

President Hill announced the next **Executive Committee meeting will be held in Winchester, VA with Bob Horsburgh as host.** Hill commented that only officers and state representatives had voting privileges but any members were welcomed to attend.

Future SAAS meeting locations are as follows:
1994 Downtown Nashville
1995 New Orleans
1996 Greensboro, NC

President Hill offered newly elected **Executive Treasurer Jere McBride** the opportunity to speak to group. McBride deferred until banquet for sake of time.

No new business was brought to the attention of Society and after recognizing the fact that two new members from Kansas were in attendance the meeting was adjourned.

R.C.A.S. Executive Committee Meeting Minutes
Winchester, VA
October 7, 1993
submitted by
James A. Reinert, Secretary

Committee members present: James R. Hill (SC), Chair, Joe Musick (LA), President; Dennis Onks (TN), First Vice President; Jim Pitts (AL), Second Vice President; James Reinert (TX), Secretary; Jere McBride (LA), Executive Treasurer, Randy Akridge (AL); John Clark (AR); David Calvert (FL); Ed Worley (GA); Lyle Lomas (KS); Bill Peterson (KY); F. T. Withers, Jr. (MS); Jake Fisher (MO); Carl Tart, Jr. (NC); Jonathan Edelson (OK); Ben Kittrell (SC); John Hodges (TN); Joe McFarland (TX); Bob Horsburgh (VA); Robert Freeland (TN); Joe W. High, Jr., Local Arrangements to Past President; William C. Loe (AK), Past President; Howard Malstrom (TX), Past President; Will Waters (FL), Past President; and Bill Webb (OK), Past President. We were indeed grateful to have all committee members and six past presidents present.

Chairman James R. Hill, Jr. called the meeting to order at 8:30 a.m. October 7, 1993. On behalf of all present, he thanked Bob Horsburgh for hosting the Fall Planning Meeting of RCAS at the Winchester Agricultural Experiment Station in Virginia. Bob Horsburgh welcomed the group to Virginia and to his Centers and introduced Ms. Virginia Graver who provided the group with a plan of local arrangements for both days of the meeting.

Chairman Hill announced he had retired as a Resident Director but was back as a consultant with Clemson University. Hill also acknowledged Lyle Lomas and thanked him for his attendance and the participation of Kansas in RCAS. He asked each person around the table to introduce themselves and it proceeded.

James Reinert presented copies of the minutes from meetings on January 31, 1993 and February 2, 1993 in Tulsa (transcribed by then secretary Jim Pitts) that had been mailed (September 4, 1993) to the Executive Committee members. He asked if anyone wanted these minutes read. Motion was made and seconded to approve minutes of both meetings as submitted (motion approved by unanimous voice vote).

Jere McBride provided Treasurers Report. The Society has a balance of $6,125.00. Some discussion proceeded on separation of Secretary and Treasurer duties. The Secretary will continue dues and funds collection and treasurer will keep the Accounts/Records.

Chairman Hill also reminded group that with division of Secretary/Treasurer office into two offices, there was a problem with duties. He appointed committee to review

the bylaws and propose needed changes. Jake Fisher, chair, John Hodges, and James Reinert committee with Jere McBride, ex officio member.

Chairman Hill reminded the group that the main reason for the meeting was to **develop the program for the Annual Meeting.** He then turned the meeting over to First Vice President and **Program Chairman, Dennis Onks,** to take charge and develop the program for the Annual Meeting in February, 1994.

The one-half day workshop/seminar on "How Does Your Conflict Style Affect Your Ability to Lead?" presented by the Center for Government Training at the University of Tennessee was discussed again. A cap of $1,500 to be paid by the Society was set. The workshop would be limited to 110 enrollment at a cost of $550 per person.

Dennis Onks then opened the meeting to potential subject matter for the reminders of the February program and reminded the group that they needed about three broad topics or 13 different topics. Considerable discussion followed with the following topics being proposed:

- Research Management.
- Personnel Management.
- Fiscal Management.
- Multi-State Cooperation Research Initiatives.
- State-Federal Prospective with Neville Clarke or Terry Nipp - CSRS.
- Intellectual Property Rights.
- Future Economic Considerations.
- Budgeting.
- Legal Aspects of Hiring Technical Support Center Programming-Harmony Among Employees and How to Reward the Outstanding.
- Environmental Issues at a Center/Station.
- Communication.

A morning session was proposed on communication with interactive discussion groups in the following areas: Center events - Field Days - Butch Withers, moderator; Industry-Chamber of Commerce and Community - Carl Tart, moderator; Press and Media - Ben Kittrell, moderator, Legislature and Government - Will Waters or Joe High, moderator. We planned to break this session into these four groups and then come back together later with reports on each topic to the general meeting. A presentation of Jack Odle from Progressive Farmer on Communication was also proposed.

After plans for the program were formulated, Chairman Hill thanked Dennis Onks for the fine leadership and discussion on the program.

Discussion on fees for the workshop/seminar presented by the University of Tennessee followed. A motion to charge $5 for the seminar from RCAS members and $25 from non-members was made and seconded (motion approved by unanimous voice vote).

Committee Reports:

Local Arrangements Committee: Joe High, chair, and other members from Tennessee, gave a report on local arrangements for the Nashville meeting. Meeting will be at Convention Center with Stouffer's Nashville Hotel and Holiday Inn Crown Plaza within two blocks. A review of previous years tour sites was given and three tour stops were proposed from among Malone High Wholesale Grocery, R. C. Olen (tobacco), King Bee (tobacco), and a greenhouse operation. The tour and banquet would cost about $30 ($20 for meal and $10 for tour bus per person).

Proceedings Committee: Howard Malstrom, Editor, (Dennis Onks, Associate Editor), proposed we take a copy of the 92 Proceedings and each Executive Committee member sign it as a gift to Ms. Rosa Maese who has done much of the work with the Proceedings for several years. Discussion ensued over a gratuity, a plaque, and an invitation to attend one of our annual meetings. Motion was made and seconded to send Ms. Maese a gratuity of $100 this year and instruct President Joe Musick to send her a letter expressing the gratitude of the Society for her services (motion approved by unanimous voice vote).

Howard Malstrom also clarified the correct person in each state for mailing of the Proceedings and how many copies were needed for each state. The Proceedings are to include accumulatively, the program and papers presented at annual meeting, minutes of meetings, bylaws and vita on award recipients. The membership list is to be revised on even years and published that year in the Proceedings.

Awards Committee: Bill Loe, chair, reported on secret ballot of his committee of Ben Kittrell and David Calvert. They nominated Past President James Riley Hill, Jr., for the Distinguished Service Award. Motion was made and seconded to accept their nomination (motion approved by unanimous voice vote). A proposal was made by Jere McBride suggested that as the Society moved to future states, we continue to recognized past president from that state with a plaque commemorating their service to the Society. Discussion followed.

Historical Committee: Bill Webb, chair (committee: Bill Loe, John Clark, and James Reinert) circulated a copy of the Historical Committee report and asked for comments on it. He reported that all the information he had available had been processed and appropriate material was either printed in the 93 Proceedings from Tulsa or submitted for publication in the 94 Proceedings. The membership decided that the old brief case that had been used to contain secretaries business for years

be sent to Archives with Bill Webb. Secretary Reinert was instructed to write a letter of appreciation to Pamela Bernaro who has assisted Bill Webb in preparation of the extensive Historical Report.

Nominating Committee: James Hill, chair (Will Waters and Ed Worley, members) reported the Nominating Committee consisted of the three immediate past presidents. He put forth a call to the Executive Committee to contact any of his committee with suggested candidates. Chairman Hill called for members to provide the secretary with names and affiliation of any retired, deceased, or new members from the various states. Eight personnel changes were reported to be recognized at annual meeting.

New Business:

Membership: According to the bylaws, membership in RCAS is open to private industry research farm, as well as university center/station leaders. Each member was encouraged to contact the private industry farm leaders in their state to invite membership and encourage participation.

Jonathan Edelson reported on the Southern Region Directors Meeting he attended at the end of the SAAS Meeting in Tulsa. The Southern Directors have Southern Region Advisory Committees for each discipline that is composed of Department Heads. They rely upon these committees for advise on focus and need for resources. No representation from RCAS is present at these meetings. John Hodges also added comments on the previous meeting in Nashville.

It was suggested that **Chairman Riley address a letter to Dr. Neville Clarke, Executive Director** for the Directors and ask that RCAS be represented at the Southern Region Directors Meetings in the future and possibly chair their interdisciplinary Research Committee. A motion was made and seconded for the letter (motion approved by unanimous voice vote).

Dennis Onks gave a report on the RCAS-compiled Directory Maps.

Another call was issued for submission. A deadline of January 15, 1994, was set for contributions to be received.
A motion was made and seconded to bind and distribute the State Directory Maps (motion approved by unanimous voice vote).

Will Waters brought forth a list of ways for the Society **to better serve our membership** as directed by Chairman Hill.

- consider semi-annual or quarterly newsletter.
- assign second vice president to help Executive Treasurer develop newsletter.

- o develop workshops either at annual meeting or Fall meeting.
- o special two-day regional tours; involve membership more in meetings and tours.
- o special recognition for outstanding services.
- o best paper awards.
- o more involvement of new members in Society.

Chairman Hill appointed a committee to evaluate these and other ways for the Society to better meet the needs of membership (F. T. Withers, Jr., chair, Randy Akridge, and Joe McFarland members).

Chairman Hill appointed a Bylaws Update committee to evaluate needed Bylaws changes (Jake Fisher, chair, James Reinert and John Hodges III, members, and Jere McBride exofficio member).

Fall Executive Meeting 1994:

David Calvert volunteered to host the meeting at Ft. Pierce, FL, on October 5 and 6, 1994. A discussion followed on format of one-day tour and one meeting. A motion to meet in Ft. Pierce, FL, on October 5 and 6, 1994, was made and seconded (motion approved by unanimous voice vote).

Future Meetings:

94 - Nashville TN
95 - New Orleans, LA
96 - Greensboro, NC
97 - Birmingham, AL
98 - Orlando, Little Rock, ??

BY-LAWS AS AMENDED FEBRUARY 4, 1992

BY-LAWS
OF THE RESEARCH CENTER ADMINISTRATORS SOCIETY
OF THE SOUTHERN ASSOCIATION OF AGRICULTURAL SCIENTISTS

Article I
Name

The name of this organization shall be "Research Center Administrators Society" and for the purpose of this document shall be frequently referred to as "Society".

Article II
Objectives

The objectives of the Research Center Administrators Society shall be to hold educational meetings; to provide opportunities for interaction with colleagues; and to enhance the profession within the scientific community.

Article III
Members

Section 1

The membership shall include superintendents, resident directors, center directors, and other individuals with various titles having administrative responsibilities involving a field station, branch station, research station, research center, or other branch research facility of a state agricultural experiment station or any other public or private agricultural research organization.

Section 2

Membership shall be composed of regular and active members. Any unit head of a branch research facility in any participating state shall be considered a regular member. Any individual, with administrative responsibilities involving a satellite research facility, who attends the annual meeting and pays the designated fees shall be considered an active member with all rights and privileges afforded by the Society.

Article IV
Officers

Section 1

The officers of the Society shall be a President, a First Vice-President, a Second Vice-President, and a Secretary and an Executive Treasurer. These officers shall perform the

duties prescribed by these bylaws and by the parliamentary authority adopted by the Society.

Section 2

The officers shall be elected by rising, show of hands, or by voice vote to serve for one year or until their successors are elected, and their term of office shall begin at the close of the annual meeting at which they are elected. The Executive Treasurer shall serve at the pleasure of the Executive Committee and the Society for specified term announced upon the election of the officer. An additional term may be served if deemed in the best interest of the Society.

Section 3

No member shall hold more than one office at a time, and no member shall be eligible to serve more than one consecutive term in the same office. The Executive Treasurer may serve more than one term upon recommendation of the Executive Committee and approval of the Society.

Section 4

Duties of the President shall include:

- Serve as overall coordinator of Society activities;
- Preside at annual meeting;
- Prepare letters for distribution to State Agricultural Experiment Station Directors requesting them to invite and to encourage attendance of membership from their state at annual meeting;
- Appoint Nominating Committee in accordance with bylaws;
- Appoint Local arrangements Committee Chair;
- Serve as a member and attend Executive Committee meetings;
- As immediate past President serve as Executive Committee Chair.

Section 5

Duties of the First Vice-President shall include:

- Serve as Chair of the Program Committee;
- Mail copy of program to Secretary-Treasurer of the Southern Association of Agricultural Scientists at designated time;
- Mail a copy of program to all Society officers;
- Serve as a member and attend Executive Committee meetings.

Section 6

Duties of the Second Vice-President shall include:

- o Serve on Program Committee;
- o Perform other duties as President assigns;
- o Serve as a member and attend Executive Committee meetings;
- o Assist Secretary in registration at Annual meeting.

