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Marvel Baker Hall

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Marvel Baker Hall

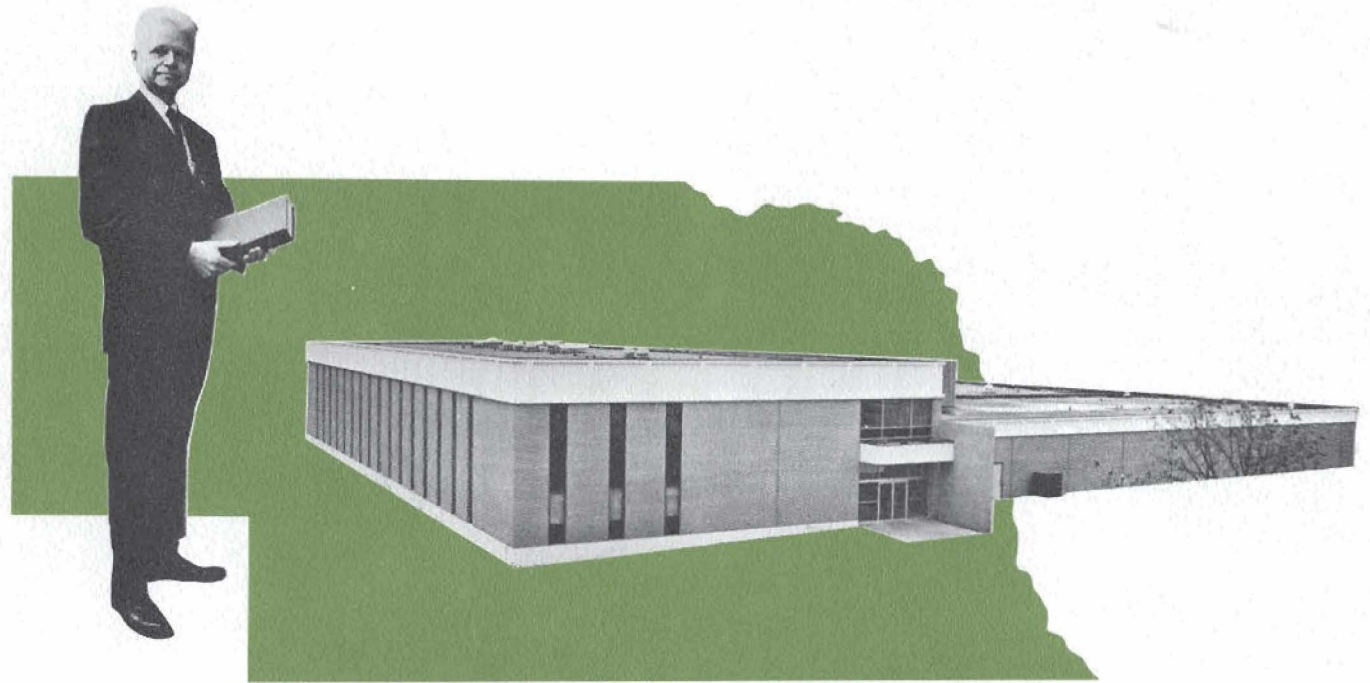
Completed in 1969, Marvel Baker Hall permitted total integration of the staff members concerned with meat production and those specializing in dairy production. The facility has research and teaching capabilities that enhance the effectiveness of the Animal Science Department's public service. The academic community of animal agriculture centering in Marvel Baker Hall stimulates self improvement and development of the scientist-teacher on the staff. Nebraska's youth who study Animal Science profit through the excellence of the educational opportunities available to them including work in the analytical laboratories, the meat laboratory, and in the animal units as well as participating in extracurricular judging teams or other clubs.

[The following pamphlet was published by the Animal Sciences Department for the opening of Marvel Baker Hall in 1969.]

Research
Today.....
Profit
Tomorrow!

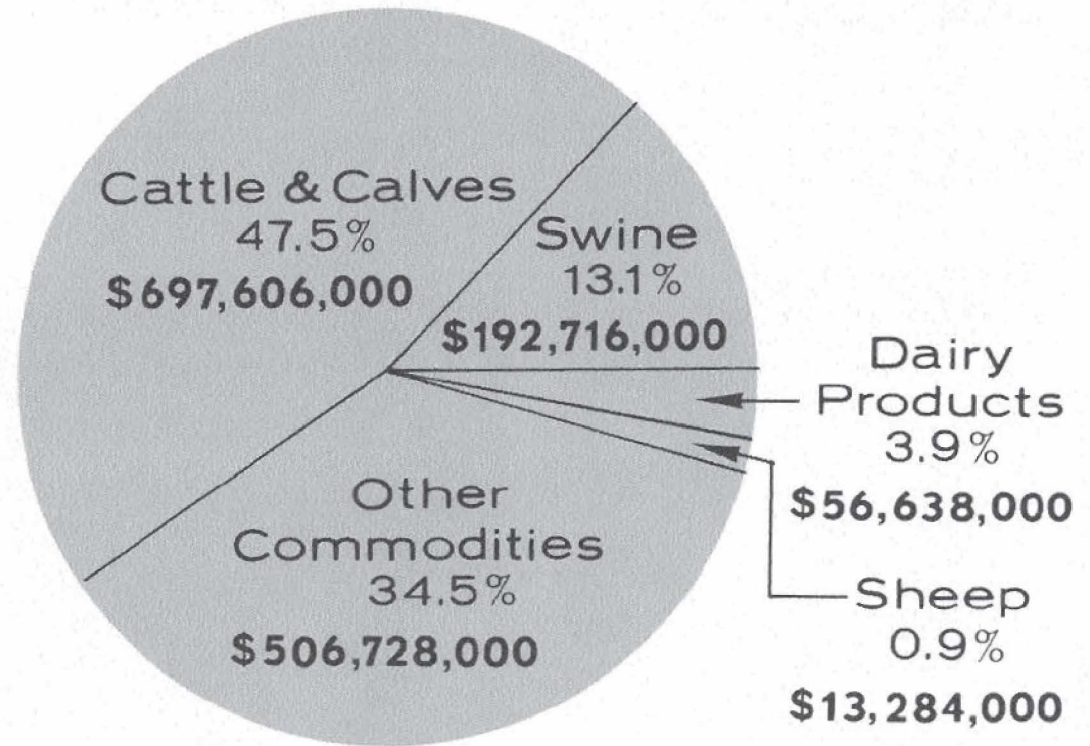


Progress in.... ANIMAL AGRICULTURE



MARVEL BAKER HALL
UNIVERSITY OF NEBRASKA
COLLEGE OF AGRICULTURE AND HOME ECONOMICS

RESEARCH TODAY.... PROFITS TOMORROW!



Nebraska Agricultural Cash Receipts

\$1,466,976,000 (5 year average 1963-67)

Animal agriculture is the lifeblood of Nebraska. It is the primary market for the produce of farms and ranches. In it grows beef and pork for more than ten million people. From it flows milk for three million people. Investments in livestock, feed, land, buildings and equipment plus marketing and processing facilities make animal agriculture a true multi-billion dollar industry. It produced more than a billion dollars cash income in 1967.

