

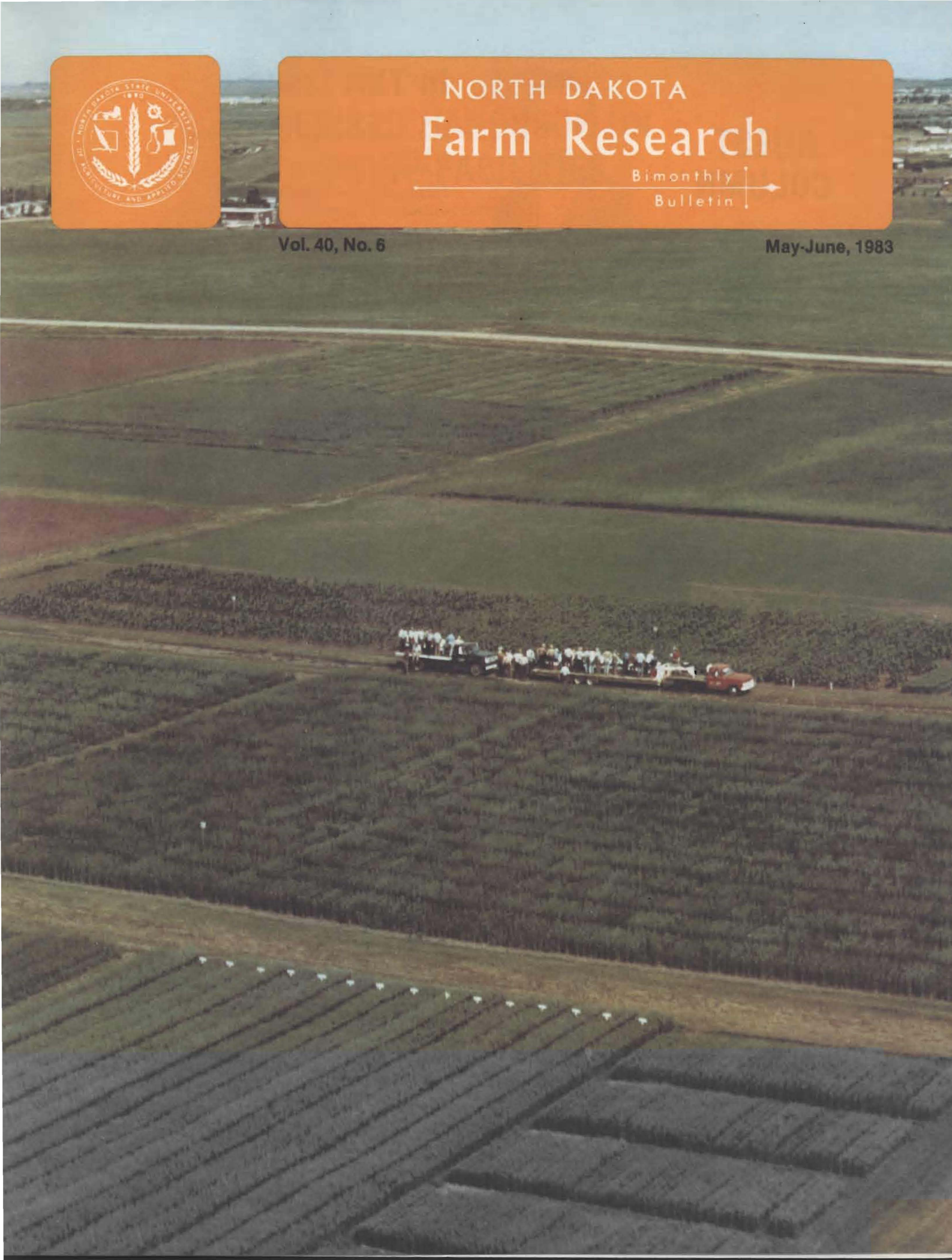


NORTH DAKOTA
Farm Research

Bimonthly
Bulletin

Vol. 40, No. 6

May-June, 1983



GUEST COLUMN



Ben Hoag
Superintendent,
North Central Experiment Station

The North Central Experiment Station and Seed Farm near Minot was established by the state legislature in April of 1945. It has faithfully serviced agriculture in north central North Dakota over the past 38 years. The station is an integral part of the North Dakota State University Experiment Station system, along with seven other branch experiment stations all placed at ideal locations throughout the state. The purpose, as well as location, of the station keeps our staff in close contact with people in the surrounding farming communities, including county extension staff, farmers, and agricultural products firms to name but a few.

