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ROMAN L. HRUSKA
U.S. MEAT ANIMAL RESEARCH CENTER[1]

Overview on Center

The Roman L. Hruska U.S. Meat Animal Research Center (MARC) was authorized by Congress on June 16, 1964, thereby creating a single facility that provides an unusual opportunity for making major contributions to the solution of problems facing the U.S. livestock industry. Development of the 35,000-acre facility started in the spring of 1966 and is continuing at the present time. Phase I construction, consisting of an office-laboratory building for intensive investigations, was completed in January 1971. These facilities provide a physical plant for 42 scientists and about 200 support personnel. Phase II construction, consisting of the Meats Research Laboratory and Agricultural Engineering Building, was completed in October 1977. It provides a physical plant for 25 scientists and about 60 support personnel. Phase III construction will provide facilities for a comprehensive research program of producing, harvesting, handling, storing, and using forages in livestock production systems. Approximately 35 additional scientists and 65 support personnel will be required for this phase. Currently, one-third of the scientific staffing is completed.

Approximately one-half of the research program is devoted to beef cattle, one-fourth to sheep, and one-fourth to swine. Current research program objectives require breeding-age female populations of approximately 7,000 cattle (20 breeds), 5,000 sheep (9 breeds), and 500 swine litters (8 breeds) per year.

The research program at the Center is organized on a multidiscipline basis and is directed toward extending investigations into new areas not now being adequately studied to provide new technology to increase quantities of palatable, wholesome, and nutritious beef. We are planning and conducting from the basic cellular level, examining the very fundamental biology of life processes to the animal level, and examining environmental and genetic influences on beef quantity, composition, and quality. The aim of the research program is to provide basic knowledge of the fundamental processes of biology as a basis for developing new technology with production and consumer application.

The current program includes research in genetics and breeding, nutrition, reproduction, agricultural engineering, meats, production systems, and crop residue-forage utilization. The research program complements research conducted elsewhere by the U.S. Department of Agriculture (USDA) and is cooperative with the Nebraska Agricultural Experiment Station and other Land Grant university agricultural experiment stations throughout the country. The program is also designed to complement existing domestic and international research programs in developing beef cattle production technology.

[1]Agricultural Research Service, U.S. Department of Agriculture, the University of Nebraska, and other cooperating Land Grant Universities.

Overview on the Beef Cattle Research Program

MARC's beef cattle research program places the highest priority on developing technology capable of having an immediate and major impact on the beef cattle industry. Although the program is largely oriented towards fundamental research, emphasis is placed on the generation of technology that can be practically implemented by small farmers and commercial beef cattle producers alike within a relatively short time frame. Because of the uniqueness of the Center's resources, research is being conducted on a "conception to consumption" basis with beef cattle.

Currently, we have 18 scientist "equivalents" conducting research in the beef cattle program at MARC. They are working in 19 primary thrust areas and have 44 experiments under way. In addition, they are coworkers on six major projects away from MARC. Also, MARC has an active predoctoral, postdoctoral, and visiting scientist program, which supports the beef cattle research program.

This report represents a cross section of our beef cattle research program at the present time. Since some of the projects from which results are reported are still in progress, the preliminary nature of some of the results must be recognized. However, it is our opinion that information useful to the industry should be provided at the earliest possible time. Progress reports of this nature will be released periodically to make current results available to the industry. For convenience, the research program is reviewed on a discipline basis in this report with problem areas listed under the disciplinary unit that is taking the lead on research programs in each specific problem area.

Robert R. Oltjen

Robert R. Oltjen, Director
Roman L. Hruska U.S. Meat
Animal Research Center