The Animal Science Department, established as the Animal Husbandry Department in 1898, supports Nebraska's animal agriculture with a *Research Program* for developing new technology, with a *Teaching Program* for developing people and with an *Extension Program* for solving problems.

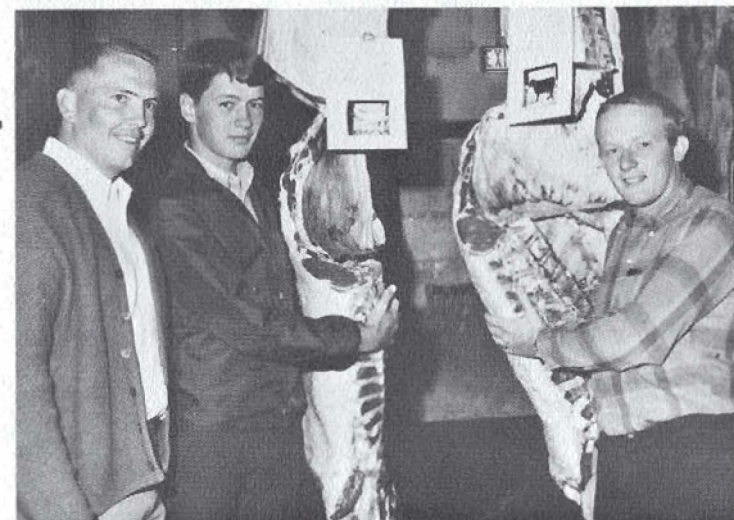
Research...

Round experimental pellets (rear) compared with normal ration.



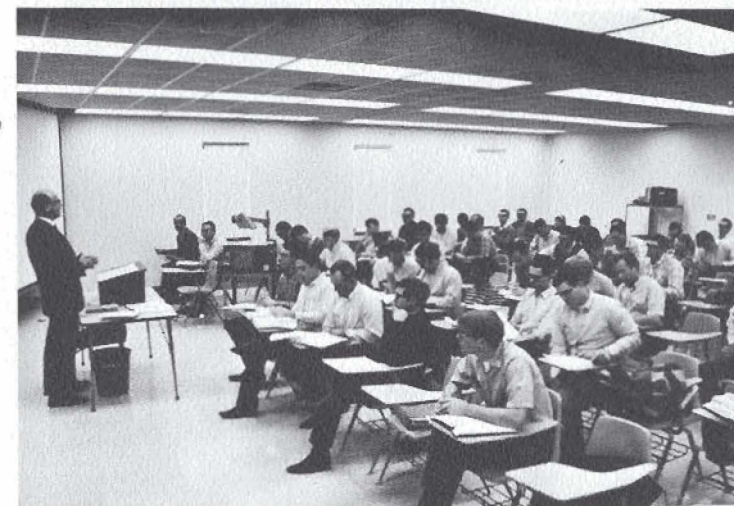
Extension...

A county Extension agent works with 4-H boys on beef carcass evaluation.



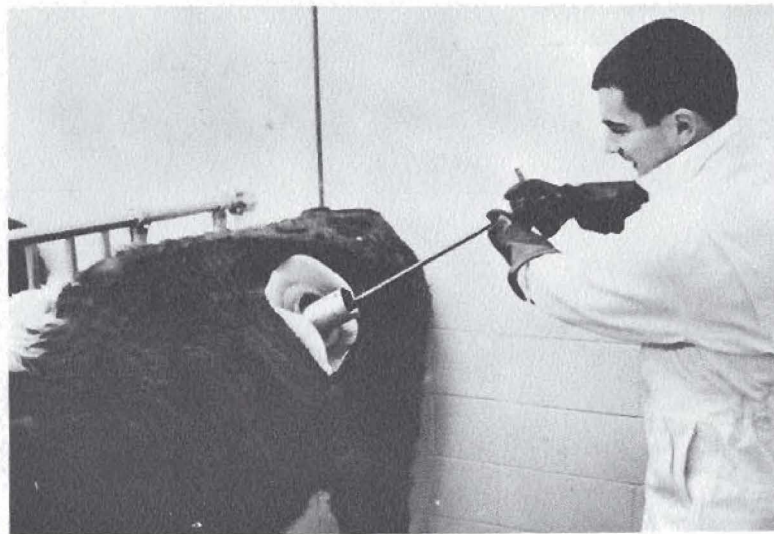
Teaching....

Animal Science students learning principles of animal breeding.

