

2010

2009 Review—ISU Beef Nutrition Research Farm, North Dakota Avenue, Ames, Iowa

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A.S. Leaflet R2567

Rod Berryman, superintendent,
Animal Science Beef Nutrition Research Farm

History

The university purchased land for this farm in 1954. 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, and 60 acres of endophyte-free fescue pasture. 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.
A 40' x 120' open front shed with 7, 6 head pens and a feed intake management feeding system.
Four dirt lots with fence line bunks, concrete apron and windbreaks.
Two dirt lots with concrete apron, one with fence line bunks.
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 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. Allen Trenkle & Paul Summer
Effects of feeding ethanol by-products on marbling and fatty acid composition of beef. Jon Schoonmaker.
Determination of the effects of Oligo Essential on growth and carcass composition of feedlot steers. M.P. Hoffman.
Beef cow feed efficiency project. Daryl Strohbehn and Garland Dahlke.
Evaluation of feed intakes and feed efficiency in Angus bulls. Strohbehn and Dahlke
Effect of dietary sulfur during backgrounding on sulfur tolerance of finishing cattle. Stephanie Hansen.
Changes in rumen fluid, rumen gas cap and blood with differing levels of dietary sulfur. Sulfur Project Group.
Effect of moisture level and chemical treatment on storage stability and feed value of corn stover. Jim Russell.

Teaching Activities

Animal Science 320 lab.
Animal Science 336 lab., Domestic Animal Behavior and Well Being.

Other Activities

Host tours of facilities with producers, extension personnel and researchers.
Host feedlot run-off alternative technologies with an infiltration and wet land system.

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Feeding in the new Feed Intake Monitoring System barn.



Animal behavior class utilizing working facility at Beef Nutrition Farm.



Bull calf eating out of new FIMS bunk.