



Agricultural Research Division  
University of Nebraska Extension  
Institute of Agriculture and Natural Resources  
University of Nebraska–Lincoln

## Beef Cattle Reports and Summaries

MP101 — 2015 Beef Cattle Report

G425 — G2014 Beef Report Summaries

MP99 — 2014 Beef Cattle Report

G425 — 2014 Beef Report Summaries

MP98 — 2013 Beef Cattle Report

G425 — 2013 Beef Report Summaries

MP95 — 2012 Beef Cattle Report

G425 — 2012 Beef Report Summaries

MP94 — 2011 Beef Cattle Report

G425 — 2011 Beef Report Summaries

MP93 — 2010 Beef Cattle Report

G425 — 2010 Beef Report Summaries

MP92 — 2009 Beef Cattle Report

G425 — 2009 Beef Report Summaries

MP91 — 2008 Beef Cattle Report

G425 — 2008 Beef Report Summaries

MP90 — 2007 Beef Cattle Report

G425 — 2007 Beef Report Summaries

MP88 — 2006 Beef Cattle Report

G425 — 2006 Beef Report Summaries

MP83 — 2005 Beef Cattle Report

G425 — 2005 Beef Report Summaries

MP0480 — 2004 Beef Cattle Report

G425 — 2004 Beef Report Summaries

MP0380 — 2003 Beef Cattle Report

G425 — 2003 Beef Report Summaries

MP79 — 2002 Beef Cattle Report

G425 — 2002 Beef Report Summaries

MP76 — 2001 Beef Cattle Report

G425 — 2001 Beef Report Summaries

MP73 — 2000 Beef Cattle Report

MP71 — 1999 Beef Cattle Report

MP69 — 1998 Beef Cattle Report

MP67 — 1997 Beef Cattle Report

### **Cow/Calf**

Impact of Heifer Development System on Subsequent Gain and Reproduction  
Genetic Parameter Estimates for Calving Difficulty and Birth Weight in a Multibreed Population  
Estimation of British- and Continental-Specific Heterosis Effects for Birth, Weaning, and Yearling Weight in Cattle  
Using Sugar Beet Pulp to Replace Wheat Straw when Limit Feeding Late Gestation Beef Cows  
Supplementing Cow-Calf Pairs Grazing Smooth Bromegrass  
Effects of Calf Age at Weaning on Cow and Calf Performance and Feed Utilization in an Intensive Production System  
An Economic Analysis of Conventional and Alternative Cow-Calf Production Systems  
Effect of Post-Weaning Management and Age at Weaning on Calf Growing and Finishing Performance

### **Growing**

Dried Distillers Grains Supplementation of Calves Grazing Irrigated Corn Residue  
Comparison of Commercial Lick Tubs to Distillers Grains Supplementation for Calves Grazing Corn Residue  
Efficacy of Bovatec 2.2 Mineral Blocks for Cattle Grazing Crested Wheatgrass Pastures  
Effect of Distillers Grains Plus Solubles and Monensin Supplementation on Grazing Steers  
Comparison of Wet or Dry Distillers Grains Plus Solubles to Corn as an Energy Source in Forage-Based Diets  
Effects of Processing Treated Corn Stover and Distillers Grains on Performance of Growing Cattle  
Digestibility of Calcium Oxide Treated Corn Residue with De-Oiled Distillers Grains  
Digestibility of De-oiled Modified Distillers Grains Plus Solubles in Forage-based Diets  
Evaluation of the Impact of an Alternative Corn Residue Harvest Method on Performance and Methane Emissions from Growing Cattle  
Effect of Diet on the Rumen Microbial Community Composition of Growing Cattle and the Role It Plays in Methane Emissions

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Stocking Rate Effects on Forage Nutrient Composition in Early Summer Pastures  
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### **Finishing**

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Effects of Replacing Corn with a Pelleted Treated Corn Stover and Distillers Grains on Intake and Total Tract Digestibility of Finishing Diets  
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Effect of 300 or 400 mg Daily of Ractopamine Hydrochloride on Growth Performance and Carcass Characteristics of Finishing Steers During the Last 14, 28, or 42 Days  
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A Comparison of Two Implant Protocols: Synovex-Choice/Synovex-Plus vs. Synovex-S/Revalor-S on Steer Feedlot Performance and Carcass Characteristics  
Effect of Zinc and Copper Source on Finishing Steer Feedlot Performance and Incidence of Footrot  
Effects of Next Enhance® Concentrations in Finishing Diets on Performance and Carcass Characteristics of Yearling Feedlot Cattle  
Evaluating Two Rates of Monensin Fed During the Grain Adaptation Period on Cattle Performance and Carcass Characteristics  
Effects of Dietary Fat Source and Monensin on Methane Emissions, VFA Profile, and Performance of Finishing Steers  
Mineral Composition of Beef Cattle Carcasses  
Mineral Composition of Serial Slaughter Holstein Carcasses  
Anaerobic Digestion of Feedlot Manure

## **Beef Products**

A Basic Mechanism of Beef Tenderization: Feeding Wet Distillers Grains Plus Solubles Contributes to Sarcoplasmic Reticulum Membrane Instability

The Effects of Source and Amount of Nitrite on Quality Characteristics of All-Beef Frankfurters

Effect of Feeding Distillers Grains in Different Phases of Production on the Fatty Acid Profile and Oxidation of Frozen, Cooked Beef Links

Effect of Feeding Distillers Grains and Supplementing with Dietary Antioxidants on Ground Beef Color During Retail Display

## **Statistics Used in Nebraska Beef Cattle Report and Their Purpose**

## **MP99 – 2014 Beef Cattle Report** — <http://www.ianrpubs.unl.edu/epublic/live/mp100/build/mp99.pdf>

### **Cow/Calf**

Effect of Pubertal Status and Number of Estrous Cycles Prior to the Breeding Season on Pregnancy Rate in Beef Heifers

Comparison of Long-term Progestin-based Synchronization Protocols on Fixed-time AI pregnancy Rate in Beef Heifers

Androgen Excess in Beef Cows Results in Altered Theca Cell Gene Expression and Fertility

Follicular *Vascular Endothelial Growth Factor A* Expression Before and After the LH Surge

Evaluation of Genomic Predictors for Red Angus Cattle

Preconception Distillers Grains Supplementation Improves Mature Beef Cow Return to Estrous

Impact of Supplemental Protein Source on Pregnant Heifers

Effects of Winter Supplementation on Cow Performance and Post-Weaning Management on Steer and Heifer Progeny in a Late Spring Calving System

Effects of Calf Age at Weaning on Cow and Calf Performance and Efficiency in a Drylot/Confinement Production System

### **Growing**

Effects of Forage Quality, MDGS, and Monensin on Performance, Methane Concentration, and Ruminal Fermentation of Growing Cattle

Energy Value of De-Oiled Modified Distillers Grains Plus Solubles in a Forage Based Diet

Replacement of Grazed Forage and Animal Performance when Distillers Grains are Fed in a Bunk or on the Ground on Summer Range