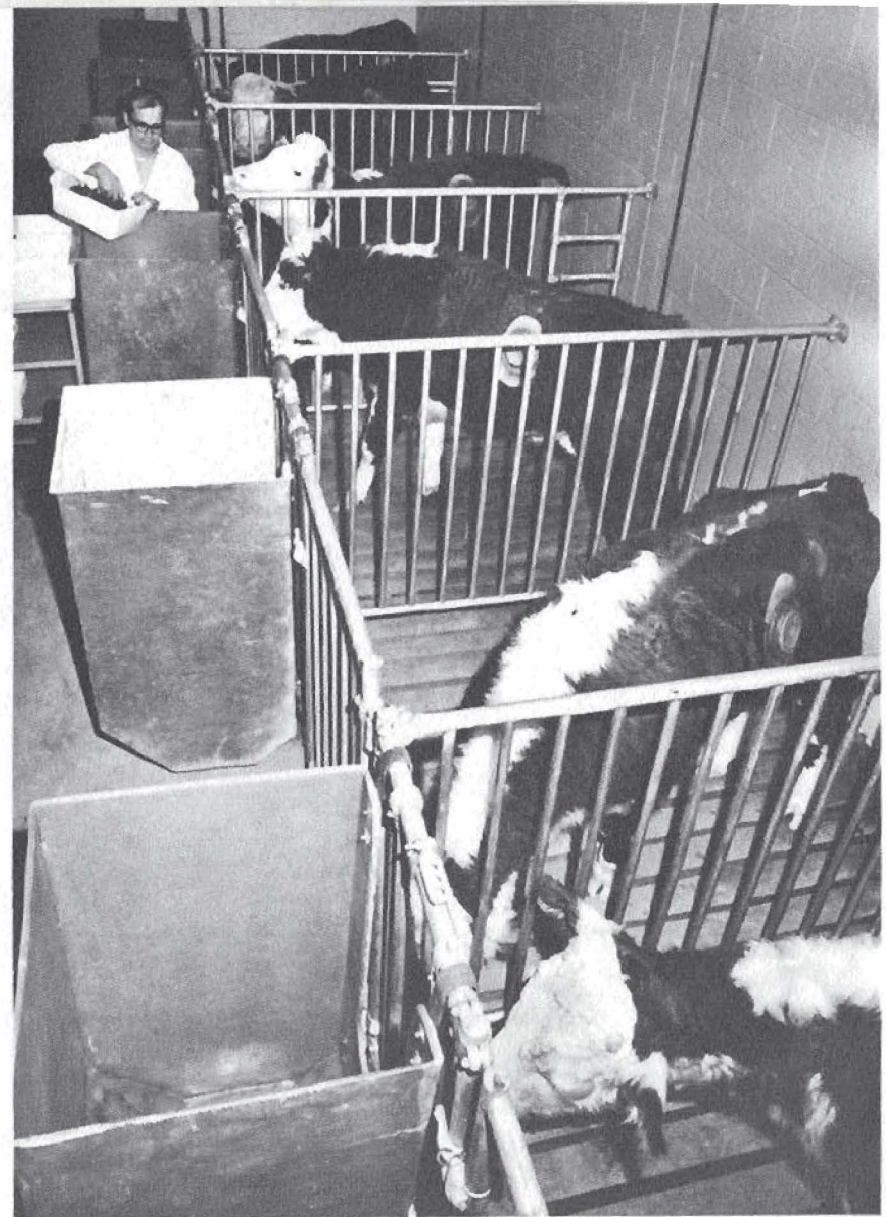


Marvel Baker Hall permits total integration of the staff members concerned with meat production and those specializing in dairy production. This facility has research and teaching capabilities that enhance the effectiveness of the Animal Science Department's public service. Nebraska's array of animal research extends from basic projects in the building to more extensive and applied projects at the outstate stations and the Mead Field Laboratory. The animal rooms and analytical laboratories in Marvel Baker Hall and Loeffel Meat Laboratory provide for intensive research projects and preliminary trials at the center of the state's livestock research program.

LARGE ANIMAL FACILITIES



Rumen fluid taken from a fistulated steer is used as an inoculum for studies on rumen bacteria in the laboratory.



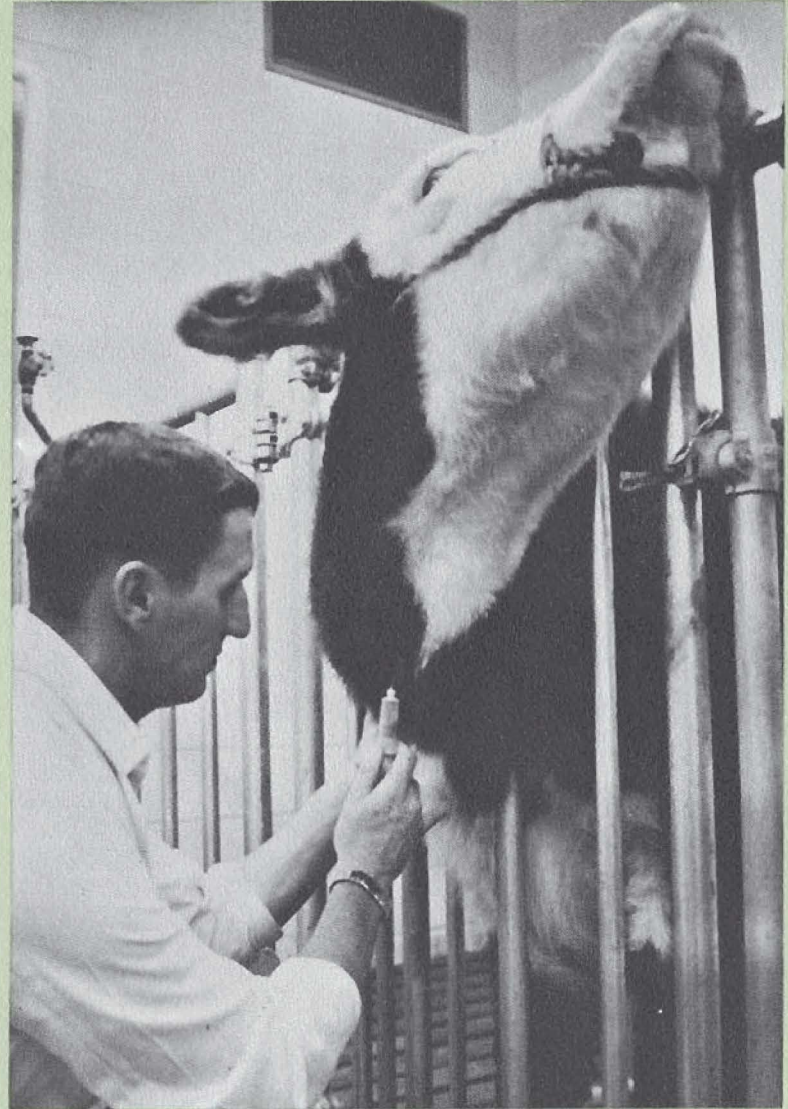
Experimental animals in slotted floor confinement area. These fistulated steers are individually fed to produce the type of rumen conditions desired.



Metabolism crates for cattle and sheep are used to determine digestibility and utilization of rations.



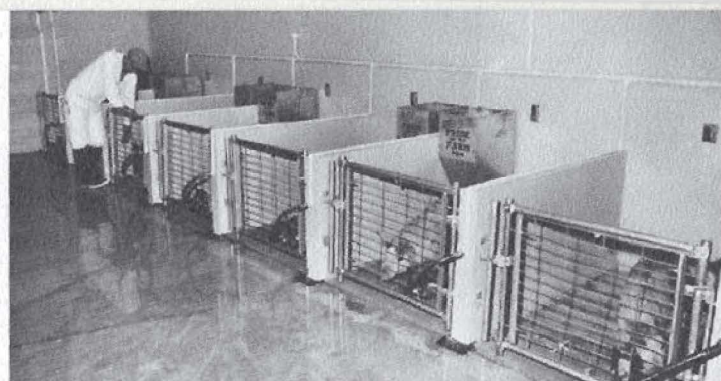
Restraint chute and scale combined permit effective handling and weighing of cattle.



Jugular blood samples are taken for laboratory analysis.



Experimental surgery is performed in one of the reproductive physiology research projects.



Individual feeding pens in the swine metabolism unit.

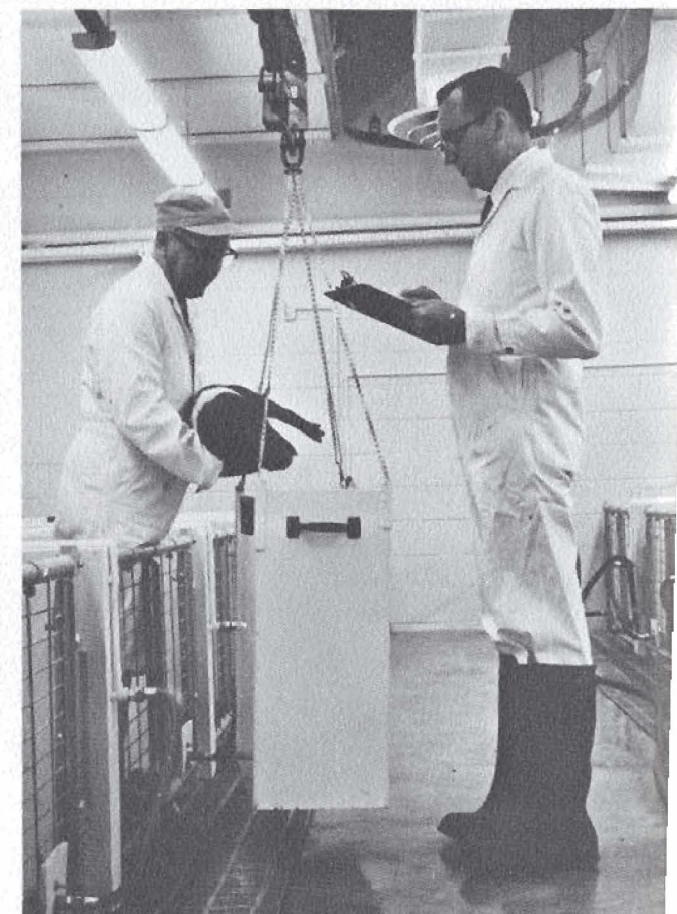


Mobile scales: a feature of the baby pig research unit.



