

How Experiment Station Research Has Helped North Dakota Farmers and Ranchers

Arlon G. Hazen

Very often as I travel around North Dakota and visit with people, whether they be business people in our towns or people in the rural areas who make farming and ranching their business, I find the Agricultural Experiment Station is not entirely clear to many of them. For this reason, I take advantage of opportunities such as this one to talk about your Agricultural Experiment Station. My hope is to cover enough points so each of you might be reminded of something you already knew and had forgotten, or you might learn something new.

Actually, your Experiment Station is not something which is found only in North Dakota. There is a similar station in every other one of the 50 states of our nation. And there is very good reason for this.

Democracy, in its most simple form, might be described as a representative government trying to maintain maximum freedoms and minimum regulations.

Early in our history as an independent and free nation, it became apparent that if two basic things could be achieved our nation would have a greater opportunity for growth and progress. One of these basic things would be an ample supply of food and fiber. The other was an opportunity for education at all levels which might be within the reach of every person who aspired to take advantage of educational opportunities.

And so it was at that time in our nation's history, when a high percentage of the people were on the land, struggling to provide enough food and fiber for themselves and just a few others, the matter of education for rural people became a concern in our federal Congress.

Why not devise a way to provide education at the college levels for the sons and daughters of those who were on the land and in the business of handling agricultural products? Why not make this a joint responsibility of the state and federal governments?

Thus, in 1862 the Congress enacted legislation which President Lincoln signed into law making federally owned land available to the individual states. The amount of land for each state was based upon the number of members in the House of Representatives. Quoting from the law, the land was granted ". . . to the endowment, support and maintenance of at least one college 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 . . ."

Every state then in existence established what became known as a land-grant college. The law also provided for future states, and as they joined the nation each of them also established a land-grant college. These colleges, many of them known as A & M colleges, grew very rapidly. Sons and daughters of families with very modest and even quite meager means were accepted in the "people's colleges". Soon the degree graduates were taking places of leadership on farms and ranches and among the small communities over the nation as well as becoming scientists, lawyers, doctors and other kinds of professional people. A system of higher learning entirely unknown to mankind before was initiated and allowed to flourish.

North Dakota provided for its land-grant college in the state constitution, designating it to be located near the city of Fargo in the county of Cass, and naming it the North Dakota Agricultural College. The institution received its first appropriation from the first legislature in 1890 and opened its doors for students that fall. The Agricultural Experiment Station was part of the institution, and the entire faculty and facilities of the institution consisted of five men, 40 acres of land and temporary building space.

The major reason for reciting this bit of history is to clearly establish the point that today the agricultural research program of your Agricultural Experiment Station is really a part of a comparatively large, publicly-supported research program involving the experiment stations in each of the states and also the research programs of the United States Department of Agriculture. And it is

rather highly organized. Presently, the nation is divided into four regions of about 13 states each, and much time and effort is spent in planning and coordinating the research program for each of the individual state stations.

Why is this done? There are two primary reasons. We aspire to avoid and prevent costly duplication of effort, and we use the formal organization of regions, regional committees, formal project outlines and cooperative relationships with the United States Department of Agriculture to insure a constant and free flow of information between scientists.

This cooperative and highly productive relationship between research scientists at the state stations and in the Department of Agriculture was initiated at the outset, and has continued to this time.

I mentioned earlier that your North Dakota Station was established in 1890. In January of 1891 the first bulletin was published, and it was entitled "Grain Smuts." The bulletin described the general nature of plant diseases and some of the measures which could be used to deal with them.

So, starting with Bulletin No. 1 in 1891, the philosophy and purpose of the Experiment Station was clearly set forth. Since that time there has been no deviation from this philosophy and purpose.

Let me assure you of one thing. All of your ideas, suggestions, criticisms, allegations — yes, and some of the praise which comes too — combine themselves into a powerful portion of the total forces which determine the direction we take in the research program.

Agricultural research provides results. These results may be in the form of ideas, information and opinions, such as helping to understand a government program, sources of credit, home and farmstead beautification, leadership in community activities and improvement, values of land and a working knowledge of the marketing system for specific agricultural commodities. Other results of agricultural research may be expressed in more "dollar-measurable" terms such as recommended grain varieties, fertilizer applications, use of good seed, weed control, livestock rations, machinery costs for various operations, waste management, handling of supplemental irrigation water or construction of farm-type structures.

These kinds of information are **never** offered as **requirements** for farm operators to follow. They are offered as tools for the trade — as grist for the mill which grinds out the management decisions.

If your Agricultural Experiment Station has helped North Dakota farmers and ranchers, it has

been those who understand what the program is all about and who are prudent enough to make use of the results which are available. And, I believe the Station has been instrumental in helping North Dakota farmers and ranchers, and that we have had some part in the changes which have occurred.

For example, the statistical records indicate the average annual total net income per farm in North Dakota has generally increased for a number of years. It is true that in some years the income increase has not met the increase of inflation, but certainly in the past three years it has. What are the figures?

In 1967, the average total net income per farm in North Dakota was \$4,966. In 1974, the average total net income per farm in North Dakota was \$27,131.

In 1967, the number of farms in North Dakota was 48,000. In 1974, the number of farms in North Dakota was 41,500.

Highly significant in my thinking about statistics of this kind is the fact that for each year between 1967 and 1974, the number of farms in North Dakota declined at the rate of 1,000 per year. However in 1974 and the prediction for 1975 are consistent with a decline of **just half** this amount, or 500 farms per year. Hopefully we are witnessing not only a leveling off of the decline in numbers of farms, but also a stabilizing of the number. Some studies indicate this stabilized number will be between 35,000 and 40,000 farms and ranches in North Dakota for the years ahead.

Two more historical comments:

The Cooperative Agricultural Extension Service was created by the federal Congress in 1914. This legislation again brought another dimension to the mission and function of the land-grant colleges and universities in addition to the already well established classroom instruction and agricultural research. Here was another unique way of bringing information to the people through the county agent system. This joint federal-state arrangement has also proved to be highly successful.

Lastly, I would be remiss in not mentioning that the year 1975 has been observed nationally as the Centennial of the State Agricultural Experiment Stations. Briefly, this observance was in recognition of the establishment by the Connecticut Legislature of 1975 of the first State Agricultural Experiment Station in our nation. All of the State Stations have individually and collectively used this occasion to remind all of us there has been a Century of Progress in agricultural research and agricultural production to which tangible and significant contributions have been made by your land grant institutions.