January 2005

Cover and Frontmatter

Follow this and additional works at: https://digitalcommons.unl.edu/animalscinbcr

Part of the Animal Sciences Commons

https://digitalcommons.unl.edu/animalscinbcr/157

This Article is brought to you for free and open access by the Animal Science Department at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Nebraska Beef Cattle Reports by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.
Table of Contents

Cow/Calf

Comparison of Two Development Systems for March-born Replacement Beef Heifers .................................................. 3

Effects of Supplemental Protein During Gestation and Grazing
Sub-irrigated Meadow During the Postpartum Interval on
Pregnancy Rates of Spring Calving Cows and Calf Growth ...... 7

The Effects of Temperature and Temperature-Humidity Index
on Pregnancy Rate in Beef Cows ............................................ 10

Effects of Dried Distillers Grains Supplementation Frequency
on Heifer Growth ................................................................. 13

Reproductive Response in Heifers Fed Soybeans During Post
Weaning Development .......................................................... 15

Grazing

The Effects of Dried Distillers Grains on Heifers Consuming
Low or High Quality Forage .................................................. 18

Tree Growth and Cattle Weight Gain in a Ponderosa Pine System ...21

Determination of Undegradable Intake Protein Digestibility
in Forages ............................................................................. 25

Finishing

Effects of Corn Moisture and Degradable Intake Protein
Concentration on Finishing Cattle Performance ..................... 28

Effects of Corn Moisture and Length of Ensiling on Dry Matter
Digestibility and Rumen Degradable Protein ........................ 31

Influence of Corn Kernel Traits on Digestibility and Ruminal
Fermentation ........................................................................ 34

Effect of Different Corn Processing Methods and Roughage
Levels in Feedlot Diets Containing Wet Corn Gluten Feed .... 37

Effect of Corn Bran and Corn Steep Inclusion in Finishing
Diets on Diet Digestibility and Fiber Disappearance ............. 39

Degradable Intake Protein in Finishing Diets Containing Dried
Distillers Grains ..................................................................... 42

Effect of Feeding a By-product Combination Consisting of Wet
Distillers Grains and Wet Corn Gluten Feed to Feedlot Cattle ... 45

Ethanol Distiller By-product Phosphorus Concentration as
Influenced by Corn Hybrid .......................................................... 47

Effects of Field Peas in Beef Finishing Diets ............................. 49

Effects of Dietary Phosphorus Level in Beef Finishing Diets on
Phosphorus Excretion Characteristics .................................... 51

Effects of Corn Bran and Corn Steep Inclusion in Finishing Diets
on Cattle Performance and Nitrogen Mass Balance ............... 54

Composting of Feedlot Manure: Compost Characteristics, Crop
Yields and Application Rates ................................................ 57

Vaccination for *Escherichia coli* O157:H7 in Market Ready
Feedlot Cattle .......................................................................... 61

Direct-fed Microbial Products for *Escherichia coli* O157:H7 in
Market Ready Feedlot Cattle .................................................... 64

Performance and Economics of Sorting Yearling Steers by Feedlot
Initial Body Weight ................................................................. 66

Performance and Economics of Yearlings Developed with
Intensive Winter Management, and Partial Season Grazing ...... 68

Effect of High Roughage and High Energy Diets on Body
Temperature ............................................................................. 73

Effect of Clinoptilolite Zeolite on Cattle Performance and
Nitrogen Volatilization Loss ...................................................... 76

Evaluation of Initial Implants for Finishing Steers ................. 78

Beef Products

Effect of Injecting Modified Connective Tissue Solutions on
Quality of Beef Roasts ............................................................. 82

Packaging Effects on Shelf-Life and Sensory Traits of Enhanced
Beef ....................................................................................... 85

Benchmarking the Differences Between Cow and Beef Muscles ...88

Pre-rigor Water Injection and Post-rigor Sodium Citrate
Treatment on Beef Tenderness .................................................. 91

Evaluation and Composition of Beef Semitendinosus Utilizing
a Novel Cooking System ....................................................... 93

The Effects of Phosphate Type and Potassium Lactate Level
on Quality Characteristics of Enhanced Beef Steaks ............ 96
ACKNOWLEDGMENTS

Appreciation is expressed to the following firms, associations, or agencies who provided grant support for research in the beef cattle program.