System used for handling and storing experimental rations.

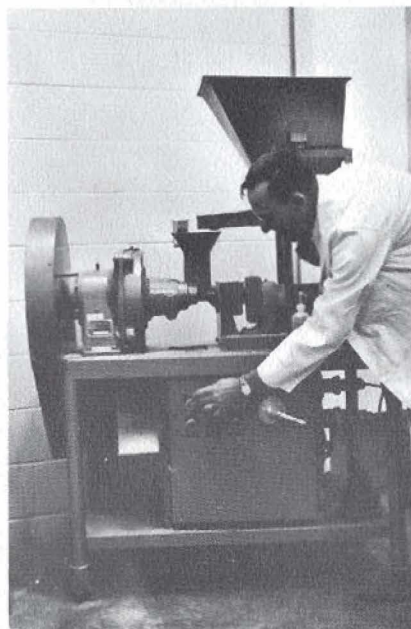
Baby pigs on nutrition studies are weighed each week.



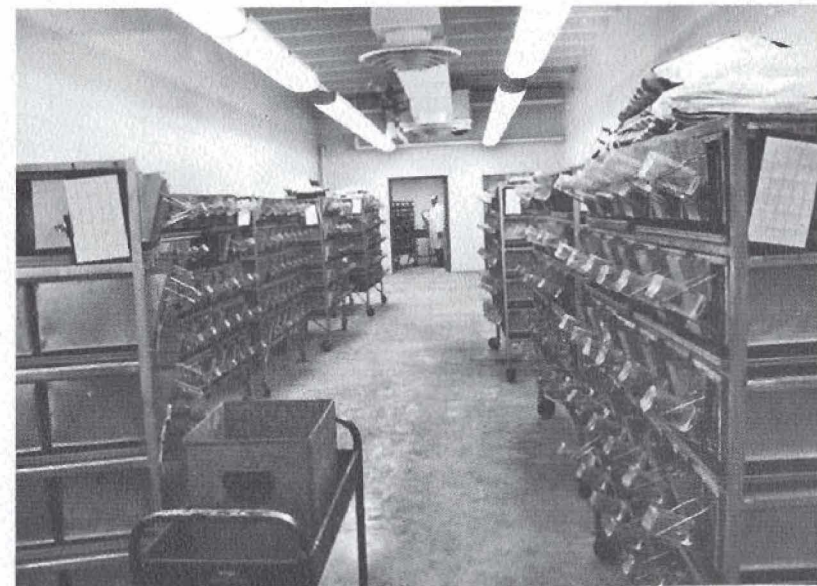


Weanling rats ear-marked and ready to be used in an experiment.

SMALL ANIMAL FACILITIES



This machine is used in pelleting experimental rations.

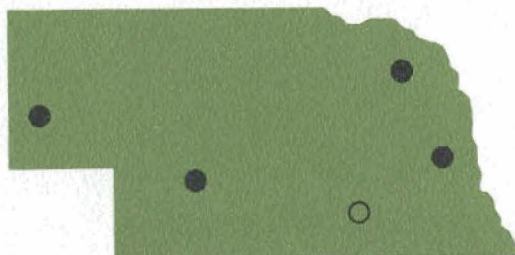


A view through one of the small animal colony rooms into the high temperature and humidity control room.



Individually identified animals on physiology studies.

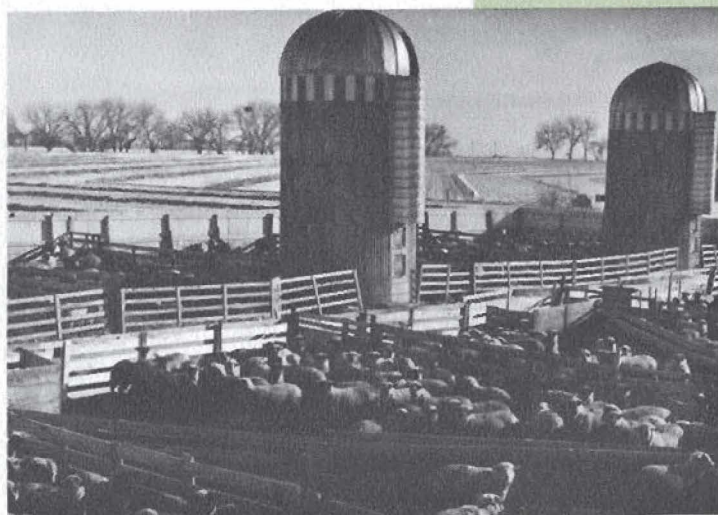
Extension programs oriented to the needs of specialized animal enterprises are made most effective by close liaison between research scientists and extension specialists. Also, two-way radio communications permit key specialists to be in contact with the office while on field assignments within range of the instrument. State specialists work with the county and area Extension staff members in developing programs to improve the livestock industry of the state.



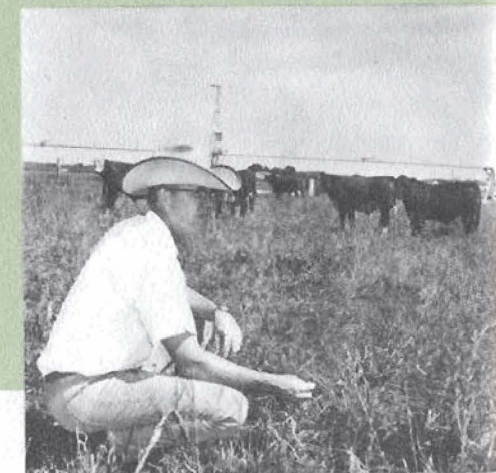
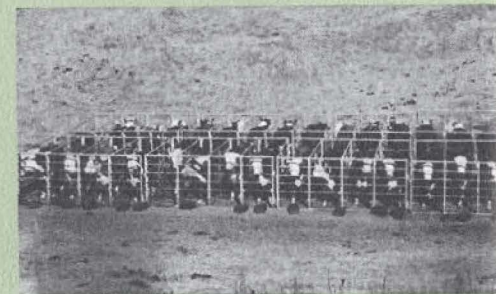
OUTSTATE FACILITIES



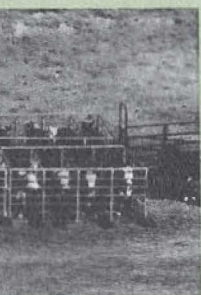
A field problem gets immediate attention through radio contact with an Extension specialist.



