

Role of MAIN EXPERIMENT STATION AND BRANCH STATIONS of North Dakota State University

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Role

The role of the North Dakota Agricultural Experiment Station is to develop and provide research information primarily intended to enhance the agricultural sectors of our population and our economy, both state and national.

Without further explanation, this terse definition may not have much meaning for a person not intimately acquainted with or directly involved in the program of the North Dakota Agricultural Experiment Station. Therefore, this statement is intended to provide an outline of the origin, organization, program and resources which relate to the Agricultural Experiment Station. This information may be helpful in interpreting and understanding the definition offered for the role of the North Dakota Agricultural Experiment Station.

Origin

Each state in the United States is legally entitled to have an Agricultural Experiment Station. Two federal laws originally provided this legal basis.

The first of these laws was the Morrill Act of 1862 which provided grants of federal lands to each state, which would use these lands and the income from them for the establishment and permanent endowment of public institutions of higher learning "... where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts...."

The Morrill Act of 1862 is the basis for establishment of land-grant institutions of higher learning, and many such institutions started as Colleges of Agriculture or as Agricultural and

Mechanical Colleges unless the state chose to make an existing institution into a land-grant institution. The law was simple and straightforward in its language, leaving much of the choice and decision for detail up to the individual states.

It is significant to indicate that the United States Department of Agriculture was also created in 1862.

Twenty-five years later, in 1887, the second federal law was enacted. This law became known as the Hatch Act of 1887, and it provided for state agricultural experiment stations to be established "... in connection with the colleges established in the several States under the provisions of an act approved July 2, 1862, and the acts supplementary thereto." The law also provided for a sum of \$15,000 in financial assistance for each state which would establish an agricultural experiment station.

In the years to follow, several additional federal laws were enacted to provide further support for research at the agricultural experiment stations, and in some instances to outline or limit the kinds of research which could properly be supported with the appropriated funds. As a consequence of the diversity of these several laws and the unproductive, burdensome administrative detail involved in complying with them, the Congress consolidated these laws in 1955 into The Hatch Act As Amended. This law serves as the principal federal authorization for the current annual appropriations made by the Congress for use in the several state agricultural experiment stations. Some of the wording in The Hatch Act As Amended is, in effect, also a statement of the role of the agricultural experiment stations and reads as follows:

"Sec. 2. It is further the policy of the Congress to promote the efficient production, marketing, distribution, and utilization of products of the farm as essential to the health and welfare of our peoples and to promote a sound and prosperous agriculture and rural life as indispensable to the maintenance of maximum employment and national prosperity and security. It is also the intent of Congress to assure agriculture a position in research equal to that of industry, which will aid in maintaining an equitable balance between agriculture and other segments of our economy. It shall be the object and duty of the State agricultural experiment stations through the expenditure of the appropriations hereinafter authorized to conduct original and other researches, investigations, and experiments bearing directly on and contributing to the establishment and maintenance of a permanent and effective agricultural industry of the United States, including researches basic to the problems of agriculture in its broadest aspects, and such investigations as have for their purpose the development and improvement of the rural home and rural life and the maximum contribution by agriculture to the welfare of the consumer, as may be deemed advisable, having due regard to the varying conditions and needs of the respective States."

North Dakota's State Constitution, adopted in 1889, established in Article XIX the agricultural college at the city of Fargo, in the county of Cass. The first Legislative Assembly of 1890, in Chapter 160 of the Session Laws, established an agricultural experiment station in connection with the agricultural college.

Branch Agricultural Experiment Stations are not eligible for use of federal funds provided under The Hatch Act As Amended for routine financial support. Therefore, each of the branch stations has its origin and maintenance within the state legislative process. Early in the history of our state legislatures, prior to 1900, provision was made for branch stations. During those years if a community would acquire and offer to donate at least 160 acres of land, the legislature would consider establishing a branch station at that location.

Program

Major areas of agricultural research are oriented toward the agricultural sciences and

include a wide range of topics or subjects. By this is meant that attention is devoted to such things as production, management, financing, marketing, consumer use, quality and processing of agricultural products. In addition, consideration is given to several aspects of rural life, illustrated by housing, utilities, conveniences, recreation and population changes.

The agricultural research program is maintained on a formal written project outline basis. At this time there are approximately 200 project outlines in use at the Main Station. The system of project outlines has emerged over the years in meeting the requirements of accounting for both the work and the expenditures of federal funds, and is similarly used in all agricultural experiment stations throughout the United States. In fact, many of the projects are prepared and executed on a cooperative basis with other state experiment stations and the appropriate research components of USDA. The system is designed and used to help maintain a full flow of research techniques and information among the scientists of the several states while at the same time avoiding unnecessary duplication of effort.

Information from the research efforts is continuously interpreted, shared, and made useful in the form of publications, conferences, lectures, scientific papers, special group "short courses," assistance to the Cooperative Extension Service in their teaching program, in the classrooms, and in the regional research program with sister agricultural experiment stations and the USDA.

A formal project outline may emerge in many different ways. It will contain essential elements such as a title, objectives, justification, procedures, cooperating personnel, and proposed budget. An individual may have an idea worthy of pursuit, a department group may discuss and organize a project outline, several personnel from different departments may originate a project proposal and cooperate in the research effort, or a project may originate by suggestion from outside advisory groups or individuals. Some research needs, such as maintaining quality hard red spring wheat varieties for North Dakota, may be answered by an assembly of specific project outlines. This technique allows better control of funds, facilities, and research effort than if a single "umbrella" type project were used. A listing of the current project titles is appended to provide a better concept of their specificity and their diversity.