Section 7

Duties of the Secretary shall include:

- o Responsible for registration at annual meeting;
- o Collect fees at annual meeting;
- o Prepare minutes of business session, prepare financial statements; prepare attendance roster from registration cards; and send copies of each to incoming and outgoing President and Executive Committee officers;
- o Mail programs and other appropriate information to membership;
- o Serve as a member and attend and serve as Recording Secretary of Executive Committee meetings.

Section 8

Duties of the Local Arrangements Representative:

- o Survey assigned meeting room well in advance of annual meeting and decide if adequate:

- o Set up and arrange for banquet and/or social;
- o Arrange for coffee breaks at annual meeting;
- o Arrange for visual aid equipment and other needed equipment;
- o Coordinate all of the above with other Program Committee Members;
- o Shall have the option to solicit additional assistance from the membership as needed;
- o Attend the Executive Committee meeting prior to annual meeting at the invitation of the President.

Section 9

Duties of the Executive Treasurer shall include:

- o Maintain the Societies' banking accounts, fiscal records and provide annual reports;
- o Issue checks for payment of bills as submitted by Secretary;

- o Represent the Society when designated by the President;
- o Maintain current Membership List;
- o Maintain current copy of By-Laws;
- o Maintain liaison with SAAS Secretary-Treasurer on matters of interest to the Society;
- o Serve as voting member and attend Executive Committee Meetings.

Article V
Meetings

Section 1

The regular meeting of the Research Center Administrators Society shall be held annually in association with the Southern Association of Agricultural Scientists, unless otherwise ordered by the Society or by the Executive Committee.

Section 2

Special interim meetings can only be called by the President in conjunction with the Executive Committee.

Section 3

Active members in attendance at any regular or special meeting shall constitute a quorum.

Article VI
Executive Committee

Section 1

The Executive Committee shall consist of current officers, the immediate past President, and one representative from each participating state.

Section 2

The Executive Committee shall have general supervision of the affairs of the Society between its annual business meeting, fix the hour and place of meetings, make recommendations to the Society, and shall perform such other duties as are specified in these bylaws. The Committee shall be subject to the orders of the Society, and none of its acts shall conflict with action taken by the Society or the Southern Association of Agricultural Scientists.

Section 3

The immediate past Society President shall serve as Chair of the Executive Committee. In his absence, the current Society President will serve as Chair.

Section 4

State Representatives shall be selected by the regular Research Center Administrators Society membership of their respective state. Each state Representative will serve a minimum
of two years.

Section 5

The Executive Committee shall meet at least twice annually. One meeting will be held during the summer and one meeting will be held the day prior to the annual meeting. The Chair of the Executive Committee shall establish the date and place of the summer meeting.

Section 6

Duties of Executive Committee Chair;

- Preside over Executive Committee meetings;
- Set date and place of summer meeting;
- Establish program agenda;
- Provide committee members with agenda 30 days prior to meeting;
- Appoint Executive Committee sub-committees.

Article VII
Committees

Section 1

A Program Committee shall be appointed by the President to be headed by the First Vice-President and to include the Second Vice-President and the Local Arrangements Representative. The duties of the Committee shall be to plan the annual program of the Society. This committee shall submit a progress report on the program plans to the Executive Committee at its regular summer meeting.

Section 2

The President shall appoint a Nominating Committee consisting of three immediate past Presidents. The Committee shall be appointed during the Executive Committee meeting held the day prior to the annual meeting. It shall be the duty of this committee to nominate candidates for the offices to be filled except for the office of Executive Treasurer. The Nominating Committee shall report during the business session and prior to the election of officers. Before the election, additional nominations from the floor shall be permitted. An Executive Treasurer candidate shall be selected by the Executive Committee

and the appointment shall be recommended to the Society for approval. The Society may also make nominations from the floor.

Section 3

Special committees shall be appointed by the President as the Society or the Executive Committee shall from time to time deem necessary to carry on the work of the Society. The President shall be ex-officio member of all committees except the Nominating Committee.

Article VIII
Parliamentary Authority

The rules contained in the current edition of "Robert's Rule of Order Newly Revised" shall govern the Society in all cases to which they are applicable and in which they are not inconsistent with these bylaws and any special rules of order the Society might adopt.

Article IX
Amendment of Bylaws

Section 1 - Amendment by Active Membership

The bylaws can be amended by a two-thirds vote of the active membership during the business session of the annual meeting. Notice of the proposed change must be given to the Society President one week prior to the annual meeting. The notice shall include the full text of the amendment.

Section 2 - Amendment by Executive Committee

The bylaws can be amended by action of the Executive Committee provided strict procedures are followed. A member proposing the amendment shall provide the Executive Committee Chair with the full text of the proposed change. The Chair shall distribute copies of the full text to the committee members 45 days prior to the voting deadline. Voting may be by letter, telephone with confirming letter, by roll call if taken during an Executive Committee meeting. State Representatives of the Executive Committee are to review the amendment with their respective delegation and cast one vote reflecting the delegation's view. A two-thirds vote of the Executive Committee members voting is required for adoption of an amendment. The Chair shall announce the results, revise the bylaws to include the amendment and distribute the revised bylaws to the Society membership.

Revised 10-1-85
Revised 2-5-89
Revised 2-6-92

RCAS Programs for 1971, and 1989 - 1994 are listed for information. Programs of 1973 through 1988 are listed in Volume 2, 1989 Proceedings: 72 - 104. Thus, all Society programs from 1971 through 1994 (except 1972) are documented in the Proceedings.

Southern Association of Agricultural Scientists
Experiment Station Superintendents
Jacksonville, FL

January 1971
Mayflower Hotel, Pilgrim Room

Robert B. Moss, Chairman

Monday, January 31

1:00 p.m. Experiment Station Superintendent Meeting

5:00 p.m. Adjourn

Mayflower Hotel, Puritan Room

6:00 p.m. Business session and dinner meeting

It was reported that 15 to 20 states were represented.

Research Center Administrators Society
Nashville, TN
Monday, February 6, 1989
Taylor A

MORNING SESSION

Howard Malstrom, Chairman

7:45 a.m. REGISTRATION - Will Waters, Center Director, Gulf Coast Research and Education Center, Bradenton, Florida.

8:20 a.m. RESEARCH CENTER ADMINISTRATOR'S SOCIETY CHAIRMAN'S REMARKS, Howard Malstrom.

8:30 a.m. OVERVIEW OF THE VIRGINIA AGRICULTURAL EXPERIMENT STATION, L.A. Swiger, Associate Director and Associate Dean College of Agriculture and Life Sciences, Virginia Polytechnic Institute and State University, Blacksburg, Virginia.

EMPLOYEE RELATIONS AND LEADERSHIP

9:00 a.m. EMPLOYEE RELATIONS AND LEADERSHIP, Joe Lancaster, CEO, Tennessee Farmers Mutual Insurance Company, Columbia, Tennessee.

9:45 a.m. QUESTIONS AND ANSWERS.

10:00 a.m. BREAK.

LEGAL CHALLENGES TO AGRICULTURAL RESEARCH

10:15 a.m. LEGAL CHALLENGES TO AGRICULTURAL RESEARCH, J.W. Looney, Dean - the University of Arkansas School of Law, Fayetteville, Arkansas.

11:15 a.m. Discussion on other legal questions from RCAS members.

12:00 noon LUNCH.

12:30 p.m. TOUR, Dennis Onks, Superintendent, Highland Rim Experiment Station, Springfield, Tennessee.

Tour details and banquet to be announced.

Tuesday, February 7, 1989
Taylor A

MORNING SESSION

Ed Worley, Chairman

8:00 a.m. ANNOUNCEMENTS.

ROLE OF RESEARCH CENTERS IN UNIVERSITY SYSTEMS

8:15 a.m. ROLE OF RESEARCH CENTERS IN UNIVERSITY, Milton Wise, Vice President and Provost, Division of Agriculture and Natural Resources, Clemson University, Clemson, South Carolina.

9:00 a.m. R.J. Johnson, Associate Director, Oklahoma Agricultural Experiment Station, Oklahoma State University, Stillwater, Oklahoma.

9:10 a.m. C.D. Ranney, Head, Delta Branch Experimental Station and Assistant Director, Mississippi Agricultural and Forestry Experiment Station, Stoneville, Mississippi.

9:20 a.m. Jim Stansel, Resident Director, Texas A&M University Agricultural Research and Extension Center, Beaumont, Texas.

9:30 a.m. Craig Brown, Producer Representative, National Cotton Council of America, Memphis, Tennessee.

9:40 a.m. QUESTIONS AND DISCUSSION.

10:00 a.m. BUSINESS SESSION, RCAS.

10:45 a.m. BREAK.

11:00 a.m. GENERAL SESSION, SAAS.

12:00 noon LUNCH.

Tuesday, February 7, 1989
Taylor A

AFTERNOON SESSION

Jack Cooley, Chairman

1:00 p.m. ANNOUNCEMENTS.

RESEARCH CENTERS SAFETY PRACTICES

1:10 p.m. MODEL OF SAFETY PROGRAM FOR RESEARCH CENTERS, David Baker, Extension Safety Specialist, University of Missouri, Columbia, Missouri.

PANEL DISCUSSION: "How Safety is Promoted by Various States and/or Research Centers".

2:00 p.m. Ike Sewell, Associate Dean, The University of Tennessee, Institute of Agriculture, Knoxville, Tennessee.

2:10 p.m. William J. Becker, Extension Safety Specialist, University of Florida, Gainesville, Florida.

2:20 p.m. Ed Worley, Superintendent, Northwest Georgia Branch Station, Calhoun, Georgia.

2:30 p.m. Fred Cumbo, Superintendent, Horticultural Crops Research Station, Clinton, North Carolina.

2:40 p.m. QUESTIONS AND DISCUSSION.

3:00 p.m. BREAK.

MAPPING FOR FIELD HISTORY

3:15 p.m. MAPPING FOR FIELD HISTORY (including small plots), George Clark, Superintendent, Central Crops Research Station, Clayton, North Carolina and Becky Westmoreland, North Carolina State Information Processing Service, Raleigh, North Carolina.

4:00 p.m. QUESTIONS AND DISCUSSIONS.

RESEARCH CENTER ADMINISTRATORS SOCIETY
Little Rock, AR
Monday, February 5, 1990
UCC - Room 2A

MORNING SESSION

William C. Loe, Chairman

7:45 a.m. REGISTRATION - Dr. James R. Hill, Center Director, Edisto Research and Extension Center, Blackville, South Carolina.

8:00 a.m. RESEARCH CENTER ADMINISTRATORS SOCIETY CHAIRPERSON'S REMARKS, Dr. William C. Loe.

8:15 a.m. OVERVIEW OF ARKANSAS AGRICULTURE, Dr. Preston E. Laferney, Vice President for Agriculture, University of Arkansas.

8:35 a.m. HOW SAFE IS OUR FOOD SUPPLY? Dr. Bob Gordon, Head, Food and Drug Protection Division North Carolina Department of Agriculture.

8:55 a.m. SAFETY OF OUR FOOD SUPPLY, AN INDUSTRY PERSPECTIVE, Mr. Jim Hudson, Vice President, Sales and Marketing, ICI Americas Agricultural Products.

9:15 a.m. FUTURE OF STATE FUNDING OF AGRICULTURAL RESEARCH, A LEGISLATIVE PERSPECTIVE, Mr. Robert Adley, Chairman, House Appropriations Committee, Louisiana Legislature.

9:35 a.m. DISCUSSION.

10:00 a.m. BREAK.

10:20 a.m. PANEL DISCUSSION, ENHANCING RESEARCH AND EXTENSION RELATIONSHIPS, Dr. Hiram Polmertree, Director, Mississippi Agricultural Extension Service, Mississippi State, Mississippi.

10:40 a.m. Dr. Ben Kittrell, Resident Director, Pee Dee Research and Extension Center, Florence, South Carolina.

11:00 a.m. Dr. Charles Scifres, Head, Agronomy, Department of Agronomy, Oklahoma State University, Stillwater, Oklahoma.

11:40 a.m. DISCUSSION.

12:00 noon LUNCH.

1:00 p.m. TOUR - International Learning and Livestock Center, Perryville, AR and Winrock International Institute for Agriculture, Morrilton, Arkansas.

6:00 p.m. BANQUET.

Tuesday, February 6, 1990
State House Izard Room

MORNING SESSION

Will Waters, Chairman

8:00 a.m. ANNOUNCEMENTS.

8:15 a.m. ACQUISITION AND USE OF SURPLUS PROPERTY - Equipment, Mr. Don Hooper, Superintendent, South Central Research Station, Chickasha, Oklahoma.