Abengoa Bioenergy Corp., York, Nebraska
Bioniche Life Sciences, Belleville, Ontario
Cargill Corn Milling, Blair, Nebraska
Elanco Animal Health, Indianapolis, Indiana
Fort Dodge Animal Health, Overland Park, Kansas
Intervet, Millsboro, Delaware

Nebraska Corn Board, Lincoln, Nebraska
Beef Council, Kearney, Nebraska
Nutrition Physiology Corp., Amarillo, Texas
J.C. Robinson Seed Co., Waterloo, Nebraska
Soypass Royalty Funds, University of Nebraska, Lincoln, Nebraska

Appreciation is also expressed to the following firms who provided products or services.

Abengoa Bioenergy Corp., York, Nebraska
American Simmental Association, Bozeman, Montana
BK Giulini, Simi Valley, California
Cargill Corn Milling, Blair, Nebraska
Chief Ethanol Fuels, Hastings, Nebraska
Dakota Commodities, Scotland, South Dakota
Elanco Animal Health, Indianapolis, Indiana
Enzyme Valley Research, South Bend, Indiana
Fort Dodge Animal Health, Overland Park, Kansas
Hi Gain Inc., Cozad, Nebraska
Intervet, Millsboro, Delaware
Iowa Limestone, Des Moines, Iowa
Lignotech, Rothschild, Wisconsin

Liquid Feed Commodities, Fremont, Nebraska
Mead Cattle Co., Mead, Nebraska
Phoenix Scientific, St. Joseph, Missouri
Rex Ranch, Whitman, Nebraska
Schering Plough Animal Health, Kenilworth, New Jersey
Sigma Fine Chemicals, St. Louis, Missouri
Smithfield Beef Enterprise, Packerland Packing Co., Green Bay, Wisconsin
Trumark Inc., Linden, New Jersey
Tyson IBP Inc., Dakota City, Nebraska/Council Bluffs, Iowa
USDA Meat Grading and Certification Branch, Omaha, Nebraska

Appreciation is also expressed to the following Research Technicians, Unit Managers, and Crew involved in the Research Programs at our various locations.

Agricultural Research and Development Center, Ithaca
Justin Beam
Jeff Bergman
Andrew Cizek
Logan Dana
Scott Gotschall
Matt Greenquist

April Miller
Karl Moline
Tom Dreiling
Ken Rezac
Matt Sillivan
Doug Watson

Animal Science Department, Lincoln
Jeff Folmer
Jeryl Hauptman
Janet Hyde
Tommi Jones
Matt Luebbe
Jim MacDonald

Clyde Naber
Robert Peterson
Calvin Schrock
Candice Toombs
Kyle Vander Pol
Casey Wilson

Gudmundsen Sandhills Laboratory, Whitman
Andy Applegarth
Jackie Musgrave
John Nollette

Ryan Saxon
Troy Smith

Panhandle Research and Extension Center, Scottsbluff
Nabor Guzman

Paul McMillen

Dalbey-Halleck Farm
Mark Dragastin

West Central Research and Extension Center, North Platte
Rex Davis
T. L. Meyer

Jim Teichert

Northeast Research and Extension Center, Norfolk
Sheryl Colgan
Bob Frerichs

Kevin Heithold
Lee Johnson

Electronic copies of Nebraska Beef Reports and Summaries are available at: http://animalscience.unl.edu. Click on Area of Interest; Beef Cattle; then Beef Reports.

It is the policy of the University of Nebraska-Lincoln not to discriminate on the basis of gender, age, disability, race, color, religion, marital status, veteran’s status, national or ethnic origin or sexual orientation.