The research and seed increase programs of this station are guided by an advisory board designated by the same law which established the station. This advisory board (Board of Visitors) is made up of two individuals actively involved in farming from each of 12 counties in north central North Dakota. This board meets twice each year to review the activities of the station and make suggestions concerning its research programs and plant improvements. They have actively worked in support of budget needs for operations and building improvements through contact with their local state legislators. Members have appeared before budget hearing committees during legislative sessions to speak on behalf of the station's interests. The board has strengthened farmer acceptance of this station through sharing their knowledge of our research and services with other growers in the area and by encouraging them to make use of these.

As one of the area branch experiment stations, this station has helped to greatly increase the rapid acceptance of new farming practices, the use of new pesticides and of new varieties. This has been accomplished through personal contact with many farmers by means of field tours, farmer information meetings and the

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On the Cover: North Dakota's system of branch experiment stations allows for localization of research and also provides an opportunity for farmers throughout the state to observe research in progress through tours and field days. This group is visiting test plots at the North Central Experiment Station near Minot. Photo by James Berg.

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A BIMONTHLY progress report published by the

**Agricultural Experiment Station,
North Dakota State University of
Agriculture and Applied Science**
Fargo, North Dakota 58105

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tion also increases rate of gain and feed efficiency (Carrington Irrigation Field Day Proceedings, 1977 and 1980). Crossbreeding increases efficiency of production with up to 23 percent more pounds of calf weaned per cow exposed. Crossbred cows mature earlier, produce more milk, are more fertile and are better mothers than straightbred cows (Cundiff, 1970). Production testing in a commercial herd is strongly encouraged. Researchers in Washington report a \$7 to \$10 advantage per cow in production tested herds. Good bulls from production tested herds can also contribute to herd improvement. Artificial insemination will increase the speed of genetic progress in your herd but it is labor intensive at a critical time of the year.

Range management has been and continues to be an important research topic in North Dakota and other livestock states. Drylot cow/calf production will not replace range beef production because the grazing animal is the only method to harvest non-tillable grasslands. However, this study concludes that a drylot cow/calf enterprise has the potential to be an economical and efficient beef production system. Forages produced under irrigation are the consistent feed base needed for a stable cow/calf enterprise. Drylot could also be used with dryland farming, but the feed supply would be less predictable. Cattlemen interested in improving efficiency or expanding their herd on a limited land base should critically evaluate a drylot program as a method of accomplishing their goals.

Continued from page 2

distribution of published research results by county extension offices.

This station's primary responsibility is in the crop production area. The staff work closely with NDSU plant breeders, pathologists, soil scientists, entomologists, horticulturists, cereal technologists, and engineers to name a few. Cooperation is present in both the public and private sector. In addition to these areas staff also research local and area needs. Examples include research on controlling false chamomile, a troublesome weed in Renville, Bottineau and Ward Counties. This weed is difficult to kill and is spreading rapidly from field to field. Presently the herbicide chlor-sulfuron (Glean) works very well in controlling false chamomile in small grains.

Another topic of great interest is no-till farming methods which are becoming so popular in the corn-producing areas of the country. This method is being evaluated by branch stations and NDSU personnel. The results are so encouraging that some farmers are giving it a try. Along this vein, new research has been initiated to develop procedures which will maximize yields using the most productive farming practices.

Considerable research is conducted off station. Each year small grain variety trials are planted on sites in two

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counties. Trials are run at those sites for a three-year period in each county, then the site is rotated to a new county. Over the years trials have been conducted in eight counties, in addition to the on-station sites and an irrigated/dryland site at Karlsruhe (McHenry County). Station staff also plant two field-scale oil sunflower trials each year and these are placed at various locations throughout the 12-county area. These sites are all cooperative efforts between the station, the county's extension agent and crop improvement association, and the farmer providing the site.

The irrigation project is a cooperative effort between the Garrison Conservancy Irrigation District, the Karlsruhe Irrigation District, the Bureau of Reclamation, and this station. Research includes row crops, small grains, and forages. The majority of plots are planned for production results, with others evaluating farming methods, herbicides, diseases, and cropping rotations.

Through the use of services and research data provided by branch experiment stations like ours, farmers have been able to greatly increase the quality and quantity of their output. This in turn has added greatly to our state's economic base. In the long run, our branch stations have many times over paid back their cost to the North Dakota taxpayer.

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