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2007

2006 Review—ISU Beef Nutrition Research Farm, North Dakota Avenue, Ames, Iowa

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Iowa State University

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Rod Berryman, superintendent
Animal Science Beef Nutrition Research Farm

History

The university purchased land for this farm in1954. Construction of the original experimental cattle feedlot unit and feed mill was completed in 1955. Over the next 20 years a second cattle feedlot unit, a lamb-feeding unit - later converted to a cattle unit, four open cattle lots, and a confinement building were added. In 1996 two of the cattle units were demolished and construction began on a 60 pen feedlot with commodities storage shed and a cattle handling facility.

Farm Area and Land Use

The farm consists of approximately 275 acres with the following use: 48 acres in crop rotation, 22 acres of permanent brome pasture, 58 acres of timber pasture, 50 acres of brome pasture for rotational grazing experiments, and 60 acres of fescue/red clover pasture for winter grazing experiments. The remainder includes the building site, small pastures and open lots, and areas used for containment of runoff.

Facilities

A 36' x 756' open front shed with 60, 6 head pens.
A 28' x 196' open front shed with 16, 6 head pens, needs building repairs, fence replacement and a system to handle runoff from the cattle lots.
A 40' x 120' open front shed with 6, 6 head pens each pen with 6 Calan electronic gates for individual feeding.
Four dirt lots with fence line bunks, concrete apron and windbreaks.
Two dirt lots with concrete apron, one with fence line bunks, no windbreaks.
76' x 184' concrete lot divided into various sized pens most with fence line bunks. There is a 16' x 120' open front shed. Building and concrete are in very poor condition.
A feed mill with overhead storage, bag storage, grain processing, batch scale and two horizontal mixers.
A 48' x 56' building with animal handling facilities, supply room and shop area.
A 58'x 72' building used for commodities storage and feed mixing.
A 36' x 40' hay storage building.
A small wood bunker silo used to store wet by-product feeds.
Three solid manure storage bunkers.
A 30' x 34' hoop building used to store hay.

Mission

Provide facilities and support for research aimed at optimizing nutrition and management of beef cattle in Iowa.

Contributions

Feedlot Nutrition and management research.
Summer and winter grazing research.
Nutrient management research.
Support metabolism and digestion trials in the Kildee Hall animal unit.
Contribute to the teaching and outreach mission of the department.

Research Activities

Improvement of high sulfur byproducts by balancing cation:anion ratio.
Using ethanol co-products to finish beef cattle without grain.
A novel approach to improving tenderness of underutilized muscles from the round of pasture fed beef.
Reducing energy costs in ethanol production through on farm storage methods of high moisture distillers feeds.
Comparison of steers and heifers fed high levels of wet distillers grains.
Winter grazing systems for Fall-calving cows producing calves for grass based beef production system.
Dwarfism.
Pathogen sampling from runoff treatment system.
Comparison of corn and triticale diets.
Maintain rumen fistulated steers for microbiology studies.

Teaching Activities

Animal Science 226	Animal Science 319 lab.
Animal Science 336	Animal Science 480A

Other Activities

Custom feeding Spring and Fall born bull calves for Iowa State Research Farms.
Support of Beef Breeding Project.
Provide facilities and animals for Pfizer Animal Health injection site training.
Provide location for Soil Science labs.
Provide a meeting place for soil judging contest.