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Agricultural Extension

1981

CHANGING DELIVERY SYSTEMS FOR AGRICULTURAL EXTENSION
THE EXTENSION TEACHER - CHANGING ROLES AND COMPETENCIES

UNIVERSITY OF CALIFORNIA
DAVIS
AUG 25 1981
Agricultural Economics Library

by Tom Brown

"When the world is changing very slowly, you don't need much information. But when change is rapid, then there's a premium on information to guide the process of change."

-- Lester Brown

Even the most casual observer would recognize that American agriculture has undergone a tremendous change, especially since World War II. There appears to be general agreement that agricultural research and extension have been major contributors to the increase in the productivity of American agriculture.

Questions are being raised about whether extension will continue to be as effective in the future. The National Agricultural Research and Extension Users Advisory Board said in the March, 1980 report to the President and Congress, "We have concern that improved knowledge and technology transfer systems need to be developed by extension. In this interest, we recommend continuing review of extension methods with an eye toward use of the most effective means of transferring knowledge and technology."

The authors of A Time to Choose credit research and extension with making successful contributions to technological and productivity advancement in agriculture by choosing a strategy of targeting the large scale, innovative producers and leaving the smaller farmer to benefit from what trickles down. They recommended that research and extension should be reoriented to better serve smaller and medium size farms. The reorientation would include paying greater attention to marketing,

*Presented at AAEE meeting,
Clemson University, July 26, 27, 1981.*

transportation and processing of agricultural products for smaller farms. Increase research to sort out and develop organic farming alternatives that will reduce costs and increase efficiencies of small farms. And, reassess and offer alternatives to current chemical, capital and energy intensive systems of farming.

There are those who would say extension's credibility has slipped.

It is not clear that extension is providing significant help to the very large commercial farmers and agri-business firms, (Castle, p. 13).

The concern about extension's capacity to continue to be effective in the future is related to two factors: (1) the audiences they program to reach; (2) the technical level of competency of the extension staff.

The audience that extension serves has become more heterogeneous as commercial farms declined in number but grew in size and specialization. While small and part-time farms have remained about the same or even increased in some areas, middle size farms have declined steadily.

State Cooperative Extension Service goals for agriculture are often written very broad and general, such as:

1. To assure that our citizens have an abundant supply of healthy, nutritious food at a reasonable cost.
2. To assure that farm families have an opportunity for a good prosperous life on the farm.
3. To insure that we are responsible stewards of our natural resources and environment.
4. That agriculture contributes its share in the development of the community, state, nation and world.

The priority goals of the USDA as stated by Deputy Secretary of Agriculture Dick Lyng and SEA Director, Anson Bertrand, include:

(1) increasing productivity in agriculture, (2) conservation of soil and water, (3) increase marketing information for farmers, and (4) improved management flexibility with more help in decision-making for farmers.

Most of us recognize it isn't a simple either/or answer. To effect agricultural productivity and to insure a continued abundant supply of food requires interaction with the 30 percent of farms with sales above \$40,000 that produce 85 percent of the agriculture production.

At the same time, we have a responsibility for the 1.6 million plus farmers on small farms. The question is the age-old one of program balance. Extension must deal with the question at all levels where programs are developed. Priorities must be set as to which are the most important objectives. And then the appropriate audiences will follow.

The level of subject matter competence and method of delivery will be determined largely by the specific audiences.

As one looks at state extension programs, at least three different extension teaching jobs can be identified -- county agent, area specialist and state specialist. The role of the different teachers has changed with the needs of the times. The critical question is whether the changes in the extension teaching roles have been adequate for the present and the future.

County Agent

The first contact for most extension programs is the county agent. In this role the person must be skilled in working with people, knowledgeable about program development methods and an effective communicator. While subject matter specialization may be desirable at this level, the opportunities are limited.

With one or at most a few county agents assigned to a county, the agent must interface with a wide variety of audiences. In practice successful agents do become experts in the major type of farming in the county. In recent times a conscientious effort has been made to staff counties with agents who have advanced training in subjects important in that county. Further, adjoining counties often share agents to gain expertise in additional subject matter fields.

While the debate goes on about whether county agents should be more specialized, the fact remains that with the situation where the number of agents likely will remain static there is limited opportunities for much greater specialization of county agents. Local people demand a broad program.

Two important issues are the kind and level of training required of new county agents, and the kind and amount of on-the-job training which is provided.

Farmers have indicated a greater need for information and educational programs in the areas of marketing, business management and production technology, (Brown, p. 11). While some people have suggested there would be significant benefits from expanded programs in public

policy, farmers have not aggressively sought this kind of program, (Wise, p. 10).

What is the correlation between subject matter training of agents and their willingness and ability to mount successful programs for different audiences and in different subject matter areas? Evidence would suggest that minimal gains could be made by recruiting more specific trained county staff, (Brown, p. 47). Greater payoff can come from better conceived and implemented in-service training. This in-service training is the responsibility of departments and their state extension specialists and the extension staff training personnel.

A new problem that is emerging and will undoubtedly become more serious is the employment of students with an urban background. In many Colleges of Agriculture, one-half or more of the students do not have a farm background. This limitation poses some serious problems, especially in the first few years of employment with extension. Some colleges are developing different types of "hands on" experiences to better equip urban students to work effectively with farmers and agribusinesses.