8:40 a.m. ANIMAL WASTE DISPOSAL SYSTEMS, Dr.James C. Baker, Extension Specialist, Biological and Agricultural Engineering, North Carolina State, Raleigh, North Carolina.

9:05 a.m. IRRIGATION SYSTEMS AND EQUIPMENT, Mr. Phil Tacker, Extension Engineer, Arkansas Extension Service, University of Arkansas, Little Rock, Arkansas.

9:30 a.m. BREAK.

9:45 a.m. RCAS SURVEY, Dr. Jere McBride, Resident Director, Red River Research and Extension Center, Bossier City, Louisiana.

10:15 a.m. BUSINESS MEETING, Dr. Howard Malstrom, Resident Director, Texas A&M Research Center, El Paso, Texas.

11:00 a.m. GENERAL SESSION.

12:00 noon LUNCH.

Tuesday, February 6, 1990

AFTERNOON SESSION

Ed Worley, Chairman

1:00 p.m. Dr. Neville Clarke, Associate Deputy Chancellor Agriculture, Texas A&M University, College Station, Texas.

1:20 p.m. MAINTAINING MAINTENANCE RESEARCH, Dr. George Burton, Associate Professor, Department of Agricultural Economics, VPI and State University, Blacksburg, Virginia.

1:40 p.m. PANEL DISCUSSION - Maintaining Independence in Research Using Outside Grant Funding, Ms. Carol A. Cook, Assistant Director, IFAS Sponsored Programs, University of Florida, Gainesville, Florida.

2:00 p.m. Dr. Tom Helms, Assistant Director, Mississippi Agricultural and Forestry Experiment Station, Mississippi State, Mississippi.

2:20 p.m. DISCUSSION.

3:00 p.m. ADJOURN.

RESEARCH CENTER ADMINISTRATORS SOCIETY ANNUAL
Ft. Worth, Texas
February 3-5, 1991

Monday, February 4, 1991
Kennedy Theater Lobby - Civic Center

Ed Worley, Chairman

7:45 a.m. REGISTRATION, Dr. Joe Musick, President Director, Rice Research Station, LSU, Crowley, Louisiana.

8:00 a.m. RESEARCH CENTER ADMINISTRATORS SOCIETY CHAIRPERSON'S WELCOME, Dr. Ed Worley.

8:15 a.m. OVERVIEW OF THE TEXAS AGRICULTURAL EXPERIMENT STATION AND ITS FUTURE DIRECTIONS - Dr. Robert Merrifield, Deputy Director, Texas Agricultural Experiment Station, Texas A&M University, College Station, Texas.

8:45 a.m. PROGRAM REDIRECTION TOWARD THE YEAR 2000: MANAGEMENT CHALLENGES - Dr. C.J. Scifres, Associate Director, Oklahoma Agricultural Experiment Station, Oklahoma State University, Stillwater, Oklahoma.

9:15 a.m. EXPERIMENT STATION OPERATIONS MANAGEMENT-CHALLENGES AND OPPORTUNITIES - Dr. James Ferguson, Department of Biological and Agricultural Engineering, University of Arkansas, Fayetteville, Arkansas.

9:45 a.m. QUESTIONS AND ANSWERS.

10:00 a.m. BREAK.

10:10 a.m. PANEL DISCUSSION - Personnel motivations and management.

10:15 a.m. PERSONNEL MANAGEMENT AT SMALL AND MEDIUM SIZE STATIONS, Mr. John Eason, Superintendent, Sand Mountain Substation, Crossville, Alabama.

10:35 a.m. PERSONNEL MANAGEMENT FOR LARGE RESEARCH CENTERS - Dr. James Riley Hill, Jr. Resident Director, Edisto Research and Education Center, Blackville, South Carolina.

11:45 a.m. QUESTIONS AND ANSWERS FROM PERSONNEL PANEL.

12:00 noon LUNCH.

1:00 p.m. TOUR - Dr. James Reinert, Coordinator Visit Frito Lay R&D, pilot plant, production and Texas A&M Research and Extension Center, Dallas, Texas.

6:30 p.m. Mexican Fiesta dinner and meeting program: INFORMATION MARKETING FOR RESEARCH CENTERS - Mr. Don Poucher, Director, IFAS Information, University of Florida, Gainesville, Florida.

Tuesday, February 5, 1991
Board Room A, Civic Center

MORNING SESSION

Will E. Waters, Chairman

8:00 a.m. ANNOUNCEMENTS.

8:05 a.m. PANEL DISCUSSION - ISSUES RELATING TO ANIMAL WELFARE - Dr. Charles Long, Resident Director, Texas A&M Research and Extension Center, Overton, Texas and Dr. J.W. Turner, Professor, San Antonio Livestock Exposition Chair, Department of Animal Science, Texas A&M University, College Station, Texas.

9:00 a.m. PRODUCER/ADVISORY COMMITTEES - EFFECTIVENESS IN RESEARCH IN PLANNING - Mr. David M. Haggard, Chairman, University of Missouri Delta Center Advisory Board, Portageville, Missouri.

9:20 a.m. PURPOSE, COMPOSITION AND FUNCTION OF ADVISORY COMMITTEES AT FLORIDA RESEARCH CENTERS - Dr. C.A. Conover, Center Director, Central Florida Research and Education Center, Apopka, Florida.

9:40 a.m. QUESTIONS AND COMMENTS ON ADVISORY COMMITTEES.

9:50 a.m. BREAK.

10:00 a.m. PROCEDURES AND TECHNIQUES FOR CONDUCTING MAJOR FIELD DAYS, Dr. Joe Musick, Resident Director, Rice Research Station, Louisiana State University, Crowley, Louisiana.

10:20 a.m. PROCEDURES AND TECHNIQUES FOR CONDUCTING SPECIAL FIELD DAYS AND GROWER DEMONSTRATIONS - Dr. Donald N. Maynard, Extension Vegetable Specialist, Gulf Coast Research and Education Center, Bradenton, Florida.

10:40 a.m. RCAS ANNUAL BUSINESS MEETING - Dr. Ed Worley, presiding.

11:00 a.m. GENERAL SESSION.

12:00 LUNCH.

Tuesday, February 5, 1991
Board Room A, Civic Center

AFTERNOON SESSION

James Riley Hill, Chairman

1:00 p.m. ANNOUNCEMENTS.

1:05 p.m. INTEGRATING BIOTECHNOLOGY INTO TRADITIONAL AGRICULTURAL PROGRAMS - Dr. Dan Lineberger, Head, Department of Horticulture, Texas A&M University, College Station, Texas.

1:35 a.m. PESTICIDE RINSE WATER DISPOSAL OPTIONS, Dr. Kirk Brown, Professor of Soil Physics, Department of Soil and Crop Science, Texas A&M University, College Station, Texas.

2:00 p.m. MANAGING CRISES THROUGH COMMUNICATION FOR RESEARCH CENTERS - Mr. Don Poucher, Director, IFAS Information, University of Florida, Gainesville, Florida.

2:30 p.m. THE POTENTIAL FOR DEVELOPING GRANTS AT RESEARCH CENTERS - SOUTH CAROLINA, Dr. Merle Shepard, Resident Director, Coastal Research and Education Center, Charleston, South Carolina.

3:00 p.m. GRANTSMANSHIP AT RESEARCH CENTERS - TEXAS - Dr. Allen J. Jones, Resident Director, Texas A&M University, Blackland Research Center, Temple, Texas.

3:30 p.m. ADJOURN.

RESEARCH CENTER ADMINISTRATORS SOCIETY

Lexington, Kentucky
February 2-5, 1992

Monday, February 3, 1992
Morgan/Neville/Hathaway Room
Hyatt Hotel

MORNING SESSION

Will E. Waters, Chairman

7:45 a.m. REGISTRATION - Dr. Dennis O. Onks, Superintendent, Highland Rim Experiment Station, University of Tennessee, Springfield, Tennessee.

8:00 a.m. WELCOME - Dr. C. Oren Little, Dean, College of Agriculture, University of Kentucky, Lexington, Kentucky.

8:15 a.m. OVERVIEW OF KENTUCKY AGRICULTURE AND ORGANIZATION OF THE KENTUCKY EXPERIMENT STATION SYSTEM - Dr. James A. Boling, Associate Director, Agricultural Experiment Station and Dean of Research, University of Kentucky, Lexington, Kentucky.

8:45 a.m. THE FUTURE OF AGRICULTURAL RESEARCH AND EXTENSION AS VIEWED BY THE PRESIDENT OF A NON-LAND GRANT INSTITUTION- Dr. John Stevenson, President of Berea College, Berea, Kentucky.

9:15 a.m. THE FUTURE OF AGRICULTURAL RESEARCH AND EXTENSION AS VIEWED BY AND ADMINISTRATOR WITHIN THE LAND GRANT SYSTEM - Dr. James R. Fischer, Director SCAES and Dean of Agricultural Research, Clemson University, Clemson, South Carolina.

9:45 a.m. QUESTIONS AND ANSWERS.

10:00 a.m. BREAK.

10:15 a.m. MANAGING A RESEARCH AND EXTENSION UNIT IN FINANCIALLY HARD TIMES - Dr. Robert Westerman, Head of Department of Agronomy, Oklahoma State University, Stillwater, Oklahoma.

10:45 a.m. ELECTRONIC INNOVATIONS IN AGRICULTURAL RESEARCH, DATA COLLECTION, MANIPULATION, AND COMMUNICATION - Dr. James A. Reinert, Paul Graff and Al Powell, Texas A&M University Research and Education Center, Dallas, Texas.

11:15 a.m. PREVENTING DEER DAMAGE ON RESEARCH STATIONS - Dr. Ben Kittrell, Resident Director, Pee Dee Research and Education Center, Florence, South Carolina.

11:30 a.m. PREVENTING BIRD DAMAGE ON RESEARCH STATIONS - Mr. Jerry W. Walker, Superintendent, Eastern Research Station, Oklahoma State University, Haskell, Oklahoma.

11:45 a.m. PREVENTING COYOTE DAMAGE ON RESEARCH STATIONS - Mr. Mike L. Bourne, Superintendent, Wes Watkins Research and Education Center, Oklahoma State University, Lane, Oklahoma.

12:00 LUNCH.

Monday, February 3, 1992
Morgan/Neville/Hathaway Room
Hyatt Hotel

AFTERNOON SESSION

James Riley Hill, Chairman

1:00 p.m. A SAFETY PROGRAM THAT HAS PROVEN TO BE SUCCESSFUL ON AN AGRICULTURAL RESEARCH STATION - Mr. Joe Brooks, Mr. Lyle Ziemann, and Mr. Tom Eddy, Monsanto Agricultural Chemical Company, St. Louis, Missouri.

1:45 p.m. FACTORS AFFECTING THE SAFE HANDLING OF LIVESTOCK - Mr. Rick Matheson, Superintendent, Agronomy Research Station, Oklahoma State University, Perkins, Oklahoma.

2:05 p.m. A SAFE PESTICIDE STORAGE FACILITY - Robert Horsburgh, Superintendent, Winchester Agricultural Experiment Station, Winchester, Virginia.

2:30 p.m. PESTICIDE MONITORING PROGRAM FOR EMPLOYEES - Dr. Will E. Waters, Center Director, Gulf Coast Research and Education Center, University of Florida, Bradenton, Florida.

2:50 p.m. QUESTIONS AND ANSWERS.

3:00 p.m. BREAK.

3:15 p.m. EMERGENCY PREPAREDNESS PROGRAM AT THE HAMMOND EXPERIMENT STATION - Dr. R. J. Constantin, Resident Director, Hammond Research Station, Louisiana State University, Hammond, Louisiana.

3:35 p.m. SECURITY AT A RESEARCH CENTER - Dr. Jose Amador, Resident Director, Texas A&M University Agricultural Research and Education Center, Weslaco, Texas.

3:55 p.m. EXPERIMENT STATION SECURITY AT A RURAL LOCATION - Dr. James M. Anderson, Superintendent, and Dr. Rick J. Carlisle, Associate Superintendent, University of Tennessee, Ames Plantation, Grand Junction, Tennessee.

4:15 p.m. QUESTIONS AND ANSWERS.

Tuesday, February 4, 1992
Morgan/Neville/Hathaway Room
Hyatt Hotel

MORNING SESSION

Joe Musick, Chairman

8:00 a.m. ANNOUNCEMENTS.

8:05 a.m. SEXUAL HARASSMENT - Ms. Genevieve Stubbs, Assistant General Council, Texas A&M University System, College Station, Texas.

8:55 a.m. EFFECTIVE COMMUNICATION WITH PRESS AND MEDIA REPORTERS - Ms. Elizabeth F. Hall, Experiment Station Editor, Agricultural Communications, Clemson University, Clemson, South Carolina.

9:45 a.m. BREAK.

