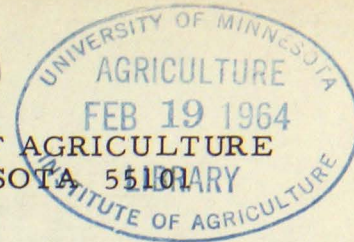


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 UNIVERSITY OF MINNESOTA -- U. S. DEPARTMENT OF AGRICULTURE
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IMPLICATIONS OF NEW DIMENSIONS FOR THE AGRICULTURAL EXTENSION SERVICE

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Change has virtually become the central characteristic of our time. Phenomenal growth of knowledge possessed by man and the social and economic impacts of the utilization of rapidly expanding technological knowledge give rise to new needs of society. Dean Berg has identified some of the Institute of Agriculture opportunities and responsibilities. These have significant implications for the Agricultural Extension Service.

There are a large number of these implications to which we could address our attention. Time available dictates the choice of only a few for consideration. I should like to state briefly some of those which I perceive and which I have chosen to discuss and then proceed to deal with them in more detail.

First -- I believe we must review and re-formulate the organizational and program objectives of the Agricultural Extension Service.

Second -- We must plan programs of even greater scope and coordinate our program efforts with total extension programs of the University.

Third -- On the assumption possible programs will continue to exceed probable resources, some rigorous priority decisions are required.

Fourth -- Some emerging programs call for increased emphasis on inter-disciplinary efforts.

Fifth -- Emerging programs call for a higher proportion of specialists among the Extension workers although the nature of our clientele requires a core of generalists as well.

Sixth -- Greater emphasis will need to be placed on programs in depth and on appropriate methods for doing this.

Seventh -- Some emerging programs will call for organizational coordination with other University units fully as much as interdisciplinary effort.

Eighth -- Staffing patterns must be adjusted to provide more specialization of personnel.

Ninth -- Some modifications of the institutional and legislative arrangements with counties will be required to facilitate different staffing patterns and adequate recognition of professional training and competence.

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Tenth -- Higher levels of professional competence must always be sought; one consequence will be demand for higher levels of formal training.

Eleventh -- Overriding all of these is the implication that the Extension institution must be responsive to change.

Basic Philosophy

While the basic Land-Grant philosophy underlying Extension work provides an element of stability for our educational programs, it also furnishes the broad structure within which we can direct our efforts to the changing technical, economic, social and political needs of our time. Congressman John Adair expressed part of this philosophy when he spoke in support of the Smith-Lever Act in 1914. He said in part: "The itinerant teacher or demonstrator (that is, Extension worker) will be expected to give as much thought to the economic side of agriculture -- the marketing, standardizing, and grading of farm products -- as he gives to the matter of larger acreage yields. He is to assume leadership in every movement, whatever it may be, the aim of which is better farming, better living, more happiness, more education, and better citizenship." Thus Extension's philosophy stems from Land-Grant philosophy.

Using today's terminology we subscribe to the same general philosophy when we say we are interested in total social and economic development in order to serve the needs of all the people and that this social and economic development is accomplished only through the development of people. We regard the role of Extension workers to be that of education: education for action -- and as Administrator Lloyd Davis of the Federal Extension Service recently said, "education at the key points limiting progress -- education as the means for overcoming social and economic problems." The orientation of our efforts to problem-solving is clearly evident in this philosophy and role of Extension.

The well-known educational philosopher, John Dewey, championed the idea that when people have in hand the appropriate facts and an understanding of the consequences of various courses of action, people will choose sound alternatives. This is the reason that Extension relies so heavily on the findings of research as the base for its educational programs.

Objective

But while this basic philosophy may be appropriate to our day, the needs of people do take on new dimensions. These new dimensions suggest new problems exist. This leads us to the assumption that the program objectives of Extension likewise should be examined and possibly re-defined periodically. The technological, economic and social dimensions outlined by Dean Berg imply that such examination and re-definition of our Extension objectives are presently in order, for objectives give direction and force to our educational efforts.