Effects of Winter Supplementation Level on Yearling System Profit Across Economic Scenarios

Distillers Grains Supplementation in a Forage System with Spayed Heifers

Economics of Distillers Grains Supplementation in a Forage System with Spayed Heifers

Effect of Distillers Grains Plus Solubles Supplementation on Grazing Cattle Performance

Effect of Distillers Grains Supplementation on Calves Grazing Irrigated and Non-irrigated Corn Residue

Effects of Grazing on Nebraska Sandhills Meadow Forage Nutrient Content

### **Forage Management and Crop Residue Utilization**

Effect of Irrigation Allocation on Perennial Grass Production and Quality

Dryland Cover Crops as a Grazing Option for Beef Cattle

Using Enspira™ to Improve Fiber Digestion

Use of Treated Corn Residues in Growing Diets

Use of a Pelleted Corn Residue Complete Feed in Receiving Diets

Alkaline Treated Wheat Straw or Corn Stover Fed to Growing Calves

Impact of Feeding Alkaline-treated Corn Stover at Elevated Amounts in Commercial Feedlot Cattle

Optimum Inclusion of Alkaline Treated Cornstalks and Distillers Grains Fed to Calf-fed Steers

### **Finishing**

Transitioning Cattle from RAMP® to a Finishing Diet on Feed Intake and Ruminal pH

Transitioning Cattle from RAMP® to a Finishing Diet on Feedlot Performance and Feed Intake Variance

Effects of Increasing Inclusion of Wet Distillers Grains Plus Solubles With and Without Oil Extraction on Finishing Performance

Effects of a Terminal Sorting System with Zipaterol Hydrochloride on Feedlot Steers

Evaluating Corn Condensed Distillers Solubles Concentration in Steam-Flaked Corn Finishing Diets on Cattle Performance and Carcass Characteristics

Feeding Elevated Levels of Corn Silage and MDGS in Finishing Diets

Effects of Feeding NEXT ENHANCE® in Finishing Diets on Performance and Carcass Characteristics

Optimal Marketing Date of Steers Depends on Marketing Strategy

Effect of Micro-Aid® Supplementation on Nitrogen Losses from Manure

Effects of Dietary Change on Viral-bacterial Interactions in the Rumen of Cattle

Differences in Fecal Bacterial Community Composition between Beef Steers which are High-shedders and Low-shedders of Shiga Toxin-producing *Escherichia coli* (STEC)

## **Beef Products**

Shelf life of Cooked Ground Beef Patties from Cattle Fed Wet Distillers Grains with Solubles  
Effect of Feeding Different Types of By-products and Concentrations throughout a Beef Growing System on Ground Beef Color Lipid Oxidation  
Lipid Oxidation of Cooked Ground Beef Links from Cattle Fed Distillers Grains in Different Phases of Production  
Effect of Natural Antioxidant Concentration on Lipid Oxidation of Ready-to-Eat Ground Beef Links from Cattle Fed Distillers Grains in Different Phases of Production  
Effects of Feeding Distillers Grains in a Yearling Beef System on Meat Quality  
Effect of Feeding De-oiled Wet Distillers Grains Plus Solubles on Beef Oxidation and Tenderness  
Effect of Feeding De-oiled Wet Distillers Grains Plus Solubles on Beef Fatty Acid Profiles  
Nutrient and Tenderness Differences of Beef from Heifers Due to Mutation of the Myostatin Gene  
Vein Steak Differences in Strip Loins of Heifers Due to Mutation of the Myostatin Gene  
The Effects of Diet and Cooler Aging on Specific Flavor Notes in Beef  
Grass Type, Grazing Supplementation, and Finishing Diets Affect Beef Fatty Acids  
The Effect of Diet on the Biochemical Constituents of Beef  
The Effect of Diet and Cooler Aging on Consumer Panel Scores for Beef

## **Statistics Used in the Nebraska Beef Report and Their Purpose**

## **MP98 – 2013 Beef Cattle Report** — <http://www.ianrpubs.unl.edu/epublic/live/mp100/build/mp98.pdf>

### **Cow/Calf**

Effect of Beef Heifer Development System on ADG, Reproduction, and Feed Efficiency During First Pregnancy  
Effect of Development System on Heifer Performance and Primiparous Heifer Grazing Behavior  
Heifers with Low Antral Follicle Counts Have Low Birth Weights and Produce Progeny with Low Birth Weights  
Effect of Two Estrus Synchronization Protocols on Reproductive Performance of May Calving Cows  
Efficacy of Newborn Bovine DNA Samples Taken Via Different Mediums in Assigning Paternity

### **Growing**

Effect of Winter Supplementation Level on Yearling System Profitability  
Applying Corn Condensed Distillers Solubles to Hay Windrows Prior to Bailing: I. Procedure and Effects on Bale Temperature and Nutrient Composition  
Applying Corn Condensed Distillers Solubles to Hay Windrows Prior to Bailing: II. Effects on Growing Cattle Performance  
Effects of Feeding Condensed Distillers Solubles With and Without Oil Extraction on Growing Cattle Performance  
Replacement of Grazed Forage and Animal Performance When Distillers Grains are Fed in a Bunk or on the Ground  
Field Peas as a Binder for Dried Distillers Grains-Based Range Cubes  
Strategic Supplementation of Dried Distillers Grains Plus Solubles to Yearling Steers Grazing Smooth Bromegrass  
Economic Analysis Update: Supplementing Distillers Grains to Grazing Yearling Steers  
Effect of Stocking Rate on Cow Performance and Grain Yields When Grazing Corn Residue

### **Forage Resource Management**

Effect of Grazing Corn Residue on Corn and Soybean Yields  
Corn Residue Removal Effects on Subsequent Yield  
Effects of Corn Hybrid, Plant Density, and Harvest Time on Yield and Quality of Corn Plants  
Nitrogen Fertilization and DDGS Supplementation Reduces Annual Weeds in Pastures  
Evaluation of a New Chemistry for Rangeland Grasshopper Control  
Influence of Pre-Collection Diet and Preparation Technique on Nutrient Composition of Masticate Samples

### **Finishing**

Replacing Steam-Flaked Corn and Dry Rolled Corn with Condensed Distillers Solubles in Finishing Diets  
Association of Inactive Myostatin in Piedmontese-Influenced Steers and Heifers on Performance and Carcass Traits at Different Endpoints  
Varying Proportions and Amounts of Distillers Grains and Alkaline-Treated Forage as Substitutes for Corn Grain Finishing Cattle Diets  
Evaluation of Rumen Metabolism and Digestibility when Treated Crop Residues are Fed in Cattle Finishing Diets  
Effects of Feeding 44 g/ton Rumensin During Grain Adaptation on Animal Performance and Carcass Characteristics  
Comparing Wet and Dry Distillers Grains Plus Solubles for Yearling Finishing Cattle  
Effects of Modified Distillers Grains Plus Solubles and Condensed Distillers Solubles With and Without Oil Extraction on Finishing Performance  
Effects of Feeding Microbial Additives on Growth Performance and Carcass Traits of Steers Fed Steam-Flaked Corn-based Diets with Wet Distillers Grains Plus Solubles