10:00 a.m. PROCUREMENT OF SURPLUS PROPERTY - Mr. William O. Peterson, Director of Management Operations, University of Kentucky College of Agriculture, Lexington, Kentucky.

10:30 a.m. RCAS ANNUAL BUSINESS MEETING - Dr. Will E. Waters, presiding.

11:00 a.m. GENERAL SESSION.

12:00 LUNCH.

AFTERNOON SESSION

1:00 p.m. TOUR - Mr. William O. Peterson, Coordinator: Visit two horse farms and the University of Kentucky North Farm Research Center.

6:30 p.m. BANQUET AT SPINDLETOP HALL - Speaker: Dr. Mike Nichols, Director of the University of Kentucky Counseling and Testing Center, Lexington, Kentucky.

RESEARCH CENTER ADMINISTRATORS SOCIETY

Tulsa, Oklahoma
Monday, February 1, 1993

Buckingham Room
Doubletree Hotel

MORNING SESSION

James Riley Hill, Chair

7:45 a.m. REGISTRATION - Mr. Jim Pitts, Superintendent, Chilton Area Horticulture Substation, Auburn University, Clanton, Alabama.

8:15 a.m. WELCOME AND ANNOUNCEMENTS - Dr. James Riley Hill, President R.C.A.S.

8:30 a.m. WELCOME AND OVERVIEW OF OKLAHOMA AGRICULTURE, Dr. C. B. Browning, Dean and Director, Oklahoma Agricultural Experiment Station, Oklahoma State University.

9:00 a.m. PROGRAM PRIORITIZATION AND STRATEGIC PLANNING, Dr. Charles J. Scifres, Associate Director, Oklahoma Agricultural Experiment Station, Oklahoma State University.

9:30 a.m. COOPERATIVE RESEARCH AND EDUCATION PROGRAMS, Mr. Michael A. Cawley, President, and Mr. George Hedger, Director, Agricultural Division, The Samuel Roberts Noble Foundation, Ardmore, Oklahoma.

10:00 a.m. BREAK.

10:15 a.m. THE NATIONAL RESEARCH INITIATIVE & USDA COMPETITIVE GRANTS, Dr. William D. Carlson, Director, USDA Competitive Grants, Washington, D.C.

10:45 a.m. EXPERIENCE IN SECURING CHECKOFF FUNDS FOR RESEARCH AND EDUCATION PROGRAMS, Dr. Robert L. Westerman, Head, Department of Agronomy, Oklahoma Agricultural Experiment Station, Oklahoma State University.

11:15 a.m. GRANT ACQUISITION FOR UNIVERSITY PROGRAMS, Dr. James D. Dodd, Assistant to the Director, Texas Agricultural Experiment Station, Texas A&M University.

11:40 a.m. ADMINISTERING GRANT AND CONTRACT SOLICITATIONS AND IMPLEMENTATION, Dr. Kenneth Koonce, Assistant Director, Louisiana Agricultural Experiment Station, Louisiana State University Agricultural Center.

12:00 noon LUNCH.

Monday, February 1, 1993
Buckingham Room
Double Tree Hotel

AFTERNOON SESSION

Joe A. Musick, Chair

1:00 p.m. CLEAN AIR ACT AND PESTICIDE UPDATE, Mr. Mark Sather, Deputy Director, Air, Pesticide, and Toxics Division, U.S.E.P.A. Region 6, Dallas, Texas.

2:00 p.m. CLEAN WATER ACT AND WATER MANAGEMENT, Mr. Kenton Kirkpatrick, Deputy Director, Water Management Division, U.S.E.P.A. Region 6, Dallas, Texas.

3:00 p.m. BREAK.

3:15 p.m. WETLAND ISSUES, Mr. John Paul Lilly, Extension Soil Science Specialist, North Carolina State University.

4:15 p.m. HOW DOES YOUR SAFETY PROGRAM STAND UP?, Mr. Chip Riedeburg, Safety Director, North Carolina Department of Agriculture.

5:00 p.m. ADJOURN.

Tuesday, February 2, 1993
Buckingham Room
Double Tree Hotel

MORNING SESSION

Dennis O. Onks, Chair

8:00 a.m. ANNOUNCEMENTS.

8:05 a.m. AMERICAN DISABILITIES ACT, Mr. Ray L. Thompson, Jr., Director, Employee Development and Training, Clemson University.

8:35 a.m. AVOIDING LITIGATION, Ms. Genevieve Stubbs, Assistant General Counsel, Texas A&M System, College Station, Texas.

9:45 a.m. BREAK.

10:00 a.m. RESEARCH CENTER ADMINISTRATORS SOCIETY ANNUAL BUSINESS MEETING, Dr. James Riley Hill, President, R.C.A.S., presiding.

11:00 a.m. S.A.A.S. GENERAL SESSION.

12:00 noon LUNCH.

Tuesday, February 2, 1993
Buckingham Room
Double Tree Hotel

AFTERNOON SESSION

Jonathan Edelson, Chair

1:00 p.m. TOUR: OKLAHOMA AGRICULTURE AND RESEARCH FACILITIES - OKLAHOMA STATE UNIVERSITY CAMPUS AND RESEARCH STATIONS, Dr. Jonathan Edelson, Wes Watkins Research and Extension Center, Oklahoma State University, Lane, Oklahoma.

7:00 p.m. ANNUAL BANQUET, Gilcrease Museum, Tulsa, Oklahoma.

MONDAY, FEBRUARY 7, 1994
Room to be announced
Stouffer Hotel

MORNING SESSION

Joe A. Musick , Resident Director, Rice Research Station, Crowley, LA

7:40 REGISTRATION
Dr. Jim Reinert, Texas A&M-Dallas, Secretary, Research Center Administrators Society

8:00 MEMBER INTRODUCTION-ANNOUNCEMENTS
Dr. Joe Musick, President, R.C.A.S.

8:20 TENNESSEE WELCOME
Dr. Don O. Richardson, Dean and Director, Tennessee Agricultural Experiment Station

8:40 FORGING NEW REGIONAL COALITIONS IN THE CUMBERLAND-SHENANDOAH FRUIT TREE REGIONS
Dr. Gerald L. Jubbs, Assoc. Director, Virginia Agricultural Experiment Station

9:00 INTERSTATE AND INTERDISCIPLINARY RESEARCH: PROS AND CONS
Dr. Bill Brown, Assist. Director, Louisiana Agricultural Experiment Station

9:20 THE ROLE OF ACADEMIA AND INDUSTRY IN TECHNOLOGY TRANSFER
Dr. Darwin G. Braund, Assoc. Head, Animal Science Dept., N.C. State University

9:40 FARMERS' ROLE IN TECHNOLOGY TRANSFER
Mr. Jack Odle, Editor, Progressive Farmer

10:00 BREAK

Mr. Jim Pitts, Superintendent, Chilton Area Horticulture Substation, Clanton, AL

10:20 FUTURE ECONOMIC EXPECTATIONS FROM AGRICULTURE
Dr. Daryll E. Ray, Blasingame Chair of Excellence, University of Tennessee

10:40 CONSTRUCTED WETLANDS FOR TREATMENT OF SWINE WASTE
Mr. John Eason, Superintendent, SandMountain Substation, Crossville, AL

11:00 PESTICIDE CONTAINER DISPOSAL AND RECYCLING PRACTICES IN MISSISSIPPI Dr. Jack Carroll, Ext. Specialist, MS Agricultural Extension Service

11:20 TRAINING AND DEVELOPMENT OPPORTUNITIES FOR TECHNICAL AND SUPPORTING STAFFS Dr. J. I. Sewell, Assoc. Director, Tennessee Agricultural Experiment Station

11:40 AFTERNOON PROGRAM INFORMATION Dr. Dennis Onks, V. Pres. R.C.A.S.

11:55 LUNCH

AFTERNOON SESSION

Room to be announced
Holiday Inn Crowne Plaza

PRE-REGISTERED MEMBERS ONLY
Rooms assigned at Registration

1:00 HOW DOES YOUR CONFLICT STYLE AFFECT YOUR ABILITY TO LEAD?

Ms. Terry Griffith, University of Tennessee, Center for Government Training

TUESDAY, FEBRUARY 8, 1994

Room to be announced
Holiday Inn Crowne Plaza

MORNING SESSION

8:00 SOCIETY GROUP DISCUSSION
CONCURRENT BREAKOUT SESSIONS

BRANCH STATION'S COMMUNICATION ROLE
WHEN PARTICIPATING IN THE FOLLOWING AREAS:

1) **FIELD DAYS** - Moderators, F. T. Withers, MS State University and Ed Worley, University of Georgia.

2) **MEDIA** - Newspaper, TV, Magazine - Moderator, Ben Kittrell, Clemson University

3) **COMMUNITY RELATIONS** - Moderator, Carl Tart, North Carolina Dept. of Agriculture

4) **GOVERNMENT** - Moderators, Will Waters, University of Florida and Joe High, University of Tennessee

9:25 **SESSION REPORTS**

10:00 RCAS Annual Business Meeting
Dr. Joe Musick, President, Presiding

11:00 SAAS General Session

12:00 Lunch

AFTERNOON SESSION

SESSION CHAIR: TENNESSEE SOCIETY MEMBERS

1:00 Leave From Holiday Inn

(Membership list compiled by Jim Reinert)

ALABAMA

STATION	ADDRESS/TELEPHONE/FAX		ADMINISTRATOR
AL Agr Exp Stn	310 Samford Hall Auburn University Auburn, AL 36849-5403 (205) 844-4768 FAX: (205) 844-5511		Dr. Lowell Frobish Director Dr. David H. Teem Assoc Director
Black Belt Substn	60 County Rd 944 Marion Junction, AL 36759 (205) 872-7878 FAX: (205) 872-2013	 # 	Mr. James L. Holliman Superintendent Mr. Jim Harris Asst Superintendent
Brewton & Monroeville Exp Fields	PO Box 217 Brewton, AL 36427 (205) 867-3139 FAX: (205) 867-9433	#	Mr. James R. Akridge Superintendent
Chilton Area Horticulture Substn	120 County Rd 756 Clanton, AL 35045 (205) 646-3610 FAX: (205) 646-3607	#	Mr. James A. Pitts Superintendent Mr. Kenneth Short Assoc Superintendent
Gulf Coast Substn	8300 State Hwy 104 Fairhope, AL 37532 (205) 928-2740 (205) 928-5217 FAX: (205) 990-8912	#	Mr. Emmett L. Carden Superintendent Mr. N.R. McDaniel Assoc Superintendent Mr. Malcomb Pegues Asst Superintendent
Lower Coastal Plain Substn	PO Box 460 Camden, AL 36726 (205) 682-4662 FAX: (205) 682-4662	# * # 	Mr. Joe A. Little Superintendent Mr. Paul Rose Asst Superintendent
N AL Horticulture Substn	PO Box 1062 Cullman, AL 35056 (205) 734-5820 FAX: (205) 734-5886		Mr. M.H. Hollingsworth Superintendent
Ornamental Horticulture Substn	PO Box 8276 Mobile, AL 36689 (205) 342-2366 FAX: (205) 342-1022	#	Mr. John W. Olive Superintendent Mr. James Stephenson Assoc Superintendent
Piedmont Substn	PO Box 368 Camp Hill, AL 36850 (205) 896-4422 FAX: (205) 896-4402	#	Mr. John T. Owen Superintendent
Prattville Exp Field	713 County Rd 4 East Prattville, AL 36067 (205) 365-7169 FAX: (205) 365-7169		Mr. Don P. Moore Superintendent

* State Representative to RCAS Executive Committee 1994.
\# Active membership.

STATION	ADDRESS/TELEPHONE/FAX		ADMINISTRATOR
Sand Mountain Substn	Rt 1, Box 20 Crossville, AL 35962 (205) 528-7133 FAX: (205) 528-2224	# # 	Mr. John T. Eason Superintendent Mr. Marvin Ruf Assoc Superintendent
E.V. Smith Res Ctr	Rt 1, Box 138 Shorter, AL 36075 (205) 727-7403 (205) 727-4038 FAX: (205) 727-9450	 # 	Dr. James S. Bannon Director Mr. Bobby Smith Supt Dairy Unit Mr. Robert Duffield Supt Field Crops Unit Mr. William Gregory Supt Beef Unit Mr. Jimmy Witt Supt Horticulture Unit Mr. Steve Nightengale Supt Plant Breeding Unit
TN Valley Substn	Belle Mina, AL 35615 (205) 353-3978 FAX: (205) 340-9845	 	Mr. W.B. Webster Superintendent Mr. Ellis Burgess Assoc Superintendent Mr. Chet Norris Asst Superintendent
Turnipseed-Ikenberry Farm	304 Hill 'N' Dale Dr Union Springs, AL 36089 (205) 738-4819		Mr. James Smith Superintendent
Upper Coastal Plain Substn	PO Box 706 Winfield, AL 35594 (205) 487-2150 FAX: (205) 487-3909	#	Mr. Randall Rawls Superintendent
Wiregrass Substn	PO Box 217 Headland, AL 36345 (205) 693-2363 FAX: (205) 693-5153	 # # 	Mr. Henry W. Ivey Superintendent Mr. Brian Gamble Asst Superintendent Mr. Larry Wells Asst Superintendent
Fisheries Res Unit	203 Swingle Hall Auburn University Auburn, AL 36849 (205) 844-4667 FAX: (205) 844-9208	#	Mr. Randell Goodman Superintendent

Active membership.

