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farm business NOTES

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THE LAND-GRANT COLLEGE CENTENNIAL

O. B. Jesness

A century has run its course since Congress passed and President Lincoln signed the Morrill land-grant act. This act provided grants of public land to the states for the support of colleges and universities that included "agriculture and mechanic arts." This is an appropriate time to review 100 years of growth and to look ahead.

The history of grants of public land for educational support is considerably longer than a century.[1] Some land grants were made by colonies in the early 1600's. A policy of Federal support for education was established early in the United States.

In the ordinance of 1787, Congress proclaimed "religion, morality, and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall be forever encouraged." This ordinance, which related to the Northwest Territory, laid the groundwork for general support of common schools. It provided for the setting aside of section 16 in each township for that purpose. In 1848 the aid was increased by adding section 36.

The policy of making education available generally on the secondary level was not extended to include higher education until later. As James Lewis Morrill, President Emeritus of the University of Minnesota, wrote, ". . . higher education in this country was modeled on the European and the British plan. Higher education was reserved for a minority, for those students who were intended for the traditional professional careers, or for young people born into families of wealth and position who were to be trained presumably for 'leadership.' Most colleges were private and sectarian, and offered a strictly limited course of classical studies oriented toward the past, not toward the needs of the future and a new and growing nation."[2]

Realization that higher education was inadequate led to an expanding interest in providing educational opportunities in agriculture. This led to the establishment of some agricultural schools, mainly with private support. It also stimulated activities in several states to obtain state support for such schools.

Michigan, in 1850, included a provision in its constitution dealing with this matter. The legislature, in 1855, established the Michigan Agricultural College. Massachusetts took similar action in 1856, and several other states followed in close order.

In short, several states established agricultural colleges before Congress made land grants for this purpose. In fact, pressures from supporters of existing colleges encouraged Congress to act.

Precedent for such action was established by extensive grants of public lands to states for internal improvements and other purposes. A few grants were made to individual colleges. But, the Morrill act was the first general provision for the support of higher education in designated fields.

THE LAND-GRANT ACT OF 1862

The land-grant act takes its name from Congressman Justin S. Morrill of Vermont who introduced the bill in 1857. It authorized grants of public lands to the states to "provide colleges for the benefit of agriculture and the mechanic arts." The fact that Representative Morrill's father was a blacksmith as well as a farmer may have led to the inclusion of "mechanic arts." As farming was the primary activity of that day, major emphasis centered on agriculture in discussions of the proposal.

The bill was first passed by Congress in 1858 but was vetoed by President Buchanan. Some reasons advanced in the veto message were:

1. Concern over possible interference with and harm to existing colleges and universities.
2. A supposed lack of power by the Federal government to compel states to carry out their trust.
3. Loss to the Treasury of needed income that it could obtain through sale of the land involved.
4. Damage to new states from depressed land prices due to placing the land on the market.

One objection has a strange ring today. It held that such a grant would lead the states to look to the Federal government for aids to which they were not entitled. President Buchanan fell back on the not uncommon idea that the bill was unconstitutional. This was based on reasoning that no power had been granted the Federal government to expend public money or lands for the benefit of the peoples of the states.

Congressman Morrill introduced a similar bill at a later session and again it passed.

The measure received President Lincoln's signature on July 2, 1862. The centennial now celebrates the Morrill land-grant act rather than the founding of agricultural colleges. However, much credit should be given that act for stimulating state action to establish and support such colleges.

The Morrill act provided a grant of 30,000 acres of public land to the states for each of their senators and repre-

[1] True, Alfred C., *A History of Agricultural Education in the United States, 1785-1925*, Miscellaneous Publication No. 36, USDA, 1929.

[2] Morrill, James L. *The Ongoing State University*. University of Minnesota Press, Minneapolis, Minnesota.

sentatives in Congress. As already indicated, this grant was made available for work in agriculture and mechanic arts in existing or new institutions of higher learning. The field of military tactics was added to the bill before final passage, probably because the nation was then engaged in war.

The act did not specify in detail how states should apply the proceeds of the grant. This encouraged wide differences of opinion regarding the types of institutions to be provided and their programs of work. As a result, procedures varied among the states.

States with established agricultural colleges logically employed the added support for their development. Some states assigned the grant to their existing state university for development of work in agriculture and engineering. Others created separate colleges for the purpose. Still others divided the grant among two or more institutions. Several states that established separate colleges actually named them "agricultural and mechanical colleges."