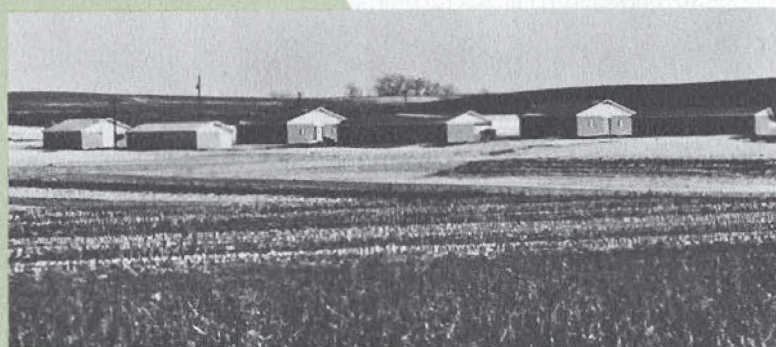
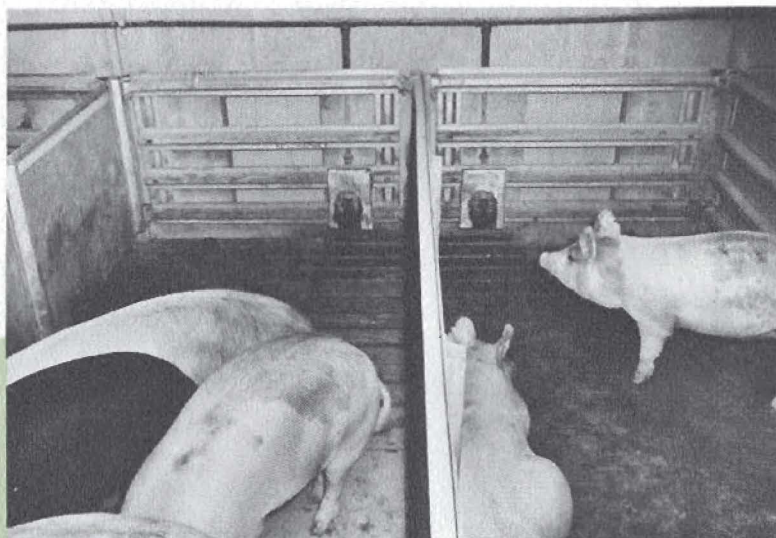
Experimental silos and lamb feeding research pens at the Scotts Bluff Station.



Range cattle nutrition research in individual feed pastures for beef cattle at the North Platte Station

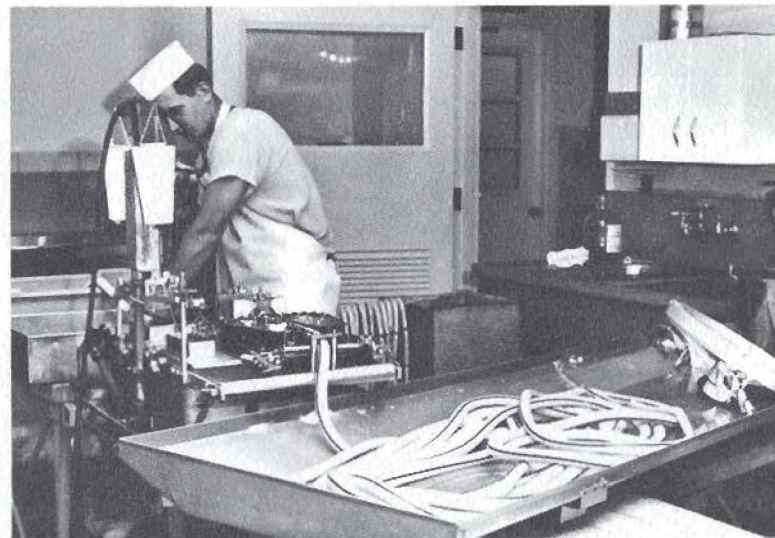


unit (top) and irrigated

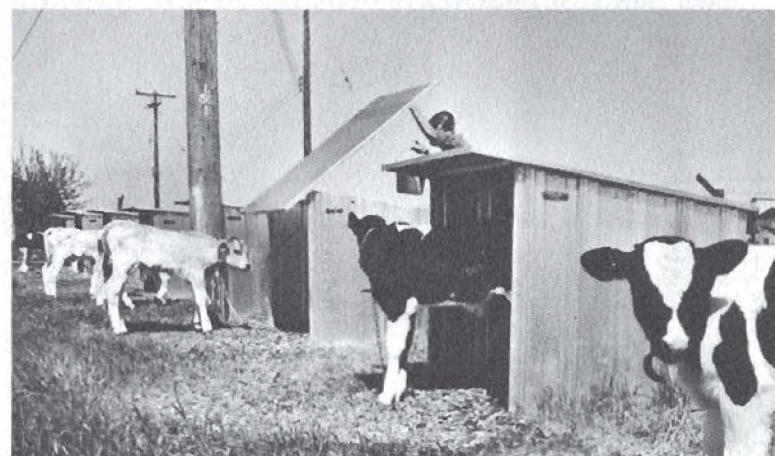


The six swine finishing units at the Northeast Station. These units will evaluate the type of construction and percent of slatted floor needed for finishing swine. Top picture shows two pens with 25 and 50 percent slatted floor in one of the enclosed buildings. The pen with 25 percent slats is dirtier than those with 50 or more percent slats and needs more frequent cleaning.

The headquarters building and herringbone milking parlor is the center of dairy research activities at Mead. A herd of 200 milking cows is housed either in free-stall or comfort-stall buildings. The "calf cabanas" shown are used in investigations of dairy calf housing systems to minimize disease, labor and costs.