ARKANSAS

STATION	ADDRESS/TELEPHONE/FAX		ADMINISTRATOR
AK Agr Exp Stn	217 Agricultural Bldg Univ of Arkansas Fayetteville, AR 72701 (501) 575-4449 FAX: (501) 575-7273		Dr. G.J. Musick Dean/Director
Cotton Branch Stn	PO Box 789 Marianna, AR 72360 (501) 295-2839	#	Mr. Robert Turner Resident Director
Delta Branch Stn	PO Box 129 Clarkedale, AR 72325 (501) 739-1318		Mr. Wallace Williams Resident Director
Fruit Substn	Rt 2 Box 154 Clarksville, AR 72830 (501) 754-2406 FAX: (501) 754-7529	#	Dr. John R. Clark Resident Director
Livestock & Forestry Branch Stn	4500 Bethesda Rd Batesville, AR 72501 (501) 793-7432		Dr. Kenneth Harrison Resident Director
NE Res & Ext Ctr	PO Box 48 Keiser, AR 72351 (501) 526-2199 FAX: (501) 526-2582	#	Dr. T.O. Evrard Center Director
Pine Tree Stn	Rt 1, Box 48 Colt, AR 72326 (501) 633-5767		Mr. Roger Eason Resident Director
Rice Res & Ext Ctr	PO Box 351 Stuttgart, AR 72160 (501) 673-2661 FAX: (501) 673-4315	*	Dr. John Robinson Resident Director
S Central Family Farms Res Ctr USDA/ARS	Rt 2, Box 144-A Booneville, AR 72927 (501) 675-3834 FAX: (501) 675-2940		Dr. Michael Brown Center Director
SE Branch Stn	PO Box 155 Rohwer, AR 71666 (501) 644-3101		Mr. Larry Ernest Superintendent
SE Res & Ext Ctr	PO Box 3508, UAM Monticello, AR 71656 (501) 460-1091 FAX: (501) 460-1415		Dr. Ed Colburn Center Director

* State Representative to RCAS Executive Committee 1994.
\# Active membership.

ARKANSAS - cont'd

STATION	ADDRESS/TELEPHONE/FAX	ADMINISTRATOR
SW Res & Ext Ctr	Rt 3, Box 258 Hope, AR 71801 (501) 777-9702 FAX: (501) 777-8441	Dr. Mike Phillips Interim Ctr Director
Vegetable Substn	PO Box 2608 Alma, AR 72921 (501) 474-0475	Mr. Dennis R. Motes Resident Director

FLORIDA

STATION	ADDRESS/TELEPHONE/FAX		ADMINISTRATOR
Univ of FL Institute of Food & Agr Sciences	Univ Florida, IFAS 1022 McCarty Hall Gainesville, FL 32611 (904) 392-1784		Dr. Joe Joyce Interim Dean
Agr Res & Ed Ctr, National Weather Service	1408 24th St SE Ruskin, FL 33570 (813) 645-2181		Mr. C.R. Eggelton Center Director
Agr Res & Ed Ctr - Brooksville	PO Box 246 Brooksville, FL 33512 (904) 796-3383 FAX: (904) 796-2930		Mr. E.L. Adams Center Director
Agr Res & Ed Ctr - Dover	13138 Lewis Gallagher Rd Dover, FL 33527-9664 (813) 751-7636	#	Dr. Will E. Waters Center Director (see Bradenton)
Agr Res & Ed Ctr - Ft. Pierce	PO Box 248 Ft. Pierce, FL 34954 (407) 468-3922 FAX: (407) 468-5668	# *	Dr. David V. Calvert Center Director
Agr Res & Ed Ctr - Hastings	PO Box 748 Hastings, FL 32045 (904) 692-1792 FAX: (904) 692-1468		Dr. D.R. Hensel Center Director
Agr Res & Ed Ctr - Jay	Rt 3, Box 575 Jay, FL 32565 (904) 994-7373 FAX: (904) 994-9589		Dr. H.A. Peacock Center Director
Agr Res & Ed Ctr - Leesburg	5336 University Ave Leesburg, FL 32748 (904) 787-3423		Dr. G.W. Elmstrom Center Director
Agr Res & Ed Ctr - Live Oak	Rt 2, Box 2181 Live Oak, FL 32060 (904) 362-1725		Dr. J.R. Rich Asst Director
Agr Res & Ed Ctr - Marianna	Rt 3, Box 376 Marianna, FL 32446-9803 (904) 594-3241		Dr. Fred M. Rhodes Acting Center Director (see Quincy)
Agr Res & Ed Ctr - Monticello	Rt 4, Box 63 Monticello, FL 32344 (904) 997-2596		Dr. W.J. French Asst Director (see Quincy)
Agr Res & Ed Ctr - Ona	Rt 1, Box 62 Ona, FL 33865 (813) 735-1314 FAX: (813) 735-1930	#	Dr. Findlay M. Pate Center Director

* State Representative to RCAS Executive Committee 1994.
\# Active membership.

FLORIDA - cont'd

STATION	ADDRESS/TELEPHONE/FAX	ADMINISTRATOR
Brooksville Subtropical Agr Res Stn, USDA	PO Box 46 Brooksville, FL 34605-0046 (904) 796-3385 FAX: (904) 796-2930	Dr. A.C. Hammond Director
Central FL Res & Ed Ctr	2807 Binion Rd Apopka, FL 32703 (305) 889-4161 FAX: (904) 392-9359	Dr. Charles A. Conover Center Director
Central FL Res & Ed Ctr	PO Box 909 Sanford, FL 32771 (305) 322-4134	Dr. J.M. White Asst Director
Citrus Res & Ed Ctr	700 Experiment Station Rd Lake Alfred, FL 33850 (813) 956-1151 FAX: (813) 956-4631	Dr. Walter Kender Center Director
Everglades Res & Ed Ctr	PO Drawer A Belle Glade, FL 33430 (305) 996-3062 FAX: (407) 996-0339	Dr. Van H. Waddill Center Director
FL Medical Entomology Lab	200 9th St SE Vero Beach, FL 32962 FAX: (407) 778-7205	Dr. R.H. Baker Center Director
Ft. Lauderdale Res & Ed Ctr	3205 SW College Ave Ft. Lauderdale, FL 33314 305-475-8990 FAX: (305) 475-4125	Dr. David W. Buchanan Center Director
Gulf Coast Res & Ed Ctr	5007 60th St E # Bradenton, FL 34203 (813) 751-7636 FAX: (813) 751-7639	Dr. Will E. Waters Center Director
N FL Res & Ed Ctr	Rt 3, Box 4370 Quincy, FL 32351-9529 (904) 627-9236 FAX: (904) 392-5231	Dr. Fred M. Rhodes Acting Center Director (see Quincy)
SW FL Res & Ed Ctr	Rt 1, Box 2G # Immokalee, FL 33934 (813) 657-2835 FAX: (813) 657-5224	Dr. Calvin E. Arnold Center Director
Tropical Res & Ed Ctr	18905 SW 280th St Homestead, FL 33031-3314 (305) 246-6341 FAX: (305) 246-7003	Dr. Waldemar Klassen Center Director

Active membership.

GEORGIA

STATION	ADDRESS/TELEPHONE/FAX		ADMINISTRATOR
Attapulgus Ext & Res Ctr	Attapulgus, GA 31715 (912) 465-3241		Mr. Stan R. Jones Acting Superintendent
Central GA Branch Stn	1508 Godfrey Rd, NW Eatonton, GA 31024 (706) 485-6105 FAX: (706) 485-7325	#	Mr. Vaughn Calvert Superintendent
Coastal Plains Stn	Tifton, GA 31794 (912) 386-3339 FAX: (912) 386-7058		Dr. Gale Buchanan Assoc Director & Resident Director
GA Exp Stn	Experiment, GA 30212-1000 (706) 228-7263 FAX: (706) 228-7270		Dr. Gerald Arkin Assoc Director & Resident Director
GA Mountain Branch Stn	Rt 1, Box 1005 Blairsville, GA 30512 (706) 745-2655 FAX: (706) 745-1526	# *	Mr. Dennis Thompson Superintendent
NW GA Branch Stn	PO Box 640 Calhoun, GA 30703-0640 (706) 629-2696 FAX: (706) 629-1938	 # 	Mr. Phil Worley Superintendent Mr. Edward Worley Retired Superintendent
SE GA Branch Stn	Rt 1, Box 146 Midville, GA 30441 (912) 589-7472 FAX: (912) 589-7009		Mr. Charles Perry Superintendent
Univ of GA - Agr Exp Stn SW GA Branch Stn	Rt 2 Plains, GA 30441 (912) 824-4375 FAX: (912) 824-3664		Mr. Robert Moss Branch Station Coordinator Mr. Stan R. Jones Superintendent
Univ of GA - College of Agr	101 Conner Hall Athens, GA 30602 (706) 542-2151 FAX: (706) 542-1119		Dr. W.P. Flatt Dean College of Agriculture
Univ of GA - GA Agr Exp Stn	107 Conner Hall Athens, GA 30602 (706) 542-2151 FAX: (706) 542-1119		Dr. Clive Donoho Director
Field Res Services - GA Agr Exp Stn	1109 Experiment St Griffin, GA 30223-1797 (404) 228-7318	#	Mr. George V. Granade Superintendent

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KANSAS

STATION	ADDRESS/TELEPHONE/FAX	ADMINISTRATOR
KS Agr Exp Stn & Coop Ext Service	Waters Hall Manhattan, KS 66506-4008 (913) 532-7137 FAX: (913) 532-6563	Dr. Marc A. Johnson Interim Dean of Agr & Director Dr. George E. Ham Assoc Dean & Assoc Dir
Fort Hays Branch Ext Stn	1232 - 240th Ave Hays, KS 67601-9228 (913) 625-3425 FAX VOICE: (913) 625-3425	Dr. Patrick I. Coyne Head
SE KS Branch Ext Stn	PO Box 316 # * Parsons, KS 67357 (316) 421-4826 FAX: (316) 421-0136	Dr. Lyle W. Lomas Head
SW KS Res-Ext Ctr	4500 E Mary, Bldg 924 Garden City, KS 67846 316-276-8286 FAX: (316) 276-6028	Dr. James A. Schaffer Head
NW KS Res-Ext Ctr	105 Experiment Farm Rd # Colby, KS 67701 (913) 462-6281 FAX: (913) 462-2315	Dr. Richard White Head
Harvey County Exp Field	Rt 1, Box 1465 Hesston, KS 67062 (316) 327-2547	Dr. Mark M. Claassen Agronomist-in-Charge
Irrigation & N Central KS Exp Fields	Rt 1, Box 43 Courtland, KS 66939 (913) 335-2836	Dr. W. Barney Gordon Agronomist-in-Charge
S Central KS Exp Field	10620 S Dean Rd Hutchinson, KS 67505-9409 (316) 662-9021	Dr. William F. Heer Agronomist-in-Charge
E Central KS Exp Field	Rt 3, Box 302 Ottawa, KS 66067 (913) 242-5616	Dr. Keith A. Janssen Agronomist-in-Charge
KS River Valley Irrigation Exp Field	6347 NW 17th Topeka, KS 66618 (913) 354-7236	Dr. Larry D. Maddux Agronomist-in-Charge
Cornbelt Exp Field	Rt 1, Box 151 Powhattan, KS 66527 (913) 474-3469	Dr. Brian Marsh Agronomist-in-Charge
Sandyland Exp Field	Box 247 St. John, KS 67576 (316) 549-3345	Dr. Victor L. Martin Agronomist-in-Charge

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STATION	ADDRESS/TELEPHONE/FAX	ADMINISTRATOR
Horticulture Res Ctr	1901 E 95th St S Wichita, KS 67233 (316) 788-0492	Dr. John C. Pair Horticulturist-in-Charge
Pecan Exp Field	PO Box 247 Chetopa, KS 67336 (316) 597-2972	Mr. William R. Reid Horticulturist-in-Charge

KENTUCKY

STATION	ADDRESS/TELEPHONE/FAX		ADMINISTRATOR
Univ of KY College of Agr	N-3 Agricultural Science Bldg, N Lexington, KY 40506 (606) 257-2983 FAX: (606) 258-5842	# *	Mr. W.O. Peterson Dir Management Operations
Univ of KY Res & Ed Ctr W KY Substn	PO Box 469 Princeton, KY 42445 (502) 365-7541 FAX: (502) 365-2667	#	Mr. Donnie L. Davis Superintendent
Univ of KY Robinson Substn	Quicksand, KY 41363 (606) 666-2438 FAX (606) 666-2215	#	Mr. R. Mason Morrison Superintendent & Area Program Director

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# Active membership.

