

# AGRICULTURAL RESEARCH and TEACHING

## at NORTH DAKOTA STATE UNIVERSITY

A. G. Hazen

*Dean and Director*

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

Consequently, in the fall of 1890, five men equipped with 40 acres of land and the constitutional backing and legislative support of the people in the new State of North Dakota initiated a program of teaching and research in agriculture. North Dakota Agricultural College was in business.

Each of these historical actions by the people of North Dakota was to participate as one of the several states in two highly significant earlier actions by the United States Congress.

The first of these two federal actions was passage into law of the Morrill Act of 1862 which provided grants of federal lands to each state. The states would use these lands and the income from them to establish and permanently endow 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 second federal action was the Hatch Act of 1887 which provided an annual appropriation of \$15,000 for each state which would establish and maintain in connection with the land grant agricultural college an agricultural experiment station.

The United States Department of Agriculture was also established in 1862, the same year the Congress passed the enabling legislation for the state land grant colleges and universities. And from that time forward, there has been a constant strengthening of the cooperative relationships between the several state colleges of agriculture, the agricultural experiment stations, and the USDA. Another major point of evidence of this relation-

ship was the creation of the federal-state Cooperative Agricultural Extension Service in 1914.

The concept of land grant colleges and universities for each of the several states where the leading object would be to teach agriculture and the mechanic arts has resulted in making available scientifically trained personnel for all kinds of services connected with food and fiber production, processing, marketing and consumption. The direct consequence of having these combined programs of research and teaching has been the freedom for an increasingly larger percentage of our people from production of food and fiber.

As more of the nation's population became released from the need to produce food and fiber, their talents and energies could be devoted to other things. As a result, the United States has become the best fed, best dressed, best educated and most technologically advanced nation in the history of mankind.

As in all other states, the teaching program in the College of Agriculture, North Dakota State University, is heavily intertwined with the Agricultural Experiment Station. About 105 of the 130 professional personnel on this campus and in the Agricultural Experiment Station are assigned formal teaching duties and responsibilities for a part of their time in the College of Agriculture. The full-time equivalent of teaching time among these 105 individuals would approximate 45, meaning that in the teaching program we are supporting with teaching funds the equivalent of 45 individuals but are receiving the talents and services of 105. This is what the combination of research and teaching is all about, and why it is so outstandingly productive when fresh minds of students are constantly challenging the maturity and experience of the professional teacher. This phenomenon is particularly notable at the postgraduate or graduate degree level.

While undergraduate students are in constant classroom contact with teachers active in the research program, the graduate students in the College of Agriculture serve as additional "research hands", as well as active and productive minds. This

is a mutually advantageous arrangement for the student, for the teaching program, and for the agricultural research program. At the present time, enrollment in the College of Agriculture is about 900 students, 160 of whom are pursuing advanced degrees for either the Master of Science or the Doctor of Philosophy.

This is an internationally unique system of teaching and research for agriculture, where the federal and state governments work closely together, where the states are organized and cooperate among themselves, and where the teaching and research programs show highly significant results. This system deserves continued preservation and support by our people in the future.

## THE TEACHING FUNCTION of the COLLEGE of AGRICULTURE

P. A. Nystuen

*Assistant Dean*

### Opportunities

Many dynamic careers await youth in agriculture. Academic degrees in agriculture offer rewarding careers, not only in farming and ranching, but also in business, industry, education, research, government services, communications, conservation and recreation.

Agriculture is one of the oldest arts and one of the newer sciences. It includes the production of plants and animals useful to man and the preparation of these products for man's use and their distribution through marketing.

Agriculture is much more than farming. It is science at work for the well-being of the world. It includes business and industry furnishing supplies and equipment to producers, as well as the buying, selling and processing of crops and livestock which turn these products by mechanized magic into appealing packages on the store shelf. Amazing advancements in agricultural efficiency have made possible the production of more food and fiber for the world by fewer people than ever before.

Great opportunities exist for young people of integrity and ambition who have the capacity for hard work, for leadership and for acceptance of responsibility. Agriculture employs people in a

broad range of positions including everyone from the day laborer to the college or corporation president. Many fields of agriculture are actively seeking recruits, both men and women, for jobs more often located in the city than on the farm. These fields are asking constantly for more college graduates to devote their energies to tasks which make the United States a worldwide symbol of abundance. Not all of the demands for graduates are being met.

Many of the thousands of jobs in hundreds of occupations were relatively unknown a few years ago. North Dakota State University graduates in agriculture have made successful careers locally, nationally and internationally.

Employment opportunities in agriculture are available in eight major areas.

**Farming and Ranching:** production of bees, beef cattle, cotton, dairy cattle, flowers, fruits, grains, greenhouse crops, hay, nursery stock, sheep, swine, poultry, timber, tobacco, vegetables and other specialized crops.

**Research:** investigation into conservation methods, crops, equipment, ecology, forestry, livestock, soil, rural sociology, management, marketing, processing, production methods, health and recreation.

**Education:** teaching in extension services, high schools, colleges, farm organizations, government agencies, private industries and foreign countries.

**Industry:** dealing with the production or processing of farm equipment, fats and oils, feed, fertilizers, food, forest products, fuel, herbicides, machinery and pesticides.

**Business:** including banking, credit, insurance, grading, land appraisal, marketing, merchandising, packaging, public utilities, transportation, sales and warehousing.

**Services:** consulting and working with federal, foreign, state or local governments and private enterprise on agricultural problems such as inspection and grading of farm products.

**Communications:** telling the agricultural story through advertising, exhibits, motion pictures, photography, publications, public relations, radio and television.

**Conservation and Recreation:** management of forests, soil, water, wildlife, game preserves, golf courses, parks and playgrounds.