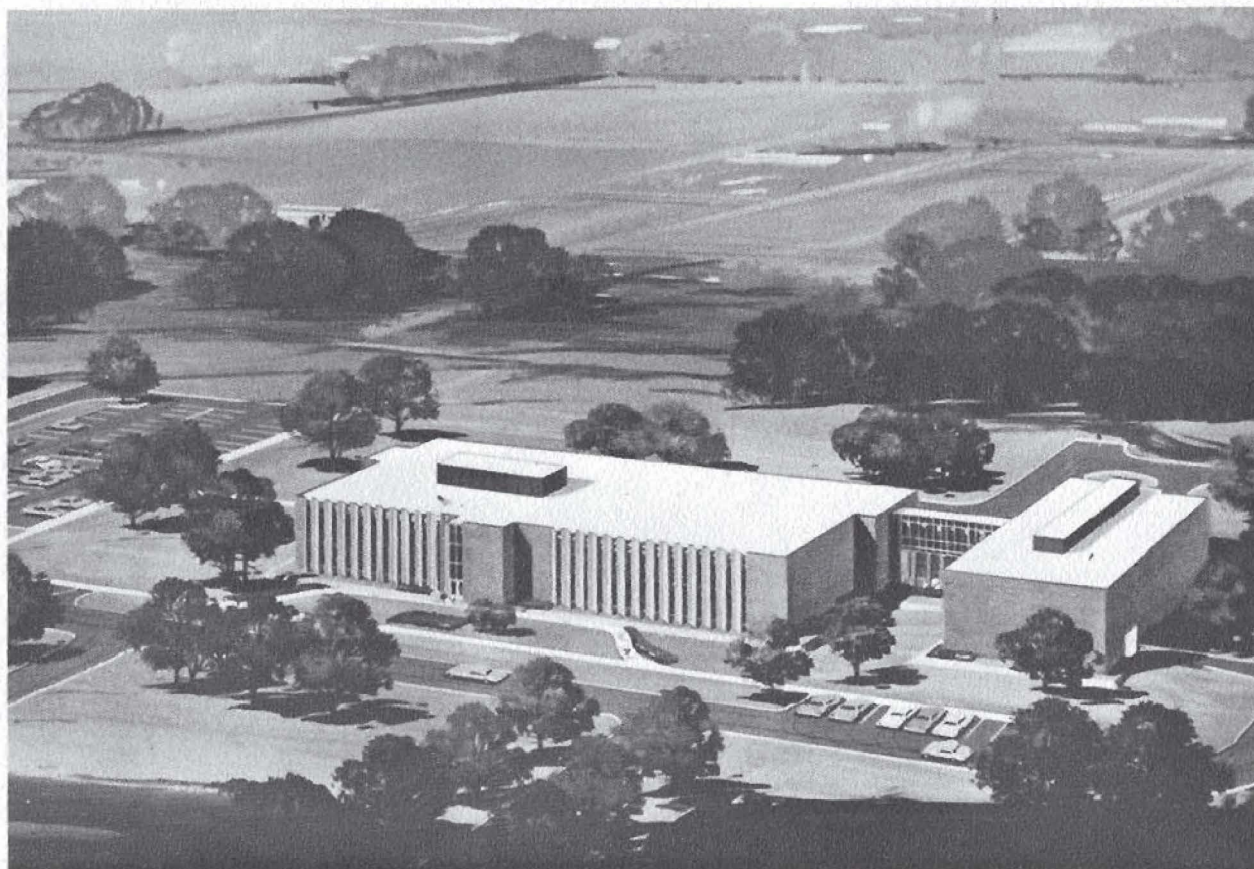


Yards and yards of wieners stream out of the stuffing machine in Loeffel Meat Laboratory in Lincoln. Carcass evaluation is another activity in meat research, teaching and Extension.

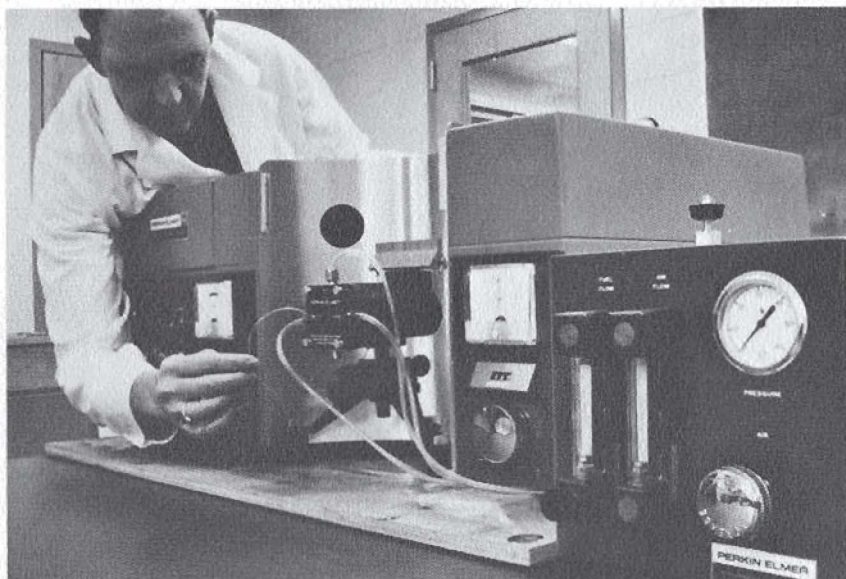


Nebraska's research and education programs are greatly strengthened through close cooperative relationships with the U. S. Department of Agriculture in the Meat Animal Research Center programs at Clay Center. USDA scientists can participate in the graduate faculty and can hold courtesy appointments or in some cases, joint appointments in the Animal Science Department. Also, scientists in the Animal Science Department cooperate with scientists at USMARC on research projects being conducted at the center.

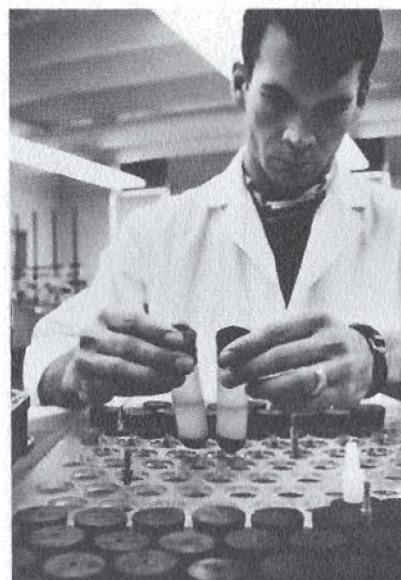
These outstanding scientists and the USMARC programs assist in attracting talented graduate students from all parts of the U.S. and the world to study in Nebraska. These students are valuable assistants in the research and teaching program. When their studies are completed, these young scientists may be employed in Nebraska's livestock industry or they may tell the story of this industry when they work in other states or countries.



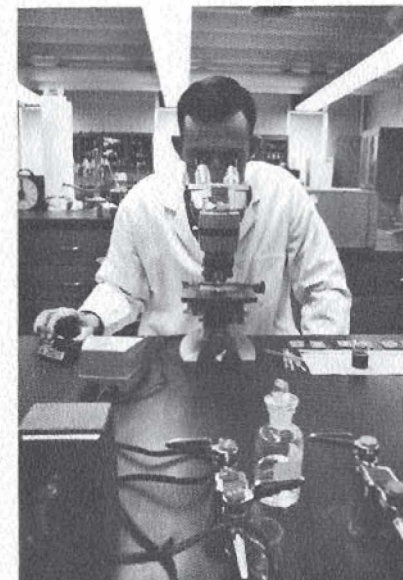
The \$2,729,000 headquarters building at the U. S. Meat Animal Research Center at Clay Center is designed to provide both office and research space. The larger section is an office and laboratory building with computer center and conference rooms. The smaller attached section is an animal laboratory building.



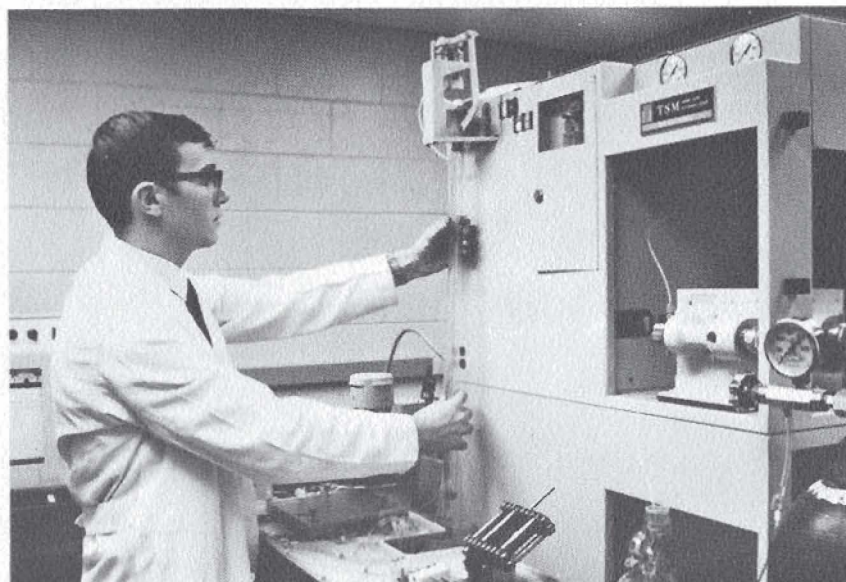
An atomic absorption spectrophotometer for mineral analyses of feed and tissue samples in the chemistry laboratory of Marvel Baker Hall.