An internship program offers an opportunity to acclimate the individual to the agricultural community. The period for the internship needs to be of sufficient length to permit the individual to acquire understanding and gain a perspective for agriculture.

Many of today's graduates are fairly specialized in their formal training even at the BS level. While this has some advantage, it also creates problems. Agents' credibility with farmers suffers when they

are unable to intelligently discuss the many concerns of farmers. This situation places added pressure on the orientation of new staff and the in-service training in general agriculture subject matter.

Area Specialist

As commercial farms have become larger and more specialized, farmers are demanding greater competency from the extension staff. They want to interact with the specialist. Many contact the state extension specialist or the researcher working on a specific problem.

Commercial firms have placed selected specialists in the field, usually as a sales representative for one of their high profit lines. For certain kinds of information, farmers consider commercial firms to be the most important source, (Brown, p. 12-15).

Area specialists are almost always responsible to the department for subject matter and frequently for administration. In essence, area specialists are state specialists with a smaller geographic area to serve and they devote a greater amount of their time to directly teaching farmers. With a static resource base, any additions to the number of area specialists must come from a reduction in either county or state specialist positions.

Many of the major problems troubling farmers requires the input of several disciplines. A team of specialists can best develop and implement a significant educational program that can address these problems effectively.

A continuing program concern of extension is how to most effectively coordinate the educational activities of the county agent, area specialist

and the state specialist. For example, should the area specialist work through the county agent or should the area specialist identify a unique audience and strive to meet their needs.

State Extension Specialist

One of the unique advantages of the Cooperative Extension Service has been the effective interface between the person in the field and the campus subject matter departments. This interface system is complex. It consists of mutual interest, trust and commitment between the field staff and the state extension specialist staff.

In the past, state specialists were largely selected from the ranks of the field staff. Few had earned a PhD. Most were successful communicators. All had a genuine interest in assisting farm and rural people through the extension education program.

In the late sixties and seventies, replacements for extension specialists were recruited from the new crop of agricultural PhDs. Effort was made to find individuals with experience as county agent, vo-ag or other similar experience. Currently, it is very difficult to find candidates for extension state specialist positions with field training experience in extension or closely related fields.

State extension specialists in most states are faculty members of the respective subject matter departments. Promotion and tenure requirements for the department are applied to the extension faculty the same as all other faculty members. In too many instances the extension faculty experiences difficulty in achieving promotion and tenure because the process does not recognize the unique responsibilities and contributions of the extension faculty member.

Frequently, joint appointments are proposed as a practical solution to the problem of gaining promotion and tenure in the department. When the joint appointment increases the productivity of both extension and/or research and resident instruction because of the complementary of the activities, joint appointments are constructive. On the other hand, when joint appointments are implemented to achieve objectives other than developing and supporting an effective extension educational program, the results are destructive.

Research trained PhDs are inadequately prepared to meet the challenges and responsibilities of a state extension specialist. This situation will force departments in Land-Grant Universities' Colleges of Agriculture to develop a more effective procedure for recruiting, orienting and training new state extension subject matter specialists.

Summary and Recommendations

The objectives of the Agricultural Extension program, of necessity, must be broad and serve the needs of a diverse audience. It would be unwise to completely zero in on one audience, such as commercial farmers or small limited resource farmers. The challenge is to develop the right program balance.

The county agent or general agriculturist will continue to be a very vital part of the extension delivery system. With the backup of state specialists, the county agent can meet the educational needs of the small and medium size farmers. Demonstrations, short courses, tours and publications remain as effective means for delivering information to these audiences.

If resources were more abundant, area specialists would be the preferred means of delivering educational programs to commercial farmers. But the harsh reality is that extension will have to operate with less. Frequently, the county agent will have to be the primary local contact for commercial farmers.

The new developments in electronic communication, individualized learning, data storage, retrieval and analysis offer the potential of greatly increasing the capacity of the county agent to assist the commercial farmer with more complex and sophisticated problems.

The burden of the responsibility for orientating the new county agent and keeping all agents competent in subject matter will continue to rest on the state extension specialists. Departments in the College of Agriculture will be challenged to find the resources and expertise to keep abreast of the fast moving developments in the technology and structure of agriculture.

Opportunities for innovative program development between extension and other groups need to be explored vigorously. Commercial farmers can and will pay for educational service type activities. Some examples are the farm business management services, computer assisted decision programs, marketing price data and outlook information.

Extension is not the only source of agricultural information available to farmers and in some areas it is not the most important. Extension must reassess its real strengths and make adjustments to assure a high quality program. This could mean dropping some programs completely, teaming up with private business to find sufficient resources to impact on a problem and cooperate with other agencies to assure maximum return from the investment of public funds.

The unique educational concept of extension is as valid today as it was in Seaman Knapp's day. Program development must begin with local people. Research is the key to solving problems and extension's educational programs bring about change -- change in the capacity of people, change in quantity and quality of information, change in the speed and efficiency of knowledge transfer.

The extension teacher is crucial in this educational process. The individual must grow in technical competence while holding on to the mastery of program development and communication. In an age of rapid change and greater specialization, it is urgent that extension maintain a great degree of flexibility so programs can be adjusted to the changing needs of farmers and the rural communities.

Thomas G. Brown, Interim Associate Dean and Acting Director of
Agricultural Extension, University of Missouri, Columbia, Missouri 65211.

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