LOUISIANA

STATION	ADDRESS/TELEPHONE/FAX		ADMINISTRATOR
Burden Res Stn	4560 Essen Lane Baton Rouge, LA 70809-3424 (504) 766-3471 FAX: (504) 766-3664		Dr. W. Allen Meadows Resident Director
Calhoun Res Stn	PO Box 539 Calhoun, LA 71225 (318) 644-2662 FAX: (318) 644-7244	#	Dr. M.L. Robbins Resident Director
Central Stn	2410 Ben Hur Rd Baton Rouge, LA 70820 (504) 765-2876 FAX: (504) 765-2877		Dr. Gerald T. Berggren Resident Director
Citrus Res Stn	Rt 1, Box 628 Port Sulphur, LA 70083 504/564-2467 FAX: (504) 564-9353	#	Dr. Roy J. Constantin Resident Director
Dean Lee Res Stn	8105 E Campus Dr Alexandria, LA 71302-9608 (318) 473-6520 FAX: (318) 473-6535		Dr. Jack L. Kreider Resident Director
Hammond Res Stn	21549 Old Covington Hwy Hammond, LA 70403 (504) 543-4125 FAX: (504) 543-4124	#	Dr. Roy J. Constantin Resident Director
Hill Farm Res Stn	Rt 1, Box 10 Homer, LA 71040 (318) 927-2578 FAX: (318) 927-9505		Dr. W. Nelson Philpot Resident Director
Iberia Res Stn	PO Box 466 Jeanerette, LA 70544 (318) 276-5527 FAX: (318) 276-9088		Dr. Howard P. Viator Resident Director
Idlewild Res Stn	Drawer 985 Clinton, LA 70722 (504) 683-5848 FAX: (504) 683-3281	#	Dr. Freddy J. Peterson Resident Director
Macon Ridge Res Stn	212 Macon Ridge Rd Winnsboro, LA 71295-5719 (318) 435-2157 FAX: (318) 435-2133		Dr. R.L. Rogers Resident Director
NE Res Stn	Box 438 St. Joseph, LA 71366 (318) 766-3769 FAX: (318) 766-4278	*	Dr. R. Larry Rogers Resident Director

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LOUISIANA - cont'd

STATION	ADDRESS/TELEPHONE/FAX	ADMINISTRATOR
Pecan Res Stn	PO Box 5519 Shreveport, LA 71135-5519 (318) 797-8034 FAX: (318) 676-7371	Dr. Richard D. O'Barr Resident Director
Red River Res Stn	PO Box 8550 # Bossier City, LA 71113-8550 (318) 741-7430 FAX: (318) 741-7433	Dr. Jere M. McBride Resident Director
Rice Res Stn	PO Box 1429 # Crowley, LA 70527-1429 (318) 788-7531 FAX: (318) 788-7553	Dr. Joe A. Musick Resident Director
Rosepine Res Stn	PO Box 26 Rosepine, LA 70659 (318) 463-7708 FAX: (318) 463-9981	Dr. Jack L. Kreider Resident Director
SE Research Stn	P0 Drawer 567 Franklinton, LA 70438 (504) 839-2322 FAX: (504) 839-3202	Dr. Jim F. Beatty Resident Director
St. Gabriel Res Stn	PO Box 34 St. Gabriel, LA 70776-0034 (505) 642-8150 FAX: (504) 642-5339	Dr. Gerald T. Berggren Resident Director
Sweet Potato Res Stn	PO Box 120 Chase, LA 71342 (318) 435-2155 FAX: (318) 435-5298	Dr. W.A. (Bill) Mulkey Resident Director

Active membership.

MISSISSIPPI

STATION	ADDRESS/TELEPHONE/FAX		ADMINISTRATOR
MS Agr & Forestry Exp Stn	PO Box 9740 Miss. State, MS 39762 (601) 325-3005 FAX: (601) 325-3001		Dr. Verner Hurt Director
MS Agr & Forestry Exp Stn	PO Box 9740 Miss. State, MS 39762 (601) 325-3000 FAX: (601) 325-3001		Dr. Fred Tyner Asst Director
MS Agr & Forestry Exp Stn	PO Box 9740 Miss. State, MS 39762 (601) 325-3003 FAX: (601) 325-3001		Dr. Tom Helms Asst Director
Alcorn Branch Exp Stn	ASU, PO Box 330 Lorman, MS 39096 (601) 877-6100 FAX: (601) 877-6529	#	Dr. George T. Bates Assoc Dean of AREAS
Animal Res Ctr	PO Box 9750 Miss. State, MS 39762 (601) 325-3715 FAX: (601) 325-4081	#	Mr. F. T. Withers, Jr. Superintendent
Brown Loam Branch Exp Stn	1676 Brownloam Rd Raymond, MS 39501 (601) 857-5952 FAX: (601) 857-2887		Dr. Rick Hardin Superintendent
Central MS Res & Ext Ctr	1320 Seven Springs Rd Raymond, MS 39154 (601) 857-2284 FAX: (601) 857-2359	*	Mr. W. A. Brock Interim Head
Coastal Aquaculture Unit	PO Box 7983 Gulfport, MS 39501 (601) 896-5778 FAX: (601) 388-1375		Mr. Michael Murphy Resident Manager
Coastal Plains Branch Exp Stn	Rt 5, Box 150-D Newton, MS 39345 (601) 683-2084 FAX: (601) 683-6770		Mr. W. A. Brock Superintendent
Delta Branch Exp Stn	PO Box 197 Stoneville, MS 38776 (601) 868-9311 FAX: (601) 686-7336	#	Dr. C. D. Ranney Head & Asst Dir
Gulf Coast Res & Ext Ctr	2710 Beach Blvd Suite IE Biloxi, MS 39531 (601) 388-4710 FAX: (601) 388-1375		Dr. David Veal Head

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MISSISSIPPI - cont'd

STATION	ADDRESS/TELEPHONE/FAX		ADMINISTRATOR
Res Support Units	PO Box 9811 Miss. State, MS 39762 (601) 325-2390 FAX: (601) 325-8188		Dr. Vance Watson Head
NE MS Branch Exp Stn	PO Box 456 Verona, MS 38879 (601) 566-2201 FAX: (601) 566-2259		Dr. Normie Buehring Superintendent
N MS Branch Exp Stn	Rt 2, Box 82 Holly Springs, MS 38635 (601) 252-4321 FAX: (601) 252-3981		Dr. Joe Johnson Superintendent
N MS Res & Ext Ctr	PO Box 456 Verona, MS 38879 (601) 566-2201 FAX: (601) 566-2257		Dr. Pat Bagley Head
Plant Science Res Ctr	PO Box 9631 Miss. State, MS 39762 (601) 325-2273 FAX: (601) 325-8057		Mr. Mitchell Roberts Superintendent
Pontotoc Branch Exp Stn	Rt 4, Box 249 Pontotoc, MS 38863 (601) 489-4621 FAX: (601) 489-6011	#	Mr. Crofton Sloan Resident Manager
Prairie Res Unit	PO Box 124 Prairie, MS 39756 (601) 369-4426 FAX: (601) 369-9547	#	Dr. R. R. Evans Superintendent
S MS Branch Exp Stn	PO Box 193 Poplarville, MS 39470 (601) 795-4525 FAX: (601) 795-0653	#	Dr. Ned Edwards Superintendent
Truck Crops Branch Exp Stn	PO Box 231 Crystal Spr., MS 39059 (601) 892-3731 FAX: (601) 892-2056		Dr. C. P. Hegwood Superintendent

Active membership.

MISSOURI

STATION	ADDRESS/TELEPHONE/FAX	ADMINISTRATOR
Univ of MO College of Agr, Food & Natural Resources at Columbia	2-44 Agriculture Bldg Columbia, MO 65211 (314) 882-7488 FAX: (314) 882-0388	Dr. Bruce Bullock Assoc Dean & Director
Univ of MO S Farm Operations at Columbia	2-44 Agriculture Bldg Columbia, MO 65211 (314) 882-4450	Ms. Rosemary Lewis Director
Univ of MO Agronomy Res Ctr (Bradford Farm) at Columbia	Rt WW Columbia, MO 65201 (314) 442-7945	Mr. John Poehlman Resident Superintendent
Univ of MO SW Ctr at Mt. Vernon	Rt 3, Box 87 Mt. Vernon, MO 65712 (417) 466-2148 FAX: (417) 466-2936	Dr. Richard Crawford Director
Dairy Farms	Rt 5 (Old Hwy 40) Columbia, MO 65202 (314) 442-4009	Dr. John Denbigh Director
Univ of MO Delta Res Ctr at Portageville	PO Box 160 * Portageville, MO 63873 (314) 379-5431 FAX: (314) 379-5875	Mr. Jake Fisher Resident Superintendent
Univ of MO Forage Systems Res Ctr at Linneus	Rt 2, Box 80 Linneus, MO 64653 (816) 895-5121 FAX: (816) 895-5122	Dr. Fred Martz Resident Superintendent
Univ of MO Greenley Memorial Ctr at Novelty	Novelty, MO 63460 (816) 739-4410	Mr. Randall Smoot Supervisor
Univ of MO Horticulture Res Ctr at New Franklin	1-40 Agriculture Bldg Columbia, MO 65211 (816) 848-2268	Mr. John Shopland Resident Superintendent
Univ of MO N MO Ctr at Spickard	Rt 2, Box 196 Spickard, MO 64679 (816) 485-6576	Dr. Fred Martz Resident Superintendent
Univ of MO Powell Gardens at Kingsville	PO Box 90 Kingsville, MO 64061 (816) 566-2600	Mr. Keith Hawxby Interim Manager
Univ of MO Wurdack Farm at Cook Stn	Cook Station, MO 65449 (314) 743-6612	Mr. Brent Booker Resident Manager
Graves Memorial Plots	Fairfax, MO (816) 744-6231	Mr. Bob Chapple Director

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MISSOURI - cont'd

STATION	ADDRESS/TELEPHONE/FAX	ADMINISTRATOR
Hundley-Whaley Farm	PO Box E Albany, MO 64402 (816) 564-3363	Mr. Don Null Director
Timmons Farm	Wheeling, MO 64688 (314) 882-8777	Dr. Ken Schnecberger Director
Ross Jones Farm	Bethel, MO (314) 882-9956	Dr. Donald Osborn Director
Pennewell Plots	Palmyra, MO (816) 739-4410	Mr. David Quarles Director
Claypan Research Farm (McCredie)	Rt 1 Kingdom City, MO (314) 882-4450	Ms. Rosemary Lewis Director
Basket Wildlife Ctr	15550 Veach Rd Ashland, MO 65101 (314) 882-9423	Mr. Ernie Wiggers Director
University Forest	Rt 2, Box 139 Williamsville, MO 63967 (314) 222-8373	Mr. Jim Joiner Director
Gaylord Laboratory	Puxico, MO (314) 222-3531	Dr. Leigh Fredrickson Director
Rocheford Farm	9761 E St. Charles Rd Columbia, MO (314) 882-9427	Dr. Jeff Firman Director

NEW MEXICO

STATION	ADDRESS/TELEPHONE/FAX	ADMINISTRATOR
NM State Univ Agr Science Ctr at Alcalde	PO Box 159 369 Alcalde Alcalde, NM 87511 (505) 852-4241	Mr. Andy Nunez Interim Superintendent
NM State Univ Agr Science Ctr at Artesia	67 E Four Dinkus Rd Artesia, NM 88210 (505) 748-1228	Mr. Carl E. Barnes Superintendent
NM State Univ Agr Science Ctr at Clovis	Star Rt Clovis, NM 88101 (505) 985-2292	Dr. Neal B. Christensen Superintendent
NM State Univ Agr Science Ctr at Corona	PO Box 126 Corona, NM 88318 (505) 849-1218	Mr. Laban Tubbs Superintendent
NM State Univ Agr Science Ctr at Farmington	PO Box 1018 Farmington, NM 87401 (505) 327-7757	Mr. E. Joe Gregory Superintendent
NM State Univ Agr Science Ctr at Los Lunas	1036 Miller St SW Los Lunas, NM 87031 (505) 865-7340	Dr. Ron F. Hooks Superintendent
NM State Univ Agr Science Ctr at Tucumcari	HC 30, Box 61 Tucumcari, NM 88401-9602 (505) 461-1620	Mr. Rex E. Kirksey Superintendent
Mora Res Ctr	PO Box 359 Mora, NM 87732 (505) 387-2319	Mr. John Harrington Superintendent
Clayton Livestock Ctr	Rt 1, Box 109 Clayton, NM 88415 (505) 374-2566	Dr. Glen P. Lofgreen Superintendent