The Effect of Lameness on Average Daily Gain in Feedlot Steers  
Effect of Feeding Greater Amounts of Calcium Oxide Treated Corn Stover and Micro-Aid on Performance and Nutrient Mass Balance  
Feeding Elevated Levels of Corn Silage in Finishing Diets Containing MDGS  
Economics of Feeding Elevated Levels of Corn Silage in Finishing Diets Containing MDGS  
Rapidly Transitioning Cattle to a Finishing Diet with RAMP  
Transitioning Cattle from RAMP to a Finishing Diet With or Without an Adaptation Period  
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Using RAMP for Receiving Cattle Compared to Traditional Receiving Diets  
Utilization of Soybean Hulls When Fed in Combination with MDGS in Finishing Diets  
Effects of Feeding Increasing Levels of Soyhulls in Finishing Diets with WDGS  
Including NEXT ENHANCE Essential Oils in Finishing Diets on Performance With or Without Rumensin and Tylan  
The Effects of Commensal Microbial Communities on the Fecal Sheddings of Shiga Toxin-Producing *E. coli* (STEC) in Beef Cattle  
Hormonal Residues in Feedlot Pens and Runoff  
Anaerobic Digestion of Finishing Cattle Manure

### **Beef Products**

Development of 2-Rib and 3-Rib Beef Chuck Subprimal  
Differences in Strip Loin Steaks of Steers Due to the Inactive Myostatin Mutation  
Variation in Composition and Sensory Properties for Beef Short Ribs  
An Evaluation of the Extended Sirloin Cap Coulotte  
An Evaluation of Pelvic Bone Shape in Beef Carcasses  
Color and Sensory Properties of Beef Steaks Treated with Antimicrobial Sprays  
Nutrient Differences of Beef from Steers with Different Genotypes for Myostatin

### **Statistics Used in the Nebraska Beef Report and Their Purpose**

## **MP95 – 2012 Beef Cattle Report** — <http://www.ianrpubs.unl.edu/epublic/live/mp100/build/mp95.pdf>

### **Cow/Calf**

Supplementing Gestating Beef Cows Grazing Cornstalk Residues  
Effect of Corn Stalk Grazing and Baling on Cattle Performance and Irrigation Needs  
Nutritive Value and Amount of Corn Plant Parts  
Wheat Straw, Distillers Grains, and Beet Pulp for Late Gestation Beef Cows  
Influence of Weaning Date and Pre-partum Nutrition on Cow-Calf Productivity  
Effect of Calving Period on Heifer Progeny  
Evaluating Conventional and Sexed Semen in a Commercial Beef Heifer Program  
Late Gestation Supplementation Impacts Primiparous Beef Heifers and Progeny  
Nutritional Regime and Antral Follicle Count Impact Reproductive Characteristics in Heifers  
Vascular Endothelial Growth Factor A(VEGFA) in Ovulatory Follicles  
Oocyte mRNA and Follicle Androgen Levels Associate with Fertility  
The Simmental Breed: Population Structure and Generation Interval Trends  
Association of Myostatin on Performance and Carcass Traits in Crossbred Cattle  
Economic Analysis of Keeping a Nonpregnant Cow<sup>5</sup>  
Effect of Post-Weaning Heifer Development System on Average Daily Gain, Reproduction, and Adaptation to Corn Residue During First Pregnancy  
Impact of Post-Weaning Beef Heifer Development System on Average Daily Gain, Reproduction, and Feed Efficiency  
Heifer Development: Think Profit, Not Just Cost or Revenues  
Beef Heifer Development and Profitability

### **Growing**

Research Results are Dependent on Accurate Cattle Weights  
Forage Availability and Quality of No-till Forage Crops for Grazing Cattle  
Strategies of Supplementing Dried Distillers Grains to Yearling Steers on Smooth Bromegrass Pastures  
Comparison of Feeding Dry Distillers Grains in a Bunk or on the Ground to Cattle Grazing Subirrigated Meadow Byproducts with Low Quality Forage to Grazing Cattle  
Effects of Forage Type, Storage Method, and Moisture Level in Crop Residues Mixed with Modified Distillers Grains  
Effect of Storage Method on Nutrient Composition and Dry Matter Loss of Wet Distillers Grains  
Spoilage of Wet Distillers Grains Plus Solubles and Feed Value

## **Finishing**

Increasing Levels of Condensed Distillers Solubles and Finishing Performance  
Feeding Condensed Distillers Solubles in Finishing Diets Containing WDGS or Synergy  
Metabolism of Finishing Diets Containing Condensed Distillers Solubles and WDGS  
Wet Distillers Grains and Ratios of Steam-Flaked and Dry-Rolled Corn  
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Distillers Grains with Solubles and Ground Ear Corn in Feedlot Diets  
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Ruminal Degradable Sulfur and Hydrogen Sulfide in Cattle Finishing Diets  
Meta-Analysis of the Effect of Dietary Sulfur on Feedlot Health  
Complete-feed Diet RAMPTM in Grain Adaptation Programs  
Use of Complete-feed Diets RAMPTM and Test Starter for Receiving Cattle  
Effects of RAMP on Feed Intake and Ruminal pH During Adaptation to Finishing Diets  
Potassium for Feedlot Cattle Exposed to Heat Stress  
Feeding Modified Distillers Grains with Solubles and Wet Corn Gluten Feed (Synergy) to Adapt Cattle to Finishing Diets  
Using Beet Pulp to Adapt Cattle to Finishing Diets  
Effect on Performance and Nutrient Mass Balance of Feeding Micro-Aid in Wet Distillers Grains Plus Solubles Diets  
Effects of Barley Diets with Distillers Grains Plus Solubles on Feedlot Performance and N and P Balance  
Feedlot Manure Utilization as Influenced by Application Scheme and Diet  
Chemical Treatment of Low-quality Forages to Replace Corn in Cattle Finishing Diets  
Reducing Particle Size Enhances Chemical Treatment in Finishing Diets  
Factors Influencing Profitability of Calf-Fed Steers Harvested at Optimum Endpoint  
Grazing Supplementation and Subsequent Feedlot Sorting of Yearling Cattle  
Impact of Sorting Prior to Feeding Zilpaterol Hydrochloride on Feedlot Steers

## **Beef Products**

Condensed Distillers Solubles and Beef Shelf Life  
Effects of Antioxidants on Beef in Low and High Oxygen Packages  
Dietary Antioxidants and Beef Tenderness During Retail Display in High O<sub>2</sub>  
Effects of Freezing and Thawing Rates on Tenderness and Sensory Quality of Beef Subprimals  
Subprimal Freezing and Thawing Rates Affect Beef at Retail