Our Extension home economists have been engaged in just such a process for nearly a year; the 4-H and youth development staff has only recently begun a study of youth program objectives and the Extension faculty consultative committee has given some attention to objectives on a broader base. It is my belief that it is important for Extension workers to study and up-date their objectives frequently.

Thus, the first implication for Extension which I perceive from the new dimensions facing the Institute of Agriculture is that Extension objectives should be reviewed and re-stated in light of present-day needs. Professor Ralph Tyler suggests five sources for educational objectives: These are: (1) studies of the learners or clientele; (2) studies of environment or contemporary life; (3) studies of the subject areas; (4) a philosophy of education; and (5) knowledge of the psychology of learning. Tomorrow's conference program is organized toward this implication for review of objectives.

Program

A second area of implications relates to program. Economic and social aspects of life today are infinitely complex and interdependence of all segments of society is well recognized. The development of Extension programs must take full account of these phenomena and, as Dr. Davis pointed out, must be directed at the key points limiting progress, whatever these may be. Full recognition of this need requires full utilization of the resources of the Institute and of the University in the development and execution of appropriate educational programs. To achieve full utilization of total resources we face two programming hurdles: (1) to develop programs sufficiently broad in scope to match the broad and complex problems; and (2) to learn how to effectively coordinate in the program of continuing education our present Extension resources with those available from other units of the Institute or the University. These two elements of programming will challenge the best efforts of Extension and other University personnel.

Program Priorities

Without doubt our present programs will call for higher levels of performance than ever before to be effective in touching the key points which block the achievement of objectives we seek for the people of the state. But present programs must not be pursued willy-nilly. The changes in society as outlined by Dean Berg command critical evaluation of present programs. Which are essential to our objectives? Which are peripheral and could well be phased out or relinquished to other agencies or to our clients themselves? What priorities should be assigned to the current programs to be retained? What should be the relative priority of these compared to new program areas?

These judgments will call for straight thinking and some hard-nosed policies at times. I am mindful of the problems posed by the concern which interest groups may have in some present programs. Moreover, program determination has traditionally been, in part, a function of local leadership among the people. And there are very cogent educational principles supporting this practice which augurs for continued Extension programming. The notions of involvement and motivation are examples.

Economic Use of Teaching Resources

Another point relevant to the question of program priorities is the need to seek and choose those methods which economize upon our teaching resources. This is far more simple to express than to implement. One facet of this question is the eternal demand for more specialized service to individuals. Inherently, such services require large blocks of teaching manpower. The obverse is to economize on the professionals by employing methods which facilitate teaching in groups. We must continue to seek acceptable answers to this dilemma.

Modern Programs and Program Approaches Already at Hand

Dr. Berg spoke of newer program areas and of opportunities for modern approaches to both newer and older programs. It is clear that we will need to exploit more fully than ever before the orientation of our resources to problems. Cross-disciplinary contributions by Institute of Agriculture departments as well as of those in other University units must be brought to bear, problem by problem. Modification in our organizational structure may be required to bring this about. A committee is currently studying this question as was pointed out earlier this morning.

The Rural Areas Development program, for example, is crying for more integration and fuller utilization of resources. The basic philosophy assumes such interdisciplinary effort. Newer resource development programs, though somewhat more specialized, will call for equally significant interdisciplinary work. The recently announced Resource Conservation and Development program for Pope, Swift and Kandiyohi counties and tentative ones for several other counties to the north are illustrative. Specialists in engineering, soils, water, wildlife, management, marketing, public affairs, land use, recreation, tourist service, sociology, business development, and geography, to name a few, will be called upon to participate in the resource conservation and development program. Research programs presently being contemplated in the natural resource field could well lead to a full-blown effort to convey pertinent findings widely to people and communities.