NORTH CAROLINA

STATION	ADDRESS/TELEPHONE/FAX	ADMINISTRATOR
Border Belt Tobacco Res Stn	Rt 1, Box 198 # Whiteville, NC 28472-9801 (910) 648-4703	Mr. Ty M. Marshall Superintendent
Central Crops Res Stn	13223 US 70 West Clayton, NC 27520-2128 (919) 553-2141	Mr. George B. Clark Superintendent
Horticultural Crops Res Stn	3800 Castle Hayne Rd # Castle Hayne, NC 28429-9657 (910) 675-2314	Mr. Thomas L. Blake Superintendent
Horticultural Crops Res Stn	Rt 5, Box 43 # Clinton, NC 28328-9501 (910) 592-7839	Mr. Fred E. Cumbo Superintendent
Lower Coastal Plain Tobacco Res Stn	200 Cunningham Rd Kinston, NC 28501 (919) 527-3579	Mr. Sanford T. Barnes Superintendent
Mountain Horticultural Crops Res Stn	2000 Fanning Bridge Rd Fletcher, NC 28732-9238 (704) 684-7197	Mr. Harley E. Blackwell Superintendent
Mountain Res Stn	516 Test Farm Rd # Waynesville, NC 28786-4016 (704) 456-3943	Mr. William L. Teague Superintendent
NC Dep of Agr Res Stn Div	PO Box 27647 Raleigh, NC 27611-7647 (919) 733-3236	Mr. L.W. Hedspeth, Jr. Engineer
NC Dep of Agr Res Stn Div	PO Box 27647 Raleigh, NC 27611-7647 (919) 733-3236	Mr. E. Floyd Wiggins Engineer
NC Dep of Agr Res Stn Div	PO Box 27647 # Raleigh, NC 27611-7647 (919) 733-3236	Mr. Paton H. Kelley Director
NC Dep of Agr Res Stn Div	PO Box 27647 # * Raleigh, NC 27611-7647 (919) 733-3236 FAX: (919) 733-1754	Mr. Carl V. Tart, Jr. Asst Director
Oxford Tobacco Res Stn	300 Providence Rd PO Box 1555 Oxford, NC 27565-1555 (919) 693-2483	Mr. William C. Clements Superintendent
Peanut Belt Res Stn	Box 220 Lewiston-Woodville, NC 27849-0220 (919) 348-2213	Mr. J. Stephen Barnes Superintendent

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NORTH CAROLINA - cont'd

STATION	ADDRESS/TELEPHONE/FAX	ADMINISTRATOR
Piedmont Res Stn	8350 Sherrills Ford Rd Salisbury, NC 28147-9619 (704) 278-2624	Mr. Raymond D. Coltrain Superintendent
Sandhills Res Stn	2664 Windblow Rd # Jackson Springs, NC 27281-9505 (910) 974-4673	Mr. Dexter J. Hill Superintendent
Tidewater Res Stn	Rt 2, Box 141 Plymouth, NC 27962-9526 (919) 793-4118 FAX: (919) 793-5142	Mr. John W. Smith Superintendent
University Res Unit 1	4616 Reedy Creek Rd Raleigh, NC 27695 (919) 515-2713	Mr. J. Stewart Starr Superintendent
University Res Unit 2	3720 Lake Wheeler Rd Raleigh, NC 27603 (919) 737-2759	Mr. Kenneth M. Snyder Superintendent
University Res Unit 4	4301 Beryl Rd Raleigh, NC 27636 (919) 515-3144	Mr. Paul N. Lineberger Superintendent
University Res Unit 7 Randleigh Farm	3241 Auburn-Knightdale Rd Raleigh, NC 27610 (919) 772-6711	Mr. Charles G. Campbell Superintendent
University Res Unit 10 Beef Cattle Center	Rt 1, Box 198-B Bahama, NC 27503 (919) 471-6872	Mr. Randall W. Guthrie Superintendent
University Res Units	Box 7601 Raleigh, NC 27695 (919) 515-2823	Mr. Wallace R. Baker Supt-In-Charge
Upper Coastal Plain Res Stn	Rt 2, Box 400 # Rocky Mount, NC 27801-9276 (919) 442-7326	Dr. Clyde R. Bogle Superintendent
Upper Mountain Res Stn	8004 NC Hwy 88 East # Laurel Springs, NC 28644-9406 (910) 982-2501	Mr. Joe K. Hampton Superintendent
Upper Piedmont Res Stn	1944 Wentworth St Reidsville, NC 27320 (910) 349-8347	Dr. Joe T. French Superintendent
Caswell Farm Unit	2415 W. Vernon Ave # Kinston, NC 28501 (919) 559-5104	Mr. Roger H. Lee Superintendent

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NORTH CAROLINA - cont'd

STATION	ADDRESS/TELEPHONE/FAX		ADMINISTRATOR
Cherry Farm Unit	Cherry Hospital Box 8000 Goldsboro, NC 27530 (919) 731-3270	#	Mr. Rex B. Sasser Superintendent
Umstead Farm Unit	John Umstead Hospital Butner, NC 27509 (919) 575-7204	#	Mr. Roger E. Collins Superintendent

Active membership.

OKLAHOMA

STATION	ADDRESS/TELEPHONE/FAX		ADMINISTRATOR
OK Agr Exp Stn at Stillwater	OSU 139 Ag Hall Stillwater, OK 74078 (405) 744-5398		Vacant
OK Agr Exp Stn at Stillwater	OSU 139 Ag Hall Stillwater, OK 74078 (405) 744-5398		Dr. Larry Crowder Asst Director
Agronomy Res Range at Stillwater	Rt 5, Box 150 Stillwater, OK 74074 (405) 372-0016		Mr. John Weir Range Manager
Agronomy Res Stn at Perkins	PO Box 110 Perkins, OK 74059 (405) 547-2385	#	Mr. Rick Matheson Stn Superintendent
Agronomy Res Stn at Stillwater	Agronomy Department 368 Ag Hall Stillwater, OK 74078 (405) 624-7036		Mr. Chris Rice Sr Stn Superintendent
Caddo Res Stn at Ft. Cobb	PO Box 42 Ft. Cobb, OK 73038 (405) 643-2501		Mr. R. Weidenmaier Agriculturist
Eastern Res Stn at Haskell	Rt 1, Box 65A Haskell, OK 74436 (918) 482-3822		Mr. Tommy Pickard Stn Superintendent
Kiamichi Forestry Res Stn at Idabel	Rt 1, Box 228 Idabel, OK 74754 (405) 286-5175		Mr. R.A. Heinemann Stn Superintendent
Marvin Klemme Range Res Stn	Rt 1 Bessie, OK 73622		Mr. C. Worthington Stn Superintendent
N Central Res Stn at Lahoma	PO Box 141 Lahoma, OK 73754 (405) 796-2447		Dr. R.J. Sidwell Sr Stn Superintendent
OK Fruit Res Stn at Perkins	Rt 2, Box 1030 Perkins, OK 74059 (918) 866-2320		Mr. Kenneth Karner Stn Superintendent
OK State Univ Dep of Agronomy at Stillwater	Agronomy Department 370 Ag Hall Stillwater, OK 74078 (405) 744-6425 FAX: (405) 744-5269	#	Dr. Bill Webb Superintendent of Agronomy Res Stn

Active membership.

OKLAHOMA - cont'd

STATION	ADDRESS/TELEPHONE/FAX		ADMINISTRATOR
OK Vegetable Res Stn at Bixby	13711 S. Mingo Rd Bixby, OK 74008 (918) 369-2441		Mr. D.B. Bostian Stn Superintendent
Panhandle Res Stn at Goodwell	PO Box 429 Goodwell, OK 73939 (405) 349-2611		Mr. Bob Hamilton Stn Superintendent and Professor
Pawhuska Res Stn at Pawhuska	PO Box 1017 Pawhuska, OK 74056 (918) 287-2810		Mr. Roy Ball Herd Manager
S Central Res Stn at Chickasha	Rt 3, Box 75 Chickasha, OK 73018 (405) 224-4476	#	Mr. D.W. Hooper Sr Stn Superintendent
Southern Great Plains Field Stn at Woodward	2000 18th Street Woodward, OK 73801 (405) 256-7449		Dr. Phillip Sims Superintendent
Irrigation Res Stn at Altus	Rt 1, Box 15 Altus, OK 73521 (405) 482-3459		Mr. Rocky Thacker Sr Stn Superintendent
USDA-ARS Grazing Lands Res Laboratory at El Reno	PO Box 1199 El Reno, OK 73036 (405) 262-5291		Dr. W.A. Phillips Asst Professor
Wes Watkins Agr Res & Ext Ctr at Lane	PO Box 128 Lane, OK 74555 (405) 889-7343	# * # 	Dr. Jonathan Edelson Professor & Ctr Director Mr. Mike Bourne Stn Superintendent

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PUERTO RICO

STATION	ADDRESS/TELEPHONE/FAX	ADMINISTRATOR
College of Agr Sciences, Agr Exp Stn	P O Box 21360 Rio Piedras, PR 00928 (801) 767-9705 FAX: (801) 758-5158	Angel A. Custodio Assoc Dean and Deputy Director
Venzuela Contract Stn	Rio Piedras, PR 00927 (809) 765-1995	Fernando Abruna Superintendent

SOUTH CAROLINA

STATION	ADDRESS/TELEPHONE/FAX		ADMINISTRATION
Clemson Univ Agr Support	101 Ag Service Center Cherry Rd Clemson, SC 29634 (803) 656-3477 FAX: (803) 656-0276	#	Dr. Jack W. Davis Director
Clemson Univ Coastal Res & Ed Ctr	2865 Savannah Hwy Charleston, SC 29414 (803) 766-3761 FAX: (803) 571-4654		Dr. Merle Shepard Resident Director
Clemson Univ Edisto Res & Ed Ctr	PO Box 247 Blackville, SC 29817 (803) 284-3343 FAX: (803) 284-3684	 # 	Dr. Mike Sullivan Acting Resident Dir Dr. James R. Hill, Jr. Resident Dir - Retired
Clemson Univ Pee Dee Res & Ed Ctr	Rt 1, Box 531 Florence, SC 29501 (803) 662-2112 FAX: (803) 661-5676	# *	Dr. Ben U. Kittrell Resident Director
Clemson Univ Sandhill Res & Ed Ctr	PO Box 23205 Columbia, SC 29224-3205 (803) 788-5700 FAX: (803) 736-4418 Internet: svrkd@clust1.clemson.edu	#	Dr. Stephen D. Verkade Resident Director

* State Representative to RCAS Executive Committee 1994.
# Active membership.

TENNESSEE

STATION	ADDRESS/TELEPHONE/FAX		ADMINISTRATOR
Univ of TN Institute of Agr TN Agr Exp Stn	103B Morgan Hall Knoxville, TN 37920 (615) 974-7105	#	Dr. J. Ike Sewell Assoc Director
Univ of TN Institute of Agr Ames Plantation	Rt 1, Box 389 Grand Junction, TN 38039 (901) 878-1067		Dr. Jim Anderson Superintendent
Univ of TN Institute of Agr Dairy Exp Stn	1071 New Lake Rd Lewisburg, TN 37091 (615) 359-1578 FAX: (615) 359-3408	#	Mr. Henry Dowlen Superintendent
Univ of TN Institute of Agr Forestry Exp Stn	901 Kerr Hollow Rd Oak Ridge, TN 37830 (615) 483-3571		Mr. Richard Evans Superintendent
Univ of TN Institute of Agr Highland Rim Exp Stn	3181 Experiment Stn Rd Springfield, TN 37172 (615) 384-5292 FAX: (615) 384-1987	#	Dr. Dennis Onks Superintendent
Univ of TN Institute of Agr Knoxville Exp Stn	PO Box 1071 Knoxville, TN 37901-1071 (615) 974-7201 FAX: (615) 974-7448	# * # 	Dr. John Hodges III Superintendent Mr. Bob Reynolds Asst Superintendent
Univ of TN Institute of Agr Martin Exp Stn	131 Brahm Hall Martin, TN 38238-5008 (901) 587-7256 FAX: (901) 587-7841	#	Mr. Harry Henderson Superintendent
Univ of TN Institute of Agr Middle TN Exp Stn	PO Box 160 Springhill, TN 17174-0160 (615) 486-2129	#	Dr. Joe High, Jr. Superintendent
Univ of TN Institute of Agr Milan Exp Stn	205 Ellington Dr Milan, TN 38358 (901) 686-7362 FAX: (901) 687-3558		Mr. John Bradley Superintendent
Univ of TN Institute of Agr Plateau Exp Stn	Rt 9, Box 363 Crossville, TN 38555 (615) 484-0034	#	Dr. Robert Freeland Superintendent
Univ of TN Institute of Agr Tobacco Exp Stn	Rt 5, Box 113 Greenville, TN 37743-9206 (615) 638-6532 FAX: (615) 638-6458	#	Dr. Phil Hunter Superintendent
Univ of TN Institute of Agr W TN Exp Stn	605 Airways Blvd Jackson, TN 38301 (901) 424-1643 FAX: (901) 425-4729	#	Dr. Jim Brown Superintendent

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\# Active membership.