## **Statistics Used in the Nebraska Beef Report and Their Purpose**

## **MP94 – 2011 Beef Cattle Report** — <http://www.ianrpubs.unl.edu/epublic/live/mp100/build/mp94.pdf>

### **Cow/Calf**

Winter Grazing System and Supplementation of Beef Cows During Late Gestation Influence Heifer Progeny  
Influencing Steer Performance Through Maternal Nutrition  
Integration of DNA Marker Information into Breeding Value Predictions  
Granulosa Cell Gene Expression is Altered in Follicles from Cows with Differing Reproductive Longevity

### **Growing**

Performance of Growing Cattle Fed Corn Silage or Grazing Corn Residue from Second Generation Insect-protected (MON 89034), Parental, or Reference Corn Hybrids  
Nutrient Composition of Spoiled Wet Byproducts Mixed and Stored with Straw  
Use of Dry Rolled Corn, Dry or Wet distillers Grains Plus Solubles as an Energy Source in High Forage Diets for Growing Cattle  
Effect of Corn Hybrid on Amount of Residue Available for Grazing  
Supplementing DDGS to Steers Grazing Smooth Bromegrass Pastures  
Economic Analysis of Supplementing DDGS to Grazing Cattle  
Replacement of Grazed Forage with WDGS and Poor Quality Hay Mixtures  
Supplementing Modified Wet Distillers Grains with Solubles to Long Yearling Steers Grazing Native Range  
Effect of Stocking Rate on Animal Performance and Diet Quality While Grazing Cornstalks  
Digestibility of Crop Residue after Chemical Treatment and Anaerobic Storage

### **Finishing**

Economics for Feeding Distillers Grains to Finishing Cattle  
Meta-Analysis of Feeding Calf-feds or Yearlings Wet Distillers Grains with Different Corn Processing  
Impact of Distillers Grains Moisture and Inclusion Level on Greenhouse Gas Emissions in the Corn-Ethanol-Livestock Life Cycle

Performance and Carcass Characteristics of Finishing Steers Fed Low Fat and Normal Fat Wet Distillers Grains  
Review: Lipid Addition to Corn Finishing Diets  
Comparing Different Drying Methods for Distillers Grains and Its Effect on Feedlot Cattle Performance  
Comparing Dry, Wet, or Modified Distillers Grains Plus Solubles on Feedlot Cattle Performance  
The Effect of Drying Distillers Grains on Nutrient Metabolism  
Effect of Feeding More than 70% Wet distillers Grains Plus Solubles on Feedlot Cattle Performance  
Effects of Feeding a Combination of Modified Distillers Grains Plus Solubles and Wet Corn Gluten Feed to Adapt Cattle to Finishing Diets  
Effect of Source and Level of Sulfur on Rumen Metabolism and Finishing Performance  
Effects of Sulfur Concentration in Distillers Grains with Solubles in Finishing Cattle Diets  
Effects of Adaptation Diets Containing Wet Distillers Grains with Solubles or Wet Corn Gluten Feed on Ruminal pH, Intake and Hydrogen Sulfide  
Effects of Sulfur Content of Distillers Grains in Beef Cattle Finishing Diets on Intake, Ruminal pH, and Hydrogen Sulfide  
Economic Impact of Sulfur Levels in Distillers Grains Diets Fed to Beef Cattle  
Effects of *Lactobacillus Acidophilus* and *Yucca Schidigera* on Finishing Performance and Carcass Traits of Feedlot Cattle  
Feeding Strategies of Optaflexx on Growth Performance and Carcass Characteristics of Feedlot Steers  
Feedlot Cattle Performance When Fed Silage and Grain from Second-Generation Insect Protected Corn, Parental Line or Reference Hybrids  
Effects of Glycerin in Steam Flaked Corn Feedlot Diets  
Protein, Fiber, and Digestibility of Selected Alternative Crops for Beef Cattle  
Mud Effects on Feedlot Cattle  
Effect of Pen Cleaning Frequency and Feeding Distillers Grains and Wheat Straw on Nutrient Mass Balance and Performance of Feedlot Steers  
Relationship Between Morbidity and Performance in Feedlot Cattle  
Effects of a Dietary Antioxidant on Performance and Carcass Characteristics of Feedlot Cattle With or Without WDGS

#### **Beef Products**

Effects of Feeding High Levels of Wet Distillers Grains and Straw on Beef Cattle  
Low-fat Wet Distillers Grains and Beef Quality  
Shelf Life of *m. longissimus lumborum* from Beef Fed Antioxidants and Wet Distillers Grains  
Effects of the Synthetic Antioxidants on Shelf Life of *m. psoas major* and *m. triceps brachii* Muscles from Beef Fed Wet Distillers Grains  
Intramuscular Tenderness and Muscle Fiber Orientation of Beef Round Muscles  
Marketing Source-Verified Beef to Restaurant Patrons

#### **Statistics Used in the 2011 Nebraska Beef Report and Their Purpose**

### **MP93 – 2010 Beef Cattle Report** — <http://www.ianrpubs.unl.edu/epublic/live/mp100/build/mp93.pdf>

#### **Cow/Calf**

Effect of Calving Season and Wintering System on Cow Performance  
Extending Grazing in Heifer Development Systems Decreases Cost Without Compromising Production  
Post Weaning Management of Heifer Calves Impacts ADG and Feed Efficiency as Pregnant Heifers  
Estrous Synchronization Increases Early Calving Frequency, Which Enhances Steer Progeny Value  
Reproductive Aging Influences Ovarian Function in Beef Cows  
Comparison of Feeding Wet Distillers Grains in a Bunk or on the Ground to Cattle Grazing Native Sandhills Winter Range  
Supplementing Wet Distillers Grains Mixed with Low Quality Forage to Grazing Cow/Calf Pairs  
Evaluation of Storage Covers When Wet Distillers Byproducts Are Mixed and Stored with Forages  
Genetic Analysis of Mature Size in American Angus Cattle  
Factors Associated with Feed Intake of Angus Steers  
Genetic and Phenotypic Parameter Estimates for Feed Intake and Other Traits in Growing Beef Cattle

#### **Growing**

Plant and Animal Responses to Grazing Systems in the Nebraska Sandhills  
Supplementing Modified Wet Distillers Grains with Solubles to Long Yearling Steers Grazing Native Range  
Supplementing Dried Distillers Grains to Steers Grazing Cool Season Meadow  
Supplementing Dried Distillers Grains to Growing Calves on Smooth Brome Grass Pastures  
Forage Quality and Grazing Performance of Beef Cattle Grazing Brown Midrib Grain Sorghum Residue  
Comparing Ensiled or Fresh Mixed Wet Distillers Grains with Solubles with Straw at Two Inclusions in Growing Calf Diets  
Comparing the Energy Value of Wet Distillers Grains to Dry Rolled Corn in High Forage Diets  
Effects of Time of Transporting Prior to Sale Date on Selling Weight of Weaned Steer Calves