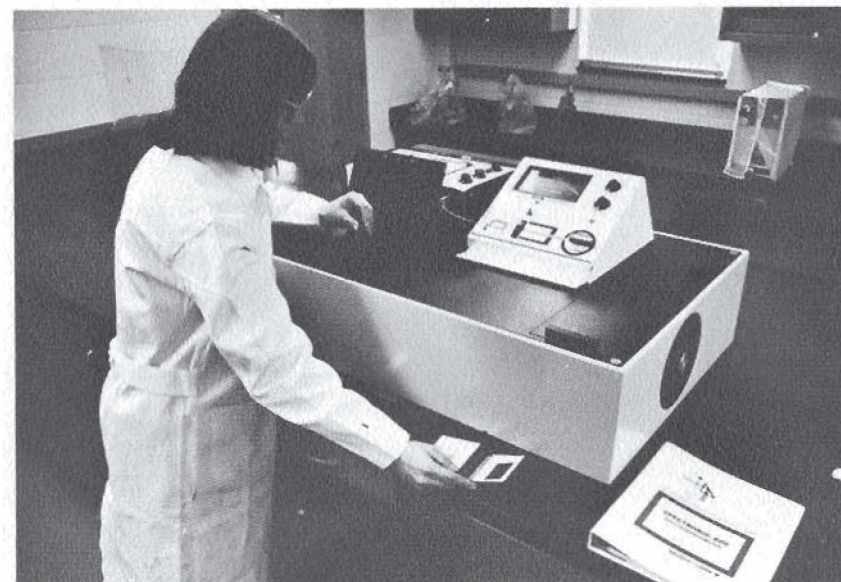
The artificial rumen is used to measure bacterial digestion of the various feeds.



Determining white cell count of blood from cattle suspected of having an abscessed liver.



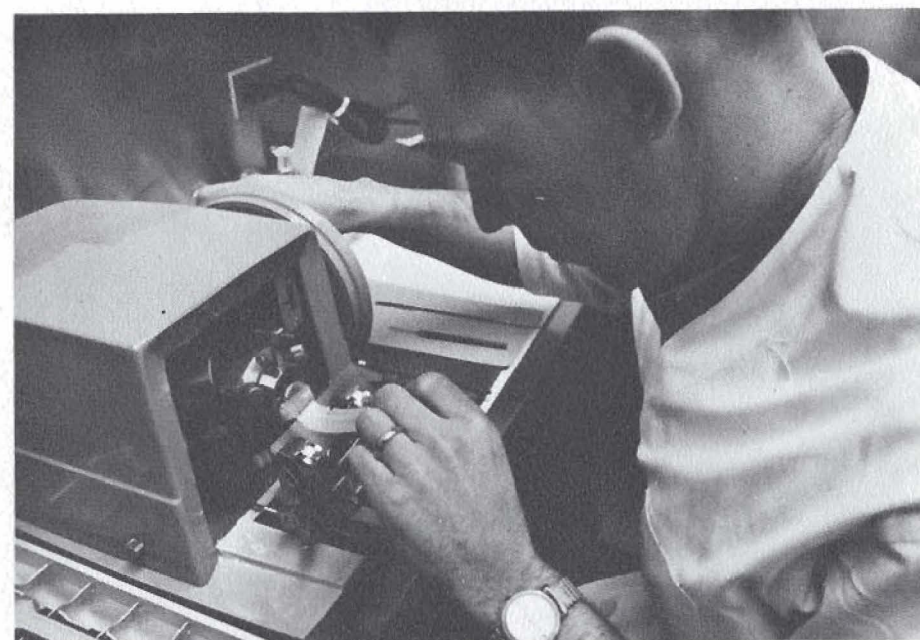
An amino acid analyzer for feed and tissue analysis in the chemistry laboratory.



Using ultra-violet absorption characteristics to get a quantitative estimation of steroid hormones.



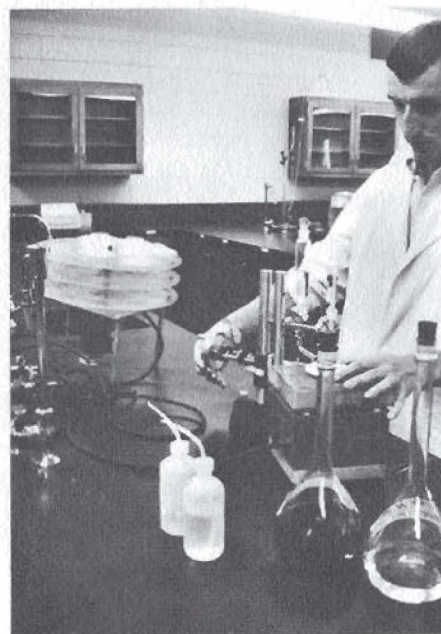
A physiology graduate student uses a liquid scintillation system in determining hormone concentration.



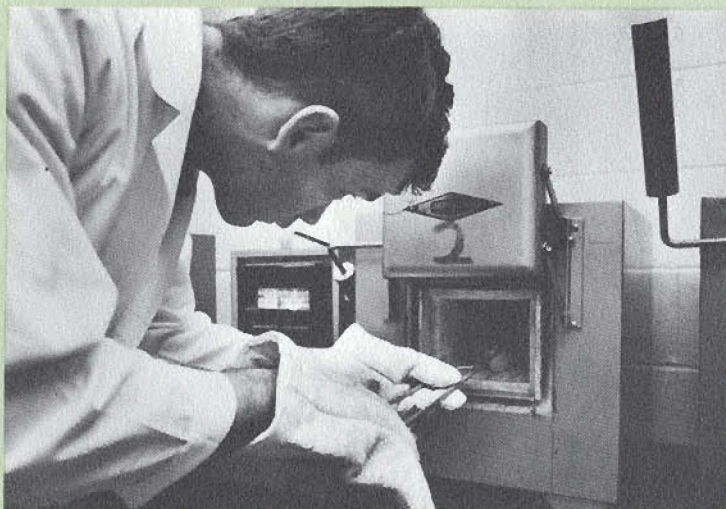
Using a microtome to make thin sections of tissues for histological study.



Analyzing blood to determine changes in its composition caused by ration treatments.



