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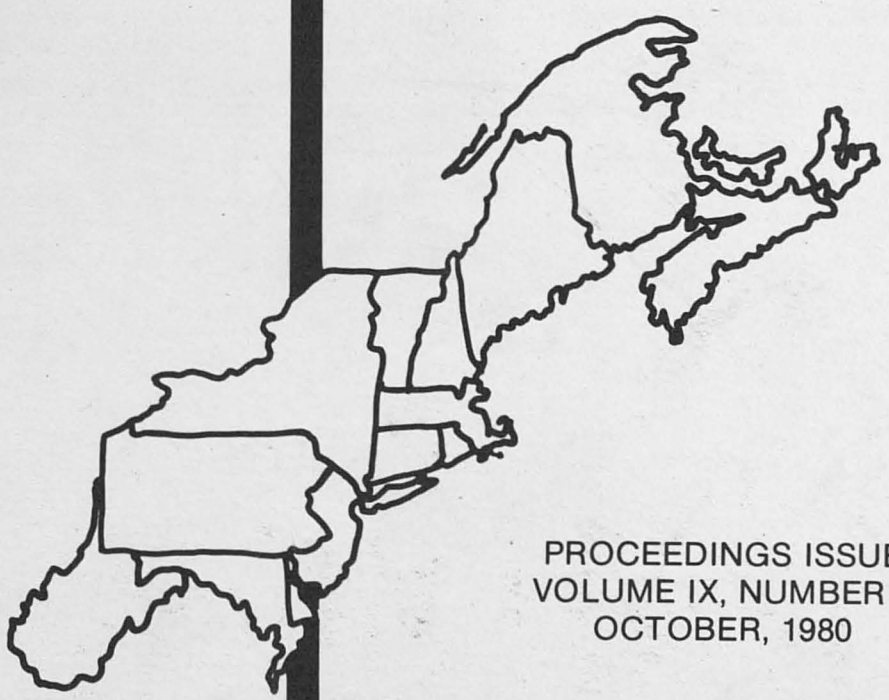

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NEW DIRECTIONS IN NORTHEAST EXTENSION IN THE 1980's

John Gerwig

The opportunity to meet with you today is much appreciated. I certainly want to compliment you on the wide range of topics to be discussed at this conference. It provides a clue to your theme, "New Directions for the 80's." I have a long-standing interest in Northeast agriculture and most of us here grew up and have worked in this area. And, of course, I am convinced that the Cooperative Extension Service is a most important part of the agricultural scene.

Someone has said that the only constant is change—and I believe that those of us who work in the Northeast can testify to the truth of that statement.

We've been through a lot of change, and I believe we're at a threshold of a lot more. But, we who are accustomed to change and who have lived with it, have no fear of it. As a matter of fact, change is exciting and challenging and stimulating.

Before I embark on my crystal ball gazing for Extension Teaching and Research in the 80's, let me bring to your attention a little historical perspective. The Connecticut Experiment Station celebrated its 100th anniversary in 1975. We at the New Jersey Agricultural Experiment Station are celebrating this year.

Now for the crystal ball gazing; to coin a phrase, we're in a new ball game. And the rules of the game are being dictated more by the energy situation than any other single consideration. It is not necessarily that oil will not be available, but the question is, can we afford it? Of course, here in the Northeast we experience tremendous urbanization pressures, but I think we can survive these if agriculture can achieve energy self-sufficiency by 1990.

We should never lose sight of the fact that farm products produced in the Northeast are not only "fresher . . . by miles!"—but in view of transportation costs—more economical . . . by miles! Before some of you wish to challenge that statement as being too broad, please accept it for the time being. We have 1/3 of the nation's population at our very doorsteps. And when it comes to marketing, agriculture is in its infancy.

I see research and extension playing a major role in the 80's, for there is no finer educational delivery system in the world than the agricultural experiment station at the land-grant universities throughout the nation.

Northeast Agriculture must grow even stronger. We grow 1/6 of the potatoes and in 4 or 5 states from Virginia to Rhode Island we can grow more vegetables than California.

The "unfinished miracles" of research will be found along the broad frontier of genetics—in both plant and animal agriculture. We know that a fuller understanding of the mechanisms and functions of living cells means advances in all the agricultural sciences. We know that to increase plant production we must know more about the process of photosynthesis. And we want to know more about nitrogen-fixation so that the properties of legumes might also become available to the cereals.

The Food and Agriculture Act of 1977 called for new federal research into alternative fuels, human nutrition, environmental problems caused by technological changes in food and agricultural production, improving the management and use of the nation's natural and renewable resources—timber, water and soil, energy conservation, climate, drought, and weather modification, export market expansion, more efficient and environmentally sound methods of producing, processing, marketing, and using food fiber, waste products, and forest and rangeland products, and new crops.

There are our new programs of integrated pest management which hold great promise of reducing our dependence on petrochemicals.