## Finishing

Determinants of Profit Variability in Calf-Fed and Yearling Production Systems  
Routine Hedging of Fed Cattle Sales Price for Calf-Fed and Yearling Production Systems  
Routine Hedging of Corn Price for Calf-Fed and Yearling Production Systems  
Distillers Grains and Livestock Are Important to Ethanol Energy and Greenhouse Gas Balance  
The Economic Impact of Feeding Wet Corn Co-Products in Nebraska  
Update: Meta-Analysis of UNL Feedlot Trials Replacing Corn With WDGS  
Evaluation of Feedlot and Carcass Performance of Steers Fed Different Levels of E-Corn, a Potential New Feed Product from Ethanol Plants  
Effects of Using Wet Distillers Grains with Solubles to Adapt Cattle to Finishing Diets on Feed Intake, Ruminal pH, and Ruminal Hydrogen Sulfide Concentration  
Relating Hydrogen Sulfide Levels to Polioencephalomalacia  
Feeding Fiber from Wet Corn Gluten Feed and Corn Silage in Feedlot Diets Containing Wet Distillers Grains Plus Solubles  
Fiber Digestibility and Rumen pH for Diets Containing Wet Corn Gluten Feed or Wet Distillers Grains with Solubles  
Metabolism Characteristics of Feedlot Diets Containing Different Fat Sources  
Lipid and NDF Analysis of Ethanol Byproduct Feedstuffs  
Evaluation of a New Single Implant Strategy vs. Two Common Implant Strategies in Beef Finishing Steers  
Comparison of Revalor-XS vs. Two Common Implant Strategies in Finishing Steers  
Comparison of Revalor XS to a Revalor IS and Revalor S Implant Strategy in Finishing Steers  
Vaccination to Reduce the Prevalence of *Escherichia Coli* O157:H7 in Feedlot Cattle Fed Wet Distillers Grains Plus Solubles  
Evaluation of ProTernative Stress Formula and ProTernative Continuous Fed Formula in a High Energy Feedlot Diet  
Tympanic Temperature of Steers Fed Different Levels of Metabolic Energy Intake During Summer and Winter  
Tympanic Temperature Profiles of Confined Beef Cattle  
Relationship of Metabolizable Protein Balance, Purine Derivative Excretion, and 3-Methyl Histidine Excretion to Feed Efficiency in Individually Fed Finishing Heifers

## Beef Products

Fatty Acid Profile of Beef from Steers Fed Wet Distillers Grains Plus Solubles (WDGS) and Vitamin E  
Effects of Feeding Wet Distillers Grains Plus Solubles and Vitamin E on Beef Tenderness and Color Under Different Packaging Systems  
Wet Distillers Grains Diets Supplemented with Vitamin E Affect Sensory Attributes of Beef *m. longissimus lumborum*  
Wet Distillers Grains Diets Supplemented with Vitamin E Alter the Mineral Composition of Beef *m. longissimus lumborum* and *m. psoas major*  
Sensory Attributes of Beef from Steers Fed Field Peas  
Intramuscular Tenderness Mapping and Muscle Fiber Directions of Small Muscles in the Beef Round  
Alternative Muscles for Traditional Japanese and Korean Beef Recipes  
Steak-Quality Meat from the Beef Heel  
Acid Marination for Tenderness Enhancement of the Beef Bottom Round  
Multiple Antimicrobial Interventions for the Control of *Escherichia Coli* O157:H7 in Very Small Beef Processing Facilities

## Statistics Used in the 2010 Nebraska Beef Report and Their Purpose

## MP92 – 2009 Beef Cattle Report — <http://www.ianrpubs.unl.edu/epublic/live/mp100/build/mp92.pdf>

### Cow/Calf

Effect of Winter Grazing System and Supplementation on Beef Cow and Progeny Performance  
Effect of Estrus Synchronization with a Single Injection of Prostaglandin During Natural Service Mating  
Limit Feeding Beef Cows with Bunkered Wet Distillers Grains Plus Solubles or Distillers Solubles  
Estimating Livestock Forage Demand: Defining the Animal Unit  
Moving Beyond Weight as the Only Predictor of Breeding Readiness: Using a Breeding Maturity Index  
The Effects of Breeding Maturity on Dystocia and Rebreeding of the Primiparous Beef Female  
An Economic Budget for Determining Co-Product Storage Costs

### Growing

Replacing Fertilizer Nitrogen with Dried Distillers Grains Supplement to Yearling Steers Grazing Bromegrass Pastures: Daily Gain and Nitrogen Use Efficiency  
Replacing Fertilizer Nitrogen with Dried Distillers Grains Supplement to Yearling Steers Grazing Bromegrass Pastures: Economics and Models  
Energy Value of Wet Distillers Grains in High Forage Diets  
Feeding Corn Distillers Solubles or Wet Distillers Grains Plus Solubles and Cornstalks to Growing Calves  
Comparison of Dry Distillers or Modified Wet Distillers Grains Plus Solubles in Wet or Dry Forage-Based Diets

Level of Wet Distillers Grains Plus Solubles and Solubles Ensiled with Wheat Straw for Growing Steers  
Summary of Grazing Trials Using Dried Distillers Grains Supplementation

### **Beef Feedlot**

Profit Variability for Calf-Fed and Yearling Production Systems  
Effects on Sorting Cattle by Weight and Time of Year on Finishing Performance, Carcass Characteristics and Economics  
Feeding Distillers Grains and *E coli* O157:H7  
An Economic Overview of Ethanol Co-Product Utilization in Nebraska  
Using Wet Corn Gluten Feed to Adapt Cattle to Finishing Diets  
The Effects on Ruminal pH, Feed Intake and Digestibility When Using Wet Corn Gluten Feed to Adapt Cattle to Finishing Diets  
Effect of the Grains-to-Solubles Ratio in Diet Containing Wet Distillers Grains ± Solubles Fed to Finishing Steers  
Effects of Substituting Wet Distillers Grains with Solubles in a Wet Corn Gluten Feed-Based Diet on Finishing Performance  
Wet Distillers Grains Plus Solubles or Solubles in Feedlot Diets Containing Wet Corn Gluten Feed  
Cattle Performance and Economic Analysis of Diets Containing Wet Distillers Grains and Dry-Rolled or Steam-Flaked Corn  
Effects of Wet Corn Gluten Feed and Roughage Inclusion Levels in Finishing Diets Containing Modified Distillers Grains Plus Solubles  
Effects of Roughage Source and Level with the Inclusion of Wet Distillers Grains on Ruminal Metabolism and Nutrient Digestibility  
Effects of Feeding High Levels of Byproducts in Different Combinations to Finishing Steers  
Sulfur in Distillers Grains  
Ruminal Sulfide Levels in Corn Byproduct Diets with Varying Roughage Levels  
Hydrogen Sulfide Gas Levels Post Feeding  
Effects of Rumensin® and Tylan® in Finishing Diets with Wet Distillers Grains Plus Solubles  
Effects of Feeding Wet Distillers Grains Plus Solubles on Feedlot Manure Value  
Effect of Dietary Cation-Anion Difference on Feedlot Performance, Nitrogen Mass Balance and Manure pH in Open Feedlot Pens  
Effect of Dietary Cation-Anion Difference on Intake and Urinary pH in High Concentrate Diets  
Composting or Stockpiling Feedlot Manure: Nutrient Concentration and Recovery  
Impact of a New Direct-Fed Microbial on Intake and Ruminal pH  
Effects of Environmental Factors on Body Temperature of Feedlot Cattle  
Effects of Surface Soil Temperature on Daily Water Intake in Feedlot Cattle