These are only several illustrations of the implication that programming for the Extension function not only in the Institute of Agriculture but also more broadly in the University may undergo significant change. The purpose of such change would be to broaden the present extension of the University resources to every community and county, thus truly making the state the University's campus. County Agricultural Extension staffs already are an outpost of the University in every county, as former President J. L. Morrill once said. So also are the Branch Experiment Stations and Schools. Combinations of continuing education programming effort on the part of the county staffs and the Branch Stations will surely be an imperative step. Full recognition of the resources residing in educational agencies other than the University is also significant to efficient use of total educational resources.

Specialist Vs. Generalist

Much has been said and written about the desire of the highly specialized farmer to seek information from highly trained specialists. We must take account of this circumstance in our programming. I shall return to this point later. At the same time we cannot lose sight of the differential levels of interest, motivation and readiness which exist among our traditional clientele as well as among newer clientele. Large numbers of persons with whom Extension works are not yet as sophisticated in their seeking for information as the highly specialized innovator. Sociological research of the last six to eight years has demonstrated rather clearly a continuum of rate-of-practice-adoption ranging from the innovator to the non-adopter category. Moreover, some distinguishing characteristics of the various categories have been identified. These are of significance to the Extension programmer. I fear we have paid too little attention to the implications of this research. We

must take it into account as we plan future programs. I would contend we must aim at differing targets with appropriate ammunition; not the same load for everyone. We should program separately for each group, for the specialized innovator and for the others, on the basis of the needs, interest levels and stages of readiness of each. This also has organizational implications of which I shall speak in a moment.

Depth of Teaching

Recognition of the higher levels of education, of expertise and of specialization of many of our present and potential clients, implies Extension programs in depth. Some efforts in this direction have been undertaken. The recent series of four or more day-long sessions on specific phases of swine, dairy, beef or soil fertility management are instances of this kind. Farm and home development is an outstanding example and where both specialists and agents do the teaching. Such opportunities for more teaching in depth must be exploited to a far greater extent. In a sense the home economists were years ahead of the agriculturists on this score. How many of you recall the Nutrition I, II, III and IV series; or the Clothing I, II and III; or Child Development I, II and III? These series were focused on a given area of subject matter in sequence and considerable depth. They fell by the wayside somewhat because once specific groups "had those lessons," it was difficult to interest them in repeat performances in subsequent years even though content was somewhat different. The key may be to seek different groups. There are many opportunities for effective teaching to fill real needs through these sequential learning experiences.

For example, several efforts have utilized educational television as a means for sequential education. I am not at all certain we have learned best how to accomplish optimum results via this medium. But the opportunities appear attractive and continued effort will demonstrate the best use of TV in our programs.

New Programs on the Horizon

I'd like to turn now to some exciting program dimensions and possibilities. We can predict with reasonable certainty that we are on the threshold of greatly expanded use of high speed electronic computing equipment in our programs. We have already moved far past the pilot stage in applying these electronic data-processing techniques to Dairy Herd Improvement Work. A year ago we were processing data from 50,000 cows monthly in Minnesota and we will pass 100,000 cows per month in June of 1964. These techniques have greatly expanded the extent and utility of the DHIA program. A pilot project in electronic processing of farm business records is underway in collaboration with Iowa and Wisconsin. The farm business data which a farmer might obtain may be expected to furnish the basis for much better informed business decisions. Other possibilities might include computing of dairy rations utilizing data from forage analyses; and computing fertilizer recommendations based on soil tests and other basic data. Even Extension housekeeping tasks relating to mailing lists, records relating to 4-H members and other Extension cooperators offer possibilities for effective use of data processing equipment.

Consumer problems are attracting increased interest as a field for educational endeavor. Contributions from home economics, management, marketing and public affairs subject matter areas could well support a consumer education program. This is a field in which we have responsibility because so much of the pertinent information grows out of research conducted by the Institute of Agriculture by other land grant institutions and by the United States Department of Agriculture.

I have already touched upon outdoor recreation somewhat. It is evident from national and state interest that development of outdoor recreation will expand rapidly in the immediate future. Although specific research on outdoor recreation may be on the short side for a time, the subject matter of many areas suggested earlier are relevant and form the base for initial education programs in the recreation field. Some program examples are assistance to the resort industry and to developers of privately owned recreational sites and the like.