The first branch station was designated to be located near Edgeley. The land was donated and

the 1893 Legislature provided a small appropriation to establish an irrigation well. The conditions for guarantee of flow from the well precluded any possible bids being submitted, and this branch station failed to materialize until 10 years later when it received sufficient legislative funds to engage a superintendent. The Edgeley Station was in operation until 1969 when it was closed and sold by direction of the 1969 Legislature.

Other branch stations established under the land donation policy of the early legislatures are: Dickinson, 1905; Williston, 1907; Langdon, 1908; and Hettinger, 1909. The 1945 Legislature accepted from the Ward County Commissioners three quarter-sections of land with existing buildings (previously used as a County Poor Farm), appropriated \$40,000, and the North Central Experiment Station at Minot was established.

In 1950, the Agronomy Seed Farm near Casselton, acquired by the State of North Dakota as a donation of a section of land from citizens and organizations in North Dakota, became a part of the Agricultural Experiment Station. This unit has the distinction of never having had any general treasury appropriation since its origin and to this time. The Agronomy Seed Farm has utilized income from production and sale of Foundation and Registered seeds to develop the physical facilities and maintain the costs of operation.

The most recent addition to the branch station listing is the Carrington Irrigation Branch Station. The 1957 Legislature appropriated \$67,200 to locate and acquire a site for the proposed irrigation station. Unlike the other branch stations at the time of their origin, this location was not predetermined by a gift, donation or legislative directive. The Agricultural Experiment Station was allowed to search for and purchase the section of land which is located north of the city of Carrington.

At the present time, the Main Station uses about 1,800 acres of land which is part of and contiguous to the NDSU campus, and the seven branch stations occupy an additional 6,200 acres of land.

The seven Branch Experiment Stations serve as geographical locations in North Dakota where controlled experiments may be conducted and the results related to that part of the state. Additionally, these locations serve as points of representation to the people in their respective areas of the total agricultural research program as well as many other services of NDSU. The program

at each branch station is the direct responsibility of the branch station superintendent. He does, however, relate cooperatively with one or more of the several subject matter departments in the Main Station in developing and maintaining his program. Some of the undertakings are jointly planned and executed by several of the branch stations (such as crop variety trials and seed increase production), while others are developed to meet more local interests and need. The branch stations are a vital part of the total agricultural research program in North Dakota.

Resources

Agricultural research requires the three basic resources of funds, facilities and personnel. The North Dakota Agricultural Experiment Station is never alone in getting these three resources.

In the first place, the Agricultural Experiment Station is a part of North Dakota State University. By having an integrated teaching and research program, the resources of facilities and personnel are greatly enhanced to the mutual advantage and efficiency of all parties concerned.

Another resource of importance is the USDA Metabolism and Radiation Research Laboratory located on the NDSU campus. This makes available personnel and equipment which would otherwise be unobtainable.

The formal regional research program conducted among the state agricultural experiment stations and USDA on a cooperative basis is a very strong resource. This system, authorized, supported and encouraged by federal law first enacted in 1946, has aided immeasurably in helping each state agricultural experiment station fulfill its particular role. At the same time this approach to cooperative and coordinated research has been a vital and efficient stimulant to assist in meeting the national goals for agricultural research.

Funds for the North Dakota Agricultural Experiment Station originate from four major sources. The largest financial support, approximating 60 per cent of the total, comes from the General Treasury of the State of North Dakota as a legislative appropriation. The Congress provides appropriated funds from the national treasury approximating 20 per cent of the total. The balance of about 20 per cent is derived from the sale of commodities and services which result as by-products of the research work, and from gifts (Continued on Back Cover)

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and grants from industry, organizations and individuals.

It is of interest to note that if one divides the current total annual operating budget of the Agricultural Experiment Station by the number of professional employees expressed on a full-time equivalent basis, the result is \$41,851. This suggests the current average expenditure for support of each full-time professional person is approximately \$42,000 annually. This is an important concept to keep in mind as one considers the required financial resources for an active research program of this kind.

Summary

The role of the North Dakota Agricultural Experiment Station, NDSU, is to develop and provide research information primarily intended to be useful in the enhancement of the agricultural sectors of our population and our economy, both state and national.

This role is fulfilled by maintaining funds, facilities and qualified personnel in an organized and effective program of agricultural research.

This program is heavily integrated with teaching of university-level undergraduate and graduate students and is formally related to other state agricultural experiment stations and the appropriate research components of the United States Department of Agriculture.

Administration of the Agricultural Experiment Station is primarily a function of NDSU and in turn the State Board of Higher Education. However, in keeping with the various federal and state laws which have emerged during a period of more than 100 years and are currently applicable, it is also highly desirable to establish and maintain a degree of understanding and flexibility in the administrative policies and decisions which are rendered in behalf of the Station. This is particularly important since the activities of the Agricultural Experiment Station are constantly under scrutiny by individual citizens and agriculturally-oriented organizations in North Dakota, by colleagues in other parts of our institutions of higher learning, by representatives of the federal offices which administer funds appropriated by the Congress, and by sister agricultural experiment stations.