### **Beef Products**

Fatty Acid Profile of Three Beef Muscles from Yearlings and Calf-Fed Steers Fed Wet Distillers Grains Plus Solubles  
Fatty Acid Composition of Beef from Cattle Fed Wet Distillers Grains Diets Supplemented with Vitamin E  
Vitamin E Mitigates the Boost in Lipid Oxidation of Beef Due to Wet Distillers Grains Feeding  
Effect of Wet Distillers Grain Feeding Supplemented with Vitamin E on Case Life of Beef  
Modified Wet Distillers Grains Finishing Diets May Increase the Levels of Polyunsaturated and Trans Fatty Acids of Beef  
A Rapid Method to Evaluate Oxidation Capacity of Fresh Beef

### **Statistics Used in the 2009 Nebraska Beef Report and Their Purpose**

## **MP91 – 2008 Beef Cattle Report** — <http://www.ianrpubs.unl.edu/epublic/live/mp100/build/mp91.pdf>

### **Cow/Calf**

Effect of Pre-breeding Weight and MGA Supplementation on Heifer Performance  
Effect of Wintering System and Nutrition Around Breeding on Gain and Reproduction in Heifers  
Pre- and Peri-pubertal Feeding of Melengesterol Acetate (MGA) Alters Testis Characteristics in Bulls  
Effects of Summer Climatic Conditions on Body Temperature in Beef Cows  
Supplementing Beef Cows Grazing Cornstalk Residue with a Distillers Based Cube  
Comparison of Crude Protein and Digestibility of Diets of Grazing Cattle at Different Sandhills Range Sites  
Determination of Diet Protein and Digestibility of Native Sandhills Upland Range  
Evaluation of Storage Methods for Wet Distillers Grains Plus Solubles with Added Forages

### **Growing**

Use of Dried Distillers Grains to Extend Range Capacity  
Dried Distillers Grains Supplementation to Yearling Cattle Grazing Smooth Bromegrass: Response and Performance Profile Summary  
The Effects of Supplementing Wet Distillers Grains Mixed with Wheat Straw to Growing Steers  
Forage Quality and Grazing Performance of Beef Cattle Grazing Brown Mid-rib Grain Sorghum Residue

## **Beef Feedlot**

Meta-Analysis of UNL Feedlot Trials Replacing Corn with WCGF  
Meta-Analysis of UNL Feedlot Trials Replacing Corn with WDGS  
Effect of Inclusion Level of Modified Distillers Grains Plus Solubles in Finishing Steers  
Effect of Corn Processing and Wet Distillers Grains on Nutrient Metabolism  
Effect of Distillers Grains Fat Level on Digestibility  
Cattle CODE: An Economic Model for Determining Byproduct Returns for Feedlot Cattle  
Economics of Modified Wet Distillers Grains Plus Solubles Use in Feedlots  
Influence of Corn Hybrid, Kernel Traits, and Growing Location on Digestibility  
Influence of Corn Hybrid and Processing Method on Finishing Performance and Carcass Characteristics  
Influence of Corn Hybrid and Processing Method on Ruminal and Intestinal Digestion  
Nutrient Mass Balance and Performance of Feedlot Cattle Fed Wet Distillers Grains  
Aerobic Composting or Anaerobic Stockpiling of Feedlot Manure  
Effects of Distillers Grains and Manure Management on Nutrient Management Plans and Economics  
Total and Water Soluble Phosphorus Content of Feedlot Cattle Feces and Manure  
Climate Conditions in Bedded Confinement Buildings  
Modeling Daily Water Intake in Cattle Finished in Feedlots  
Sorting Steers by Weight into Calf-Fed, Summer Yearlings and Fall Yearling Feed Systems  
Performance and Economics of Two Calf Wintering Systems  
Evaluation of Calf-fed and Long Yearling Production with Increasing Corn Price  
The Effect of Delaying Initial Feedlot Implant on Performance and Carcass Characteristics of Calf-fed Steers  
Effect of Backgrounding Gain, Grazing Length and Dry Distillers Grain Consumption on Performance and Carcass Traits of June Born Cattle  
Price Discovery in North and West Central Nebraska Livestock Auction Markets  
The Cattle Price Cycle: Revisited Again  
Effect of Excede<sup>®</sup> Administered to Calves at Arrival in the Feedlot on Performance and Respiratory Disease  
Vaccination for *Escherichia coli* O157:H7 in Feedlot Cattle

## **Beef Products**

Mapping Tenderness of the *Serratus Ventralis*  
Factors That Influence Consumers' Overall Sensory Acceptance of Strip Steaks  
Analysis of Veal Shoulder Muscles for Chemical Attributes  
Effects of Aging on Veal Shoulder Muscles  
Tenderness, Sensory, and Color Attributes of Two Muscles from the Beef Knuckle  
Characteristics of Beef Finished on Wet Distillers Grains with Varying Types and Levels of Roughage  
Influence of Feeding Wet Distillers Grains on Fatty Acid Composition of Beef  
Wet Distillers Grains Plus Solubles Affect Lipid Oxidation and Objective Color of Beef Steaks  
Effects of Wet Distillers Grains Finishing Diets on Fat Content and Marbling Score in Steers

## **Analytical Methods: New Technology**

Sampling Wet Distillers Grains Plus Solubles to Determine Nutrient Variability  
Evaluation of Methods for Dry Matter Determination of Ethanol Byproducts  
Ruminal Methane Production Following the Replacement of Dietary Corn with Dried Distillers Grains  
Relationship Between Metabolizable Protein Balance and Feed Efficiency of Steers and Heifers  
Microbial Characteristics, Microbial Nitrogen Flow, and Urinary Purine Derivative Excretion in Steers Fed at Two Levels of Feed Intake  
Predicting Aged Beef Tenderness with a Hyperspectral Imaging System

## **Statistics Used in the Nebraska Beef Report and Their Purpose**

## **MP90 – 2007 Beef Cattle Report** — <http://www.ianrpubs.unl.edu/epublic/live/mp100/build/mp90.pdf>

### **Cow/Calf**

Utilization of Dried Distillers Grains for Developing Beef Heifers  
Progesterin Concentrations Alter Follicle Characteristics and May Affect Quality of Oocytes (Eggs)