Our own 4-H camping program is due for a more thorough-going and sophisticated development and execution. It is being included in a broader concern by the University for work in outdoor recreation.

Problems related to water -- watershed protection and water pollution -- are drawing new attention. Extension may well assist individuals and communities to contact and utilize appropriate informational sources.

Several other dimensions with which we have been endeavoring to find our proper place are work focused on the needs of low-income families and on the interests of urban and other non-farm residents. Some attention will be given to the latter later in this conference. Only recently organized labor groups have inquired about Extension education programs which may be attractive and useful to their members. Initial exploratory discussions have taken place in this regard.

I have dealt at length with program potentials and implications to emphasize the immensity of the Extension educational task which lies before the University; not only before the Institute of Agriculture but also before the University as a whole through its several instruments of continuing education -- The General Extension Division, the Agricultural Extension Service, the Department of Agricultural Short Courses and others.

Organizational Questions

In my discussion of the differential levels of program sophistication I suggested the Extension function will need to be directed to a greater extent to more specialized needs. At the same time there remains a substantial group of people whose needs and interests are much less specialized. This suggests we will need many more specialized Extension personnel than in the past although a continued need for generalists remains.

More specialization will be required in the traditional areas as well as in the newer program areas which were identified. Increased need for specialties which supplement such programs as resource development, water, recreation, consumer education and the like calls for specialists in those fields. Some of these will be found in the Institute of Agriculture; some in other units of the University; and some in other public or private endeavor.

Generalists will be needed to develop and guide local educational programs utilizing the specialized resources made available. Among these is the 4-H and youth development program which cuts across many disciplines. Generalists also will be needed to meet the needs of individuals who are not interested in nor ready to utilize highly specialized resources.

In Institute of Agriculture

How will we organize to provide these kinds of personnel? First of all, within the Institute of Agriculture, we must provide for the closest of working relations between those staff members who have research, or resident teaching, or Extension assignments; or any combination of such duties. However this may be accomplished, close coordination is of signal importance if the total specializations in resources are to be made more available to people of the state. Capacities of the Department of Agricultural Short Courses and of the Agricultural Extension Service must be closely coordinated in the support of state-wide programs.

Some modified patterns of staffing may be adopted. One possibility is the use of area agents or area specialists. Such individuals would carry assignments for specialized subject matter work in groups of counties. They might be located at central locations, such as Branch Stations, or in other locations geographically relevant to the subject specialization needs. Our area soils agents who specialize in watershed development are illustrative of the nature of such assignments. Each of these men work in an area of about four counties.

Multiple county arrangements offer another type of staffing pattern. Here the agent positions from a number of counties could be gathered at one location with each agent being given a field of subject matter responsibility in which he would specialize for the entire group of counties.

We must recognize that there are some obstacles to staffing adjustments of this nature because the Agricultural Extension Service, by institutional arrangement and legislative action, is built into the fabric of organized local county government in a peculiar way. Proximity of Extension agents locally and the source and allocation of local funds may be retardants to staffing adjustments although they represent strength in program development and execution. Ways must be found to retain positive strengths and to ameliorate inadequacies in these arrangements.

Significant in field arrangements, I think, are possibilities of participation of Branch Station personnel in area Extension programs and possible location of some specialized Extension personnel at the Branch Stations.

In the University

As people in the state-wide campus seek to deal with some of the broader issues which have been suggested, the total resources of the University will become involved increasingly. Staff members from such units as the School of Business Administration, Institute of Child Welfare, Departments of Political Science, of Geography, of Speech and of Art Education, as well as the General Extension Division, have joined forces with us in some Agricultural Extension programs on occasion but this has been on an

ad hoc basis. Improved mechanisms for this tapping of total University resources as well as to provide for a two-way flow between General Extension and Agricultural Extension will be found desirable.