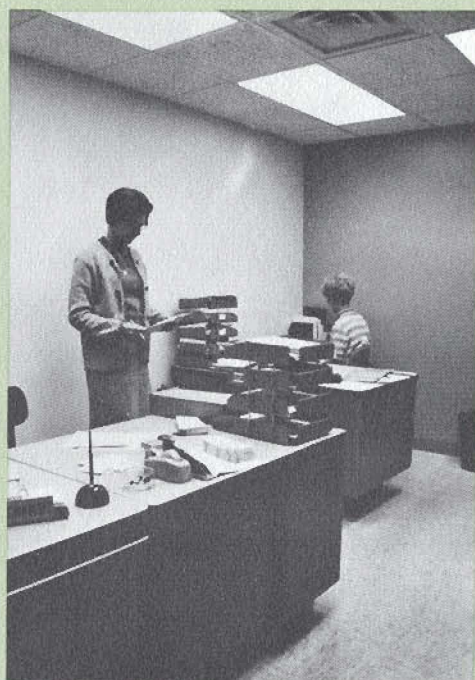
A view of the ruminant nutrition analytical laboratory.



Feed samples being ashed to determine mineral content.



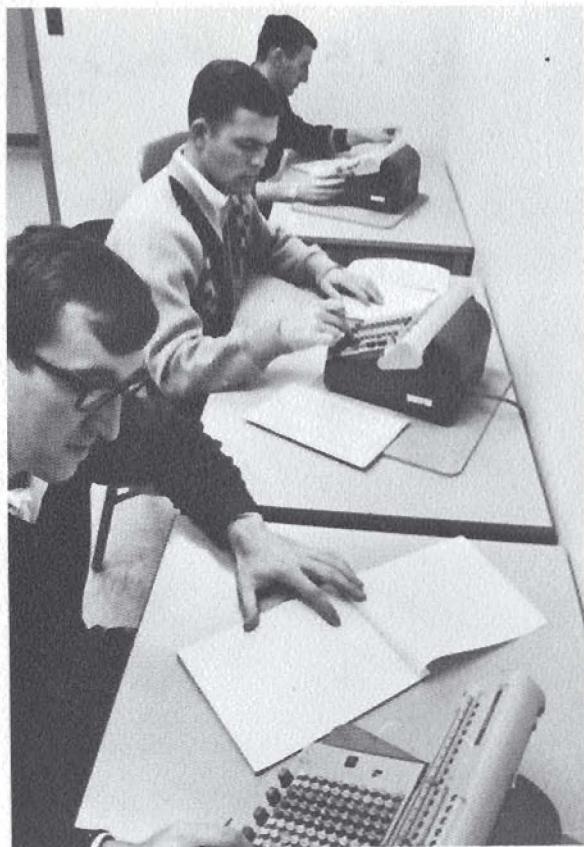
A departmental strategy session in the chairman's office.



The secretaries' pleasant welcome to the department.



Animal science research, teaching and Extension programs are developed and coordinated at staff meetings.

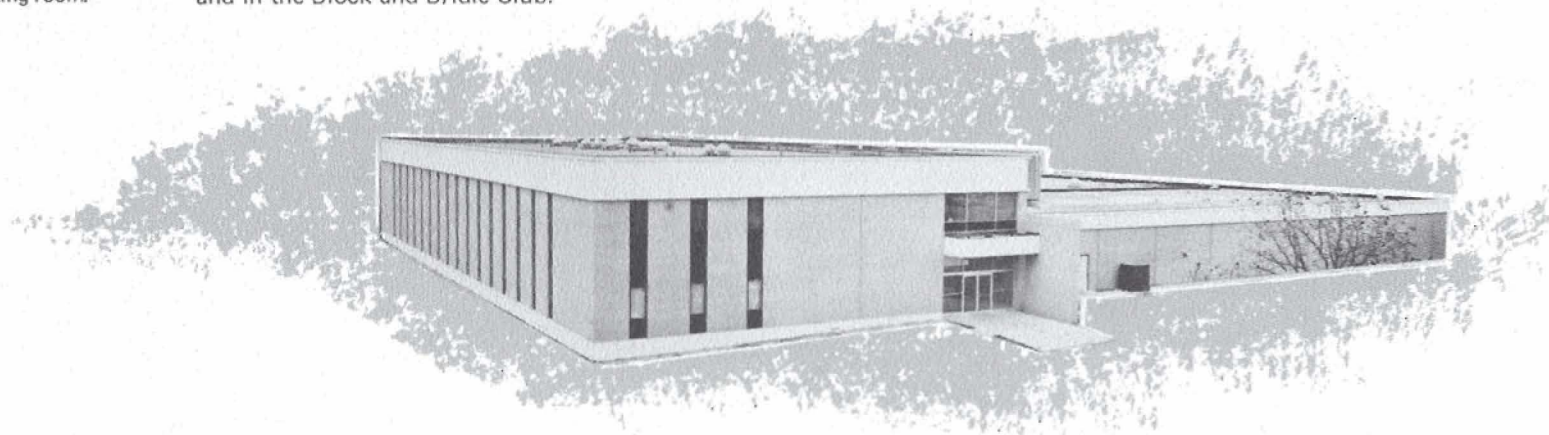


Graduate students at work in the calculating room.



An informal student-faculty discussion between classes.

The academic community of animal agriculture centering in Marvel Baker Hall stimulates self improvement and development of the scientist-teacher on the staff. Nebraska's youth who study Animal Science profit through the excellence of the educational opportunities available to them. The Department provides a variety of classroom and extracurricular activities for its undergraduates. Students work in the analytical laboratories, the meat laboratory and in the animal units. Students participate in livestock judging, meat judging, wool judging and in the Block and Bridle Club.



Samples of TODAY'S TECHNOLOGY

THAT CAME FROM YESTERDAY'S ANIMAL RESEARCH!



Beef cattle improvement through selection increased pounds of calf weaned by 20 percent in 5 years at Dalby-Halleck Farm.

MEAT-TYPE SWINE.

UREA SUPPLEMENTS FOR CATTLE AND SHEEP.

ARTIFICIAL INSEMINATION AND PROGENY TESTING
FOR DAIRY CATTLE.

PERFORMANCE-TESTED BEEF CATTLE.

CROSSBRED BEEF CATTLE.

MINERAL AND PROTEIN SUPPLEMENTS FOR SWINE.

HORMONE-STIMULANTS FOR CATTLE AND SHEEP.

ANTIBIOTICS FOR SWINE.

Samples of TOMORROW'S OPPORTUNITIES for TECHNOLOGY

CONTROLLED ESTRUS OF CATTLE, SHEEP AND
SWINE.

MODIFIED RELEASE OF UREA FOR RANGE CATTLE
RATIONS.

MEAT-TYPE LAMBS.

MULTIPLE BIRTHS IN CATTLE AND SHEEP.

IMPROVED CUTABILITY OF BEEF CARCASSES.

HIGH-DIGESTIBILITY HAY AND SILAGE.

ADJUSTED SEX RATIOS TO PRODUCE ALL MALES OR
ALL FEMALES.

CHEMICAL ASSAYS FOR GENETIC POTENTIAL FOR
MILK PRODUCTION, GROWTH RATE OR MEAT
PRODUCTION.

CONTROLLED QUALITY & QUANTITY OF FAT AND
LEAN IN TABLE-READY STEAKS, CHOPS, AND
ROASTS.

SPECIFICATION MANUFACTURE OF SAUSAGE,
WIENERS AND LUNCHEON MEATS.