### **Growing**

Summary Analysis of Grazing Yearling Response to Distillers Grains  
Dried Distillers Grains Substitute for Forage and Nitrogen on Pasture: N Dynamics and Use Efficiency  
Comparing a Modified Dry Byproduct to Dry Distillers Grains with Solubles in Growing Calf Diets  
Effect of Distillers Grains Composition and Level on Steers Consuming High-Quality Forage

Replacement of Forage with Dried Distillers Grains Reduces Ruminant Methane Production  
Dried Distillers Grains as Creep Feed for Yearling Beef Cattle Grazing Sandhill Range

#### **Beef Feedlot**

Effect of Feeding a By-product Combination at Two Levels or By-product Alone in Feedlot Diets  
Effects of Different Inclusion Levels of Wet Distiller Grains in Feedlot Diets Containing Wet Corn Gluten Feed  
Effects of Roughage Source and Level with the Inclusion of Wet Distillers Grains on Finishing Cattle Performance and Economics  
Effect of Corn Processing and Wet Distillers Grains Inclusion Level in Finishing Diets  
Optimum Levels of Dry Distillers Grains with Solubles for Finishing Beef Steers  
Digestibility, Rumen Metabolism, and Site of Digestion for Finishing Diets Containing Wet Distillers Grains or Corn Oil  
Pen Density and Straw Bedding During Feedlot Finishing  
Environmental Factors Affecting Water Intake in Steers Finishing in Feedlots  
Feedlot Surface Conditions and Ammonia Emissions  
Effect of Phase Feeding Protein on Cattle Performance and Nitrogen Mass Balance in Open Feedlots  
Changes in Gain Through the Feeding Period  
Comparison of a Long Yearling System and Calf-fed Performance and Economics  
Effect of Sorting and Feeding Optaflexx on Performance and Economics of Long Yearling Steers  
Performance Profile and Carcass Characteristics of Steers Fed Optaflexx  
Evaluation of Excede® Given at Either Initial Processing or Revaccination on Bovine Respiratory Disease and Pasture vs. Feedlot Receiving Systems  
Evaluation of Synovex Choice Versus Revalor Implant Strategies in Beef Finishing Steers  
Effect of CRINA RUMINANTS AF, a Mixture of Essential Oil Compounds, on Finishing Beef Steer Performance  
Effect of CRINA RUMINANTS AF, a Mixture of Essential Oil Compounds, on Ruminant Fermentation and Digestibility  
Feeding Potassium Bicarbonate and Sodium Chloride in Finishing Diets  
Effect of Feeding DAS-59122-7 Corn Grain and Non-transgenic Corn Grain to Finishing Feedlot Steers

#### **Beef Products**

Identification of Off-Flavor Compounds in Beef Round and Chuck Muscles  
Fatty Acids and Minerals Affect the Liver-Like Off-Flavor in Cooked Beef  
Off-Flavor Mitigation in Cow Steaks  
Masking Off-Flavors in Ground Beef  
Enhancement of Beef Chuck and Round Muscles with Ammonium Hydroxide  
Effects of Aging on Beef Chuck and Round Muscles Enhanced with Ammonium Hydroxide and Salt  
Ranking Beef Muscles for Warner-Bratzler Shear Force and Trained Sensory Panel Ratings

#### **New Technology**

Hyperspectral Imaging: A Non-Invasive Technique to Predict Beef Tenderness  
Evaluating Use of Urinary Purine Derivative to Creatinine Ratio as an Estimate of Microbial Protein Production in Steers  
Diurnal and Dietary Impacts on Purine Derivative Excretion from Spot Samples of  
Chronic Exposure of Ruminant Fluid Cultures to Treatments That Inhibit Methanogenesis  
Comparison of *In Vivo* Digestibility to *In Vitro* Digestibility of Five Forages Fed to Steers  
Using a Modified *In Vitro* Procedure to Measure Corn Bran Buoyancy  
Vascular Endothelial Growth Factor Inhibitory Isoform Is Regulated Prior to Ovulation  
Inhibition of Vascular Endothelial Growth Factor Manipulates Follicles in Beef Females

#### **Statistics Used in the Nebraska Beef Report and Their Purpose**

## **MP88 – 2006 Beef Cattle Report — <http://www.ianrpubs.unl.edu/epublic/live/mp100/build/mp88.pdf>**

#### **Cow/Calf**

Effects of Supplementing Beef Cows with Lipid from Whole Corn Germ  
Effects of Supplementing Lactating, June-calving Cows on Second-calf Pregnancy Rates  
Effects of Pre- and Postpartum Nutrition on Reproduction in Spring Calving Cows and Calf Feedlot Performance  
Effects of Dam Nutrition on Growth and Reproductive Performance of Heifer Calves  
A System for Wintering Beef Heifers Using Dried Distillers Grains  
Feeding Melengestrol Acetate to Bulls Prior to and at Puberty Alters Body Weight, and Hormone Concentration  
Bull Exposure, When Combined with a Seven Day MGA Synchronization, Does Not Enhance Rates in Cows  
Vascular Endothelial Growth Factor mRNA Isoforms 120 and 164 Are Differentially Regulated Prior to Ovulation

## **Growing**

Digestibility of Undegradable Intake Protein of Feedstuffs  
Effect of Fat and Undegradable Intake Protein in Dried Distillers Grains of Performance of Cattle Grazing Smooth Bromegrass Pastures  
Effects of Supplementing Dried Distillers Grains to Steers Grazing Summer Sandhill Range  
Influence of Dried Distillers Grains Supplementation Frequency on Forage Digestibility and Growth Performance  
Dried Distillers Grains Supplementation of Calves Grazing Corn Residue

## **Beef Feedlot (Finishing)**

Effect of Corn Hybrid and Processing Method on Site and Extent of Nutrient Digestibility Using the Mobile Bag Technique  
Influence of Corn Hybrid and Processing Method on Digestibility and Ruminant Fermentation  
Influence of Corn Hybrid on Kernel Traits  
Influence of Corn Hybrid, Kernel Traits, and Dry Rolling or Steam Flaking on Digestibility  
Effect of Corn Processing in Finishing Diets Containing Wet Distillers Grains on Feedlot Performance and Carcass Characteristics of Finishing Steers  
Effect of Dietary Inclusion of Wet Distillers Grains on Feedlot Performance of Finishing Cattle and Energy Value Relative to Corn  
Economic Optimum Use of Wet Distillers Grains in Feedlots  
Evaluation of a Low Protein Distillers By-product for Finishing Cattle  
Effect of Min-AD Ruminant Buffer and Roughage Level on Ruminant Metabolism and Extent of Digestion in Steers  
Sodium Chloride and Soybeans in Feedlot Diets  
Effects of Field Pea Level and Processing in Finishing Diets  
Vaccination for *Escherichia coli* O157:H7 in Market Ready Feedlot Cattle  
Large-scale Clinical Trial to Evaluate an Experimental *Escherichia coli* Vaccine  
Effect of Optaflexx Dosage and Duration of Feeding Prior to Slaughter on Feed Conversion and Carcass Characteristics  
Effects of Optaflexx Fed in Combination with MGA on Feedlot Heifer Performance  
Growth Promoting Agents and Season Effects on Blood Metabolite and Body Temperature Measures  
Inhibition of Methanogenesis in Rumen Fluid Cultures  
Livestock Risk Protection Insurance Vs. Futures Hedging: Basis Risk Implications  
Summary of Manure Amounts, Characteristics, and Nitrogen Mass Balance for Open Feedlot Pens in Summer Compared to Winter  
Nitrogen Mass Balance and Cattle Performance of Steers Fed Clinoptilolite Zeolite Clay  
Factors Affecting Nitrogen Losses as Measured Using Forced-air Wind Tunnels and Nitrogen Mass Balance  
Managing Phosphorus in Beef Feedlot Operations  
Economics of Manure Phosphorus Distribution from Beef Feeding Operations  
Valuing Feedyard Management Education, Experience, and Expertise

