



O. J. Banasik, Chairman

CEREAL CHEMISTRY AND TECHNOLOGY

The Cereal Chemistry and Technology Department has been in operation for nearly three-fourths of a century. About one-third of our total time of operation has



Fig. 1 Original "Mill Building" that housed Cereal Technology.

been under the directorship of Arlon G. Hazen. During this period of time, many significant advances have been made in our program and improvement in our physical facilities. A giant step was made in 1956 when the Department of Cereal Technology moved into its new building and vacated the old wooden mill building built in 1907. This modern facility was tripled in size by an addition in 1967. The most recent improvement was made in 1970 by the construction of a wheat and flour storage area.

The teaching program in Cereal Chemistry and Technology was started about the time Arlon Hazen assumed the Dean and Director positions of the agricultural units of the University. Prior to 1960, only one course was offered in the department. In 1962 eight new courses were added and our graduate teaching became solidly established. Four new courses were added in 1977 to further broaden our teaching program. To date, a total of 59 graduate students have received their degrees in Cereal Chemistry and Technology. Of the total, 24 Ph.D. degrees and 35 Master's degrees have been granted. All but 11 degrees have been obtained since 1960 and our first Ph.D. degree was awarded in 1965.

Significant advances in personnel have been made during the Hazen years. With the expansion of facilities and recognizing the fact that North Dakota must main-

tain excellence in developing quality grain varieties, the technical and professional staff have been steadily increased. In 1961, the staff was comprised of Chairman Kenneth A. Gilles and staff members O. J. Banasik, L. D. Sibbitt, George Scott, Gilbert Brunner and Ardyce Dahlen (Grant). At the present time, the professional staff consists of Chairman Banasik, L. D. Sibbitt, Bert D'Appolonia, Clarence McDonald, Richard Pyler and Brendan Donnelly. The technical and administrative support staff are as follows: Elaine Hanson, Nancy D'Ambrosio, Michael Johnson, Slavko Vasiljevic, Yvonne Streifel, Truman Olson, George Matthiensen, Dehdra Puhr, Evan Cummings, Catherine Barr, Deborah Tornow, Lynn MacArthur and Rachel Nelson. This represents over a 300% increase in total staff in seventeen years.



Fig. 2 Addition to Grain Products Laboratory under construction in 1965.

In 1974, Dr. Tadeusz Haber became the first post-doctoral person to study in the department. Since then, five additional post-doctoral scientists have studied in the department.

In 1961, The USDA Hard Red Spring and Durum Wheat Quality Laboratory was moved from Beltsville, Maryland to NDSU. The addition of the laboratory further expanded and aided the work that needed to be done to maintain quality wheats for the spring wheat region. The move eventually added seven personnel to conduct the work of the laboratory now headed by acting project leader Robert Maneval.



Fig. 3 Harris Hall that houses the Department of Cereal Chemistry and Technology.

During the past 15 years, significant additions of equipment needed for processing and research have been made. One of the world's finest pilot milling units, which is capable of evaluating milling performance on a commercial basis, was installed. The old Allis-Chalmers mill stands used for milling variety plot samples were replaced in 1960 with a modern Buhler pneumatic mill. The batch processing equipment for producing pasta was replaced by the modern DeMaco vacuum system. In addition, many new electronic instruments have been acquired to make the laboratory one of the best equipped for basic and applied research. The equipment changes or additions allow the laboratory personnel to be more productive and precise in their work.



Fig. 4 Class instruction in Cereal Chemistry.

In the last two decades, the department has assisted in the development and release of seven barley varieties, 10 durum wheat varieties and nine hard red spring wheat varieties. We share these accomplishments with the Departments of Agronomy and Plant Pathology.

The development of quality wheats for North Dakota has made the state a major supplier for overseas markets. Since the mid-1950's, increased total production of HRS and durum wheat has brought about significant changes in supplying spring wheats for foreign buyers. Technical assistance is supplied to visiting foreign trade teams. Prior to 1965, there was no departmental activity in this area. Now, we host 10-12 teams annually, providing the visitors with information on the quality of HRS and durum wheat crops. This activity is done in cooperation with the North Dakota State Wheat Commission to assist this wheat producer group to promote the sale of North Dakota grown wheat in domestic and foreign markets. In addition, several departmental personnel have been used as technical resource persons to consult with overseas buyers on the quality of our grain being shipped to them. This type of contact has been successful to maintain the confidence of our wheat customers that North Dakota is a reliable supplier of high quality wheat.

These are the major highlights of the activities of the Department of Cereal Chemistry and Technology during the tenure of Dean and Director Arlon G. Hazen. In the nearly 75 years of our existence as a department, most of our major accomplishments have occurred during this period.