Upper midwest states illustrate some of the differences in application. Minnesota, Wisconsin, Illinois, and Nebraska developed the work in their state universities. Montana, the Dakotas, Iowa, Michigan, and Kansas created separate institutions. The pioneer agricultural colleges were started when it was very difficult to obtain faculty with desired education, training, and experience. Suitable textbooks were not available. Results of experimental and research work were also very limited. Much ground work had to be laid by persons from other fields.

EXPANSION IN RESEARCH

Need for materials for classroom instruction and for work with farmers helped create a growing interest in agricultural research. Congressman Morrill probably anticipated this development in a speech supporting his bill. He said, "We need a careful, exact, and systematized registration of experiments such as can be made at thoroughly scientific institutions and such as will not be made elsewhere."

This need encouraged some agricultural colleges to begin research and experimental work as part of their programs. Again Federal aid was sought. The passage in 1887 of the Hatch act authorized an annual appropriation of $15,000 to each state in support of such work. The Morrill act did not actually establish agricultural colleges nor the Hatch act, experiment stations. Nevertheless, both played an important role in speeding the establishment and development of these institutions.

This year, 1962, also marks the centennial of the United States Department of Agriculture. It was established as a department by Congress on May 15, 1862. A modest appropriation for agricultural work had been provided the Patent Office as early as 1839. The Department was an outgrowth of activities carried on by that office.

Reference to USDA calls attention to some different views on aid to experimental and research work. One view was that the agricultural experiment stations should, in effect, be branches of USDA or mainly under its control. However, the view that they should be under state control prevailed.

The agricultural experiment station in most states is a part of the land-grant institution. This results in a close bond between research, teaching, and other activities. Much research work conducted by USDA is well coordinated with similar work in the stations.

Federal support of agricultural experiment stations was increased and broadened through acts such as Adams (1906), Purnell (1925), Bankhead-Jones (1937), and research and marketing (1946). Research activities undertaken with Federal funds are approved and periodically audited by USDA to see that they relate to authorized lines of activity. However, responsibility for initiating, planning, and conducting the studies rests with the individual experiment station.

AGRICULTURAL EXTENSION

Another important field of agricultural activity of the land-grant institution is agricultural extension. Some founders of agricultural colleges saw the importance of making the agricultural campus statewide—thereby reaching farm people directly.

Farmers' institutes became an important means of carrying on such work. Then came the realization of the need for organizing this activity on a more formal basis with greater support. Again efforts were made to obtain Federal support. The importance of carrying research results directly to farmers to obtain the greatest returns was emphasized. Some states started a county agent program on their own or with private support. The Smith-Lever act of 1914 recognized this work by authorizing Federal support.

It is of interest to note some differences in Federal aids over time. Early aids were in terms of land. Public land was available while Federal funds were limited. The requirements laid on the states were not too specific. Grants to experiment stations were in cash. They were to be repeated annually with some provision for supervision of use.

The Agricultural Extension Service, however, was created as a cooperative activity. Specific state support had to be provided before Federal funds would be available. Therefore, more direct Federal participation and supervision are involved in the case of agricultural extension.

LAND-GRANT INSTITUTIONS ARE EDUCATIONAL

Land-grant colleges and universities are state educational institutions, not controlled by the Federal government. This has helped to keep their agricultural programs adapted to the areas they serve and to retain education as their primary function.

While research and extension are important in USDA they are far from dominant. USDA has a variety of regulatory and service functions. Recently, legislated programs relating to price supports, surplus disposal, production adjustments, farm financing, rural electrification, school lunches, etc. have loomed large in staff and budget.

It is not strange that some people responsible for such activities regard research and extension as handmaidens to these activities. If so directed, they might take on political tinges. Much of their status in work of discovery and analysis, in developing understanding of basic principles, and in application to problem solving would then be lost. A research program designed to "prove" that a given line of action is "right," or an extension assignment to "sell" the public on its acceptance would soon be disqualified as educational activity. The ties between the state land-grant institutions and USDA

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in research and extension offer some protection against this happening.

Resident instruction, research, and extension provide effective means for agricultural advancement. Campus instruction includes basic and applied training for farmers, agricultural researchers, teachers, and persons engaged in a variety of agricultural pursuits. Agricultural research is problem solving. It provides results for use by farmers and others. Extension brings to farm people and others the results of research. It helps develop better understanding of problems and their solutions.