External

Advisory relationships between the people to be served and the Agricultural Extension Service should likewise be reviewed to ascertain the most effective arrangements in the light of present-day circumstances. The formal arrangements provided in the legislative statutes may be studied from the same point of view. For example, some modifications in financial provisions may be required to facilitate staffing adjustments and relocations.

International Programs

Dean Myers will be speaking to the conference on the international programs dimension on Thursday. Hence, I will only hypothesize at this point that Agricultural Extension along with other University units will be called upon to loan some of its staff resources toward the fulfillment of commitments to international programs. New kinds of arrangements with county Extension committees will be required to facilitate participation by Extension staff stationed in counties.

Professional Improvement

Thus far we have really talked only about continuing education for clientele. Now I'd like to consider the other dimension -- continuing education for the professional himself.

I should like to say a word about professional development. A review of the program areas I identified earlier will suggest areas of professional training in which we will need to seek continued development. Among the more important disciplines are some in the social sciences -- sociology, economics, psychology (especially of learning), political science, human relations and others. It is significant, I think, that county Extension agents a year and a half ago, most often identified these same areas as those in which they desired further study and preparation. These are areas of proficiency required not so much as teaching areas in and of themselves, but rather for the frame of reference they provide for assisting clientele with broad problems.

Some of the newer program needs will call for professional development in areas where disciplines are less clearly defined such as in resource use, recreation, water and the like. In our youth programs we may be more concerned about our preparation in psychology and sociology and vocational exploration than in traditional agricultural and home economics subject matter.

But let us not toss the baby out with the bath in our adjustments. Agricultural and family living sciences will continue to be basic to much of Agricultural Extension programs. Greater specialization in the traditional disciplines of the agricultural and family living sciences is inevitable. Investment in farm operations or in agri-business firms and the nature of many problems faced in these areas are often both complex and crucial, calling for greater sophistication on our part in the relevant disciplines.

Effective work in public affairs and in broad program development requires high levels of professional competence likewise.

Every Extension teacher will need to become even more expert in applying the principles of learning and teaching; in program development; in the use of effective teaching methods; and in applying and teaching the problem-solving process.

All of us in Extension have a personal responsibility to be professionally competent -- especially the specialists and agents who are at the cutting edge of the Institute's extension teaching function.

Professional development continues throughout life or the individual ceases to be a professional in the true sense. This is the state of obsolescence about which Dean Berg warned. Several avenues are open to each of us as we seek to avoid such obsolescence. First, we must put forth a good measure of self effort. Professional journals offer an excellent opportunity within reach of anyone. Extension in-service training programs will continue to be oriented to helping staff keep up to date, to deal with new programs and to improve skills.

More emphasis will certainly be placed upon the level of formal preparation. For area agents and area specialists, for example, an M.S. degree is expected to be a must -- and for some a doctorate may be specified. Increasingly more of the county Extension agents will be seeking a Master's degree in preparing more intensively for their assignments. Nationally and in our own state the number of agents engaged in graduate study and earning advanced degrees has been growing rapidly. Appropriate organizational arrangements with counties must be sought in order to facilitate financial recognition of advanced study engaged in by Extension agents. Off campus courses described by Dean Berg; leave for graduate study; and extension summer schools are opportunities in which to pursue advanced study. One of the seminars listed in your conference program will deal with professional improvement possibilities in more detail.

Glenn Frank, former president of the University of Wisconsin, once said: "The future of America is in the hands of two men -- the investigator and the interpreter ... Science owes its effective ministry as much to the interpretative as to the creative mind ... The investigator advances knowledge, the interpreter advances programs ... I raise the recruiting trumpet for the interpreters." Thus President Frank emphasized the importance of teachers -- whether in formal resident instruction or in informal Extension instruction.

I would like to add one word of encouragement. I believe the Extension unit and function of the Institute of Agriculture has a great future of useful service. Its distinguished past can be dwarfed by its future, if we are only wise enough to visualize this future and brave enough to bring it about.