Of interest to us in the Northeast is to provide direct educational, technical, and organizational assistance to the operators of small farms and their families and to help develop appropriate technology to increase income from these enterprises.

There is no end of future problems to be solved and challenges to be met.

Let me give you a little of my perspective as far as the reorganization within the USDA is concerned. The reorganization was mandated by the 1977 Food and Agriculture Act. It was interpreted by the present administration to be what we have at present. There have been many modifications of where we started as to where we are now. The purpose of Title 14 was to foster coordination of research, extension and teaching. I would not have interpreted Title 14 the way that some have but given the direction that something was going to be done, maybe where we have ended up is not too bad. The Joint Council with its regional counterparts should have some major impact on the decision making process in Washington. The User Board is having major input into the decisions that are being made as well. At present, I believe both boards are beginning to function and being helpful in the decision making process.

But I do see changing roles for research and extension personnel in the future—and the not-too-distant future at that. I see extension specialists doing applied research. Here, in the Northeast, this will come as no surprise, for many of our extension specialists have been involved in applied research. Most of the personnel stationed at our New Jersey/South Jersey Research and Development Center are Extension specialists—mainly in vegetable production, agronomy, and soils.

This role change of the specialist will then require the county agent to act as the specialist. Most of this work will be accomplished on a multi-county or regional basis. For example, our county agents are area agents and act somewhat as specialists. And both the agent and the specialist have been engaged from time to time in applied research. Directors of Extension will be Extension Directors of Applied Research, as well as Directors of Extension.

I also see that the research personnel of the Experiment Station will be more concerned with basic information. And it is the pool of basic knowledge that sets the foundation and limits of applied and developmental research, that, in turn, are translated into technologies for application and use.

The spectacular production of crops we have harvested lately is based on research that was done 10, 20, and 30 years ago. Where is the next "miracle" to come from?

It will come from basic research and I believe that much of basic research will be grant funded. Most of the tax dollars in Agriculture will go into applied research—at least most of the increases. I believe directors of research will be mostly basic research directors, and more grant funds will be involved.

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The future food supply depends in large measure on the achievements of agricultural research and I have no doubt that national—and international—priorities will be arranged—or rearranged—to meet both domestic and world requirements.

But, as in the current celebrated case of California federal funds not going into "labor-saving" devices, I do envision more grantsmanship on the part of researchers to obtain funds for specific projects. Much time will be spent on writing proposals to grant-funding organizations. Of course, this may mean some "bending" of our mission. Any grant-funded project must work on that particular project and not on one that the Department of Agriculture might be interested in at the time. Budgets will stay skinny. We will do well if we keep up with increased costs; therefore, other methods must be used.

I also see a rapid adoption of computers—with remote access computer terminals in the county agents' offices, in the specialists' offices, in the research laboratory, and on the farms—in the milking parlor, plastic greenhouse or egg room—and, eventually, in everybody's living room.

Stored computer data, supplied by research and extension, will be immediately accessible and will minimize the need for publications. Information on weather, market news, recommendations as to fertilizer, application of pesticides, time of pruning, temperature and humidity readings in poultry houses and greenhouses—and a myriad of additional information will be accessed instantaneously. What few publications may be needed will be in the form of complete readouts.

Much of the data will be localized and of use to farmers in specific targeted geographic areas. Dissemination of information will be much faster than we have known—and the amount of data will be much greater. Specialists will spend more time developing information to be put into computer systems rather than in writing publications.

The new hardware will add much to farm efficiency, as the introduction of mechanization has in the past.

I am optimistic about the future. There will be great "opportunities for leadership." Research and extension will be playing major roles in the future, although, as I have tried to point out, these roles may be different.

The Users Advisory Board, SEA, USDA, listed 10 areas of interest to them—producers, consumers, and representatives of a wide range of interests:

1. Basic research for agriculture
2. Integrated pest management
3. Food security
4. Structure of food and agricultural system
5. Water and agriculture
6. Agricultural transportation and distribution
7. Energy and agriculture
8. Competition in the food and agricultural system
9. Human nutrition
10. Need for better research, extension and teaching management and coordination.

Let me reemphasize. The computer age is here. In the dairy barns alone there are electronic feeders that allow precise individual grain allotments and alert the dairy farmer when a cow is "off feed." There are electronic devices for mechanized milk recording, mastitis detection and computer data entry. The same can be applied to most all areas of farming and in the home. Computers will change the management schemes of all types of farming.

As these trends continue into the 1980's, farm business management will become crucial. Farm managers will spend less time collecting eggs and milking cows and driving tractors and more time collecting and analyzing information. Managers will make more use of computer technology to expedite these tasks. With research and Extension serving these managers, they must function as facilitators to assist in the delivery of subject matter information.

It could well be that before this decade is over, we will know whether our agricultural research and extension system has met the challenges that face it.

I am confident the Northeast Agricultural Economics Council will meet their challenges—here in this meeting and back home in your respective states.