Agricultural work in land-grant institutions may not rightly claim all credit for the high level of productivity of American agriculture. An important share must be assigned to farmers for their ingenuity in developing, adapting, and applying improved methods. Considerable research and educational work also is carried on by industry and others. However, no one will question the important contribution of land-grant institutions.

Research findings and their application have been so fruitful in yielding agricultural abundance that some suggest that a moratorium on research ought to be declared until markets catch up with capacity to produce. Such a proposal misses some important points.

Research cannot be turned on and off at will. It must be continuing with timely adjustments in types of work and methods to keep in step with changing problems. Research paves the way to progress, and progress always involves changes. Instead of restricting or preventing progress, we must make the changes involved. The need is for adjustment and adaptation to change.

There often is a considerable lag between discovery and application. Agriculture could continue to improve productivity for years on what is now known but not in general use. Shutting off research would not end the surplus but would handicap prospects for later improvement. Why handicap agriculture generally by choking off research because of surpluses in a few commodities?

The work in agriculture in the land-grant institutions naturally experienced slow growth for a period of years. Faculty, students, experience, materials, and funds were limited. The same was true of research progress. Early activity grew out of other fields, especially natural sciences.

More and more interest in and direct contact with problems of farmers widened the program and increased its application. At first, concern was with problems of the farm. However, the last half century brought an expanding interest in economic aspects such as the organization and management of the farm business, marketing, prices, farm finance, land problems, and public policy. Social problems also received increasing attention.

ADJUSTING TO CHANGE

As is true of farming, land-grant institutions find it important to make adjustments in their programs and operations. The need for adjustment is continuous. As land-grant institutions begin their second century, the changes ahead appear greater than ever. They arise from the rapid growth and change in agriculture itself and from the increasing complexity of life.

The time is past when the farmer's concern was bounded by his line fences. His community contacts and interests have increased vastly. As agriculture became more commercial and as levels of living rose, the farmer's dependence on his market grew. The level of economic activity in other pursuits are of vital importance to him. As a producer and a citizen he has direct interests in what happens in the world.

The agricultural and related curricula in land-grant institutions must adapt to such changes if their students are to provide the service and leadership expected of them. Agricultural colleges that are part of universities now find themselves depending more on other sections of the university. Separate agricultural institutions are finding it necessary to add new fields of work. The emphasis on basic courses and those concerned with developing an understanding of "why" are replacing some of the "how" courses of the trade school variety.

Adaptations also will continue in the research programs. Agricultural extension, in order to meet its educational obligations, must shift from performing routine services to concentrating on educational programs.

Farmers are finding technical training more important. The years ahead will see an increasing number of technically trained farmers. A corresponding need for training is found in many businesses serving farmers. The need for instruction, research, and extension will grow—not diminish. The work to which the Morrill act gave an important impetus 100 years ago stands on the threshold of another century with increasing demands and greater opportunities for service.

LOOKING AHEAD

The second 100 years will not lack problems. Many communities are faced with providing education on the elementary and high school level for a rapidly growing school population. Colleges and universities are experiencing similar effects. They anticipate even greater problems in terms of numbers seeking admission in coming years.

Expressions of doubt are heard over whether there will be room in institutions of higher learning for the children of today when they reach college age. This concern arises not only from increasing population, but also from the realization that college education and technical training will be a greater factor in job opportunities. State universities and colleges may find that they must provide for an increasing share of the total population.

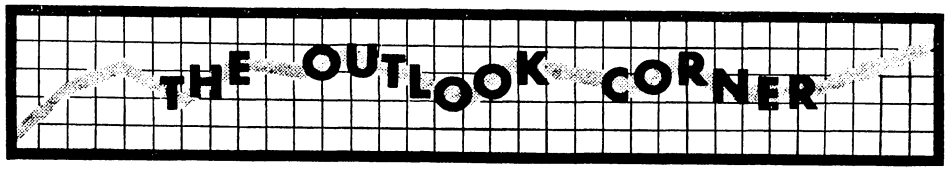
The interest in and desire for more and better education show no sign of lessening. This suggests that public support for education will continue. However, other questions remain. Will the future supply of teachers be adequate? If not, what steps should be taken to meet that problem? Will increasing pressure on facilities lead to a tightening up of entrance requirements and standards?