TEXAS

STATION	ADDRESS/TELEPHONE/FAX		ADMINISTRATOR
TX A&M Univ Agr Res & Ext Ctr at Amarillo (Bushland-Etter)	6500 Amarillo Blvd West Amarillo, TX 79106-1796 (806) 359-5401 FAX: (806) 358-9718		Dr. G. B. Thompson Resident Director
TX A&M Univ Agr Res & Ext Ctr at Beaumont	Rt 7, Box 999 Beaumont, TX 77713-8530 (409) 752-2741 FAX: (409) 752-5560		Dr. James W. Stansel Resident Director
TX A&M Univ Agr Res & Ext Ctr at Chillicothe-Vernon	PO Box 1658 Vernon, TX 76384 (817) 552-9941 FAX: (817) 553-4657		Dr. Jerry Cox Resident Director
TX A&M Univ Agr Res & Ext Ctr at Corpus Christi	Hwy 44 West Rt 2, Box 589 Corpus Christi, TX 78406-9704 (512) 265-9201 FAX: (512) 265-9434		Dr. Bobby R. Eddleman Resident Director
TX A&M Univ Agr Res & Ext Ctr at Dallas	17360 Coit Rd Dallas, TX 75252-6599 (214) 231-5362 FAX: (214) 783-1723 E-mail: jreinert@dallas-ctr.tamu.edu	#	Dr. James A. Reinert Resident Director
TX A&M Univ Agr Res Ctr at El Paso	1380 A&M Circle El Paso, TX 79927 (915) 859-9111 FAX: (915) 859-1078	#	Dr. Howard L. Malstrom Resident Director
TX A&M Univ Agr Res & Ext Ctr at Lubbock	Rt 3, Box 219 Lubbock, TX 79401-9757 (806) 746-6101 FAX: (806) 746-6528 E-mail: jabernat@lubbock-ctr.tamu.edu		Dr. John R. Abernathy Resident Director
TX A&M Univ Agr Res Ctr at McGregor	Rt 1, Box 148 McGregor, TX 76657 (817) 840-3032 FAX: (817) 840-3544		Dr. David K. Lunt Superintendent
TX A&M Univ Agr Res & Ext Ctr at Overton	Drawer E Overton, TX 75684 (903) 834-6191 FAX: (903) 834-7140 E-mail: clong@overton-ctr.tamu.edu		Dr. Charles R. Long Resident Director
TX A&M Univ Agr Res Stn at Pecos	PO Box 1549 Pecos, TX 79772 (915) 445-5050 FAX: (915) 445-9231	#	Dr. Jaroy Moore Superintendent

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TEXAS - Cont'd

STATION	ADDRESS/TELEPHONE/FAX	ADMINISTRATOR
Prairie View A&M Univ Coop Agr Res Ctr	PO Box U Prairie View A&M University Prairie View, TX 77446 (409) 857-2030 FAX: (409) 857-2325	Dr. A.H. Reine Research Director
TX A&M Univ Agr Res & Ext Ctr at San Angelo	7887 N Hwy 87 San Angelo, TX 76901 (915) 653-4576 FAX: (915) 658-4364	Dr. Carl S. Menzies Resident Director
TX A&M Univ Agr Res Stn at Sonora	PO Box 918 Sonora, TX 76950 (915) 387-3168	Dr. Charles A. Taylor Superintendent
TX A&M Univ Agr Res & Ext Ctr at Stephenville	Rt 2, Box 00 # * Stephenville, TX 76401 (817) 968-4144 FAX: (817) 965-3759 E-mail: jmcfarla@stephenville-ctr.tamu.edu	Dr. Joe McFarland Resident Director
Blackland Res Ctr at Temple	808 E Blackland Rd Temple, TX 76502 (817) 770-6600 FAX: (817) 770-6561	Dr. C. Allan Jones Resident Director
TX A&M Univ Agr Res & Ext Ctr at Uvalde	1619 Garner Field Rd Uvalde, TX 78801 (512) 278-9151 FAX: (512) 278-1570	Dr. J. W. Holloway Resident Director
TX A&M Univ Agr Res & Ext Ctr at Weslaco	2415 East Hwy 83 Weslaco, TX 78596 (512) 968-5585 FAX: (512) 968-0641 E-mail: jamador@weslaco-ctr.tamu.edu	Dr. Jose M. Amador Center Director
TX A&M Univ Plant Disease Res Stn at Yoakum	PO Box 755 Yoakum, TX 77995 (512) 293-6326 FAX: (512) 293-2054	Dr. A. Mike Schubert Superintendent

Active membership.

VIRGINIA

STATION	ADDRESS/TELEPHONE/FAX	ADMINISTRATOR
VA Polytechnic Institute & State Univ	Hutcheson Hall Blacksburg, VA 24061 (703) 231-4152 FAX: (703) 231-4163	Dr. L. A. Swiger Dean, College of Agriculture and Life Sciences & Director, VA Agr Exp Stn
Eastern Shore Agr Exp Stn	Rt 3, Box 133 Painter, VA 23420 (804) 442-6411 FAX: (804) 787-5824 E-mail: PAINTER@vtvm1	Dr. Robert E. Baldwin Director
Eastern VA Agr Exp Stn	Rt 690 # Warsaw, VA 22572 (804) 333-3485 E-mail: EGS@vtvm1	Dr. Ras G. Sagaral Superintendent
Hampton Roads Agr Exp Stn	1444 Diamond Springs Rd Virginia Beach, VA 23455 (804) 363-3900 FAX: (804) 363-3950 E-mail: PSCHULTZ@vtvm1	Dr. Peter Schultz Director
Middleburg Agr Exp Stn	Rt 2, Box 9 Middleburg, VA 22117 (703) 687-3521 E-mail: MAES@vtvm1	Dr. David Kronfeld Acting Superintendent
Northern Piedmont Agr Exp Stn	PO Box 448 Orange, VA 22960 (703) 672-2660 E-mail: NPAES@vtvm1	Dr. David E. Starner Superintendent
Reynolds Homestead Agr Exp Stn	PO Box 70 # Critz, VA 24082 (703) 694-4135 FAX: (703) 694-2791	Mr. Richard E. Kreh Res Assoc in Charge
Shenandoah Valley Agr Exp Stn	McCormick Circle Steeles Tavern, VA 24476 (703) 377-2255 FAX: (703) 377-5850 E-mail: STEELES@vtvm1	Dr. Gerald L. Jubb Acting Superintendent
Southern Piedmont Agr Exp Stn	PO Box 448 Blackstone, VA 23824 (804) 292-5331 FAX: (804) 292-5623 E-mail: MRSG@vtvm1	Dr. James L. Jones Director
SW VA Agr Exp Stn	Rt 2, Box 430 Glade Spring, VA 24340 (703) 944-3668	Mr. Allan Brock Superintendent

Active membership.

VIRGINIA - cont'd

STATION	ADDRESS/TELEPHONE/FAX		ADMINISTRATOR
Tidewater Agr Exp Stn	6321 Holland Rd PO Box 7099 Suffolk, VA 23437 (804) 657-6450 FAX: (804) 657-9333 E-mail: PWORREL@vtvm1	#	Dr. Glen Heuberger Director
VA Seafood Agr Exp Stn	PO Box 369 Hampton, VA 23669 (804) 727-4861 FAX: (804) 727-4871 E-mail: EX221@vtvm1		Dr. Merle Pierson Acting Superintendent
Winchester Agr Exp Stn	595 Laurel Grove Rd Winchester, VA 22602 (703) 869-2560 FAX: (703) 869-0862 E-mail: COBB@vtvm1	* # 	Dr. Alson H. Smith, Jr. Director Dr. Robert Horsburgh Director - Retired

* State Representative to RCAS Executive Committee 1994.
\# Active membership.

DR. JAMES RILEY HILL, JR.
Resident Director and Professor of Animal Science
Clemson University - Edisto Research and Education Center
Blackville, South Carolina

Award Recipient - 1994, Nashville, TN

Dr. James Riley Hill, Jr. is recognized for his leadership and devoted service to RCAS. He first attended the annual meeting of RCAS in 1980. He served as secretary/treasurer in 1989-90, second vice-president in 1990-91, first vice president/program chairman 1991-92, president 1992-93, and chairman of the Executive Committee 1993-94. He served on numerous committees including the publications, bylaws, and special activities committees. During his tenure as president major changes in the bylaws were made, and the position of executive treasurer was established. In the fall of 1989 he hosted the RCAS Executive Committee in South Carolina.

He served as secretary, vice president and president of the Southern Section of ASAS, and director of the American Society of Animal Science. He was the 1993 Soybean Man Of The Year in South Carolina.

James Riley Hill, Jr. grew up on a general farm in Abbeville, SC. He received B.S. and M.S. degrees in Animal Husbandry from Clemson University and a Ph.D. in Animal Breeding from North Carolina State University. In 1963 he joined the Animal Science faculty of Clemson University with joint research and teaching responsibilities. From January, 1979 to June, 1993 he was Resident Director of the Clemson University - Edisto Research and Education Center at Blackville, SC., where he had administrative responsibility for up to 18 resident research and extension faculty, representing six different departments. He also coordinated cooperative programs which included approximately 25 nonresident faculty. Dr. Hill worked as county extension agent, and taught at Berry College, Mt. Berry, GA prior to joining the Clemson faculty.

Dr. Hill believes that most of the problems facing agriculture require interdisciplinary teams to solve; therefore, the programs at the Edisto Center emphasize a team approach. He is a strong proponent of a close working relationship between research, extension and teaching.

He and his wife Ethel Mae live on their farm in Blackville, SC. They have one son, two daughters and three grandchildren. James Riley is a Deacon and Sunday School teacher in First Baptist Church.

RCAS COMMITTEES
1994 - 1995

Local Arrangements
1995 Meeting - New Orleans
Jere McBride, Chair
G. T. Berggren
R. J. Constantin
Richard O'Barr
H. P. Viator

Finance Committee
Dennis Onks, Tennessee, Chair
Jonathan Edelson, Oklahoma
Joe McFarland, Texas
Jere McBride, Louisiana
Will Waters, Florida

By-Laws
John Hodges, Tennessee, Chair
Jake Fisher, Missouri
Jere McBride, Louisiana
James Reinert, Texas
William Peterson, Kentucky

Awards
Ben Kittrell, South Carolina, Chair
Howard Malstrom, Texas
John Robinson, Arkansas

Historical
Bill Webb, Oklahoma, Chair
Joe High, Tennessee

Nominating
Joe Musick, Louisiana, Chair
James Riley Hill, South Carolina
Will Waters, Florida

Membership Service
F. T. "Butch" Withers, Mississippi, Chair
Randy Ackeridge, Alabama
James Reinert, Texas
Joe McFarland, Texas
Lyle Lomas, Kansas

Past Recipients of the **Distinguished Service Award** for service, leadership, and outstanding contributions to RCAS over an extended period of time.

Year Awarded	Recipient
1987	John Ewing
1988	Robert "Bobby" Moss
1989	Joe High, Jr.
1990	Wallace Griffey and Bill Webb
1991	Norman Justus
1992	Gene Morrison and Jere McBride
1993	William Loe and Howard Malstrom

PAST PRESIDENTS, RCAS

Years	Chairman
1969 - 1970	Robert Moss
1970 - 1971	Preston Reed
1971 - 1972	Charles Douglas
1972 - 1973	Charles Douglas
1973 - 1974	D. M. Gosset
1974 - 1975	Henry Marshall
1975 - 1976	Tom Corley
1976 - 1977	H. Rouse Caffey
1977 - 1978	E. G. Morrison
1978 - 1979	Robert Moss
1979 - 1980	Joe High, Jr.
1980 - 1981	Julian Craigmiles
1981 - 1982	Freddy Peterson
1982 - 1983	Wallace Griffey
1983 - 1984	Bill Webb
1984 - 1985	Gary Elmstrom
1985 - 1986	Norman Justus
1986 - 1987	Robert Freeland
1987 - 1988	Jere McBride
1988 - 1989	Howard Malstrom
1989 - 1990	Bill Loe
1990 - 1991	Edward Worley
1991 - 1992	Will Waters
1992 - 1993	James R. Hill, Jr.
1993 - 1994	Joe Musick