## **Beef Products**

Alternative Enhancement Strategies for Beef Muscles  
Flavor Relationships among Muscles of the Beef Chuck and Round  
The Influence of Cooking Rate and Holding Time on Beef Flavor  
Wet Distillers Grains plus Solubles Do Not Increase Liver-like Off-flavors in Cooked Beef

## **Statistics Used in the Nebraska Beef Report and Their Purpose**

## **MP83 – 2005 Beef Cattle Report** — <http://www.ianrpubs.unl.edu/epublic/live/mp100/build/mp83.pdf>

### **Cow/Calf**

Comparison of Two Development Systems for March-born Replacement Beef Heifers  
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  
The Effects of Temperature and Temperature-Humidity Index on Pregnancy Rate in Beef Cows  
Effects of Dried Distillers Grains Supplementation Frequency on Heifer Growth  
Reproductive Response in Heifers Fed Soybeans During Post Weaning Development

### **Grazing**

The Effects of Dried Distillers Grains on Heifers Consuming Low or High Quality Forage  
Tree Growth and Cattle Weight Gain in a Ponderosa Pine System  
Determination of Undegradable Intake Protein Digestibility in Forages

### **Finishing**

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

Effects of Corn Moisture and Length of Ensiling on Dry Matter Digestibility and Rumen Degradable Protein  
 Influence of Corn Kernel Traits on Digestibility and Ruminant Fermentation  
 Effect of Different Corn Processing Methods and Roughage Levels in Feedlot Diets Containing Wet Corn Gluten Feed  
 Effect of Corn Bran and Corn Steep Inclusion in Finishing Diets on Diet Digestibility and Fiber Disappearance  
 Degradable Intake Protein in Finishing Diets Containing Dried Distillers Grains  
 Effect of Feeding a By-product Combination Consisting of Wet Distillers Grains and Wet Corn Gluten Feed to Feedlot Cattle  
 Ethanol Distiller By-product Phosphorus Concentration as Influenced by Corn Hybrid  
 Effects of Field Peas in Beef Finishing Diets  
 Effects of Dietary Phosphorus Level in Beef Finishing Diets on Phosphorus Excretion Characteristics  
 Effects of Corn Bran and Corn Steep Inclusion in Finishing Diets on Cattle Performance and Nitrogen Mass Balance  
 Composting of Feedlot Manure: Compost Characteristics, Crop Yields and Application Rates  
 Vaccination for *Escherichia coli* O157:H7 in Market Ready Feedlot Cattle  
 Direct-fed Microbial Products for *Escherichia coli* O157:H7 in Market Ready Feedlot Cattle  
 Performance and Economics of Sorting Yearling Steers by Feedlot Initial Body Weight  
 Performance and Economics of Yearlings Developed with Intensive Winter Management, and Partial Season Grazing  
 Effect of High Roughage and High Energy Diets on Body Temperature  
 Effect of Clinoptilolite Zeolite on Cattle Performance and Nitrogen Volatilization Loss  
 Evaluation of Initial Implants for Finishing Steers

### **Beef Products**

Effect of Injecting Modified Connective Tissue Solutions on Quality of Beef Roasts  
 Packaging Effects on Shelf-Life and Sensory Traits of Enhanced Beef  
 Benchmarking the Differences Between Cow and Beef Muscles  
 Pre-rigor Water Injection and Post-rigor Sodium Citrate Treatment on Beef Tenderness  
 Evaluation and Composition of Beef Semitendinosus Utilizing a Novel Cooking System  
 The Effects of Phosphate Type and Potassium Lactate Level on Quality Characteristics of Enhanced Beef Steaks

## **MP0480 – 2004 Beef Cattle Report** — <http://www.ianrpubs.unl.edu/epublic/live/mp100/build/mp0480.pdf>

### **Cow-Calf**

An Evaluation of Economic Efficiencies of Two Beef Systems from Calving to Harvest  
 A System for Wintering Spring-calving Bred Heifers Without Feeding Hay  
 Effect of Gestation and Supplementation on Intake of Low-quality Forage

### **Grazing**

A Review of Corn Stalk Grazing on Animal Performance and Crop Yield  
 Feed Values for Annual Forages in Western Nebraska  
 Urea Inclusion in Forage Based Diets Containing Dried Distillers Grains  
 Effect of Distillers Grains or Corn Supplementation Frequency on Forage Intake and Digestibility  
 Dried Distillers Grains as a Grazed Forage Supplement

### **Finishing**

Effects of Corn Bran and Degradable Protein Source on Microbial Protein Estimated from Spot Urine Samples in Heifers  
 Effects of Corn Bran and Degradable Protein Source on Finishing Heifer Performance and Estimates of Microbial Protein Supply in High Moisture Corn Finishing Diets  
 Influence of Implant Regimen on Performance and Carcass Characteristics in Feedlot Steers  
 Delayed Implanting Improves Quality Grade in Steer Calves  
 Basis Variability on the Feeder Cattle Contract Versus the Failed Stocker Contract  
 Effect of Wet and Dry Distillers Grains Plus Solubles and Supplemental Fat Level on Performance of Yearling Finishing Cattle  
 Phosphorus Requirement for Finishing Heifers  
 Sodium Chloride Levels for Finishing Feedlot Heifers  
 The Influence of Corn Kernel Traits on Feedlot Cattle Performance  
 Evaluation of Initial Implants for Finishing Heifers  
 Wet Corn Gluten Feed and Alfalfa Hay Levels in Dry-rolled Corn Finishing Diets  
 Prediction of Net Energy Adjuster for Feedlot Cattle When Using the 1996 Beef Cattle NRC Model  
 Vaccination and Direct Fed Microbials as Intervention Strategies for Reduction of *E. coli* O157:H7 in Feedlot Steers  
 Reducing Diet Digestibility and Increasing Pen Cleaning Frequency: Effects on Nitrogen Losses and Compost Nitrogen Recovery

Impact of Cleaning Frequency on Nitrogen Balance in Open Feedlot Pens  
Hydrogen Sulfide Concentration in Vicinity of Beef Cattle Feedlots  
Crop Performance and