How can selection and guidance of students be improved? What provisions should be made for those who cannot or will not make the grade? Shall more attention be given to vocational or other technical training? Does not society as well as the individual lose when highly qualified young people are prevented or discouraged from seeking a college education because of limited finance?

Some see prospects of lessened support for agricultural work because of the decline in the proportion of the population engaged in farming and a continuing drop in the actual number of farmers. Offsetting this is the growing need for more training for farming and closely related agricultural businesses.

Agricultural research and extension benefit the general public as well as agriculture. Therefore, support for such activity should increase rather than diminish. This conclusion is strengthened by the increase in number and complexity of agricultural problems.

The centennial year presents a challenge and an opportunity to lay the foundation for even greater advancement in the next 100 years.



Agricultural Extension Looks to the Future

Skuli Rutford

The accomplishments of the Agricultural Extension Service have built up a reservoir of goodwill. We must view this goodwill as a challenge and a source of inspiration for future work.

How can we judge the efficiency of Extension's program in Minnesota and elsewhere? The 1948 Committee Report on Extension Policies and Goals suggests these criteria: "(1) The degree of accuracy with which the changing needs, desires and interests of people can be recognized and anticipated, and (2) the extent with which the tools of Extension—can be geared to meet changing needs and desires."

The report emphasizes the role of change. Change and adjustment to change in agriculture, of course, is not new. Today the number of changes and the speed at which they occur cause concern. Furthermore, technological developments and application in one part of society can have far-reaching implications in other sectors. These must not develop into unnoticed problems.

What is extension's educational responsibility for the future? Generally, it must develop and carry out programs that lead to a better informed public and a higher standard of living. These programs must help individuals develop themselves so they can detect and solve their own problems on their own initiative.

Programs to help individuals and groups should:

1. Recognize the nature of changes and problems.
2. Provide meaningful background for studying these problems and related issues.
3. Create an atmosphere that stimulates thought and discussion.
4. Help individuals and groups form opinions.

What will be important in the future? No doubt the general pattern of farm, business, home, and community problems will be similar to those now growing out of changes within and outside of agriculture. Moreover, these changes are likely to come faster and faster in view of trends associated with (1) highly specialized farming, (2) large capital requirements per farm, (3) market changes and drastic changes in marketing costs, (4) public policy views and action, and (5) changes in family living patterns.

We in extension must anticipate a need for more educational information in the following program areas.

Farm Business. Fewer, larger, and more specialized farm operations will place more emphasis on management. Farm transfers will be made in a different way. Adjustments in agricultural production will require changes in methods and procedures in marketing.

Family Living. These changes in technology are reflected in corresponding changes in family living. Interest in home improvements and other homemaking skills will continue. However, the Extension Service will give greater attention to management, consumer buying, family life education, and related programs. All these reflect the changing role of the homemaker.

Youth. We are evaluating extension programs for youth such as 4-H Club work. Adjustments are underway to meet more of youth's needs—both those of today and in the future. New projects stress new fields of study. Career opportunities and ways to prepare for them are examples.

Group Action. The nature of our government and society requires persons to cooperate with others to get action. Public affairs programs will receive greater attention because numerous policy issues that require answers and action face people today. Extension will use more resources on programs that develop a better informed public.

How will people be reached? This will involve:

1. Close cooperation with public and private agencies in work of a truly educational character.
2. Continued emphasis on the volunteer leader system with more attention given to well prepared educational material and periodic training sessions.
3. More educational events that provide for concentrated study.
4. Maximum use of the mass media communications.
5. Different or revamped teaching techniques.

The Agricultural Extension Service is raising its sights as the land-grant college system starts a new century. However, it must adhere closely to basic principles—to analytical thought, carefully drawn decisions, well guided action, and continuing efforts.

All this means continued reliance on education as an important means of helping people help themselves. Thus the land-grant college concept of making knowledge and research available to all who can benefit will serve us well in the future.

RECENT PUBLICATIONS

Fuller, Earl and Jensen, Harold. *Alternative Dairy Chore Systems in Loose Housing.* Univ. of Minn. Sta. Bul. 457.

1962 Feed Grain Program. FM-45. Contains facts you should consider when thinking about participation in the 1962 program. Obtain copies from your county agent or the Bulletin Room, Institute of Agriculture, University of Minnesota, St. Paul 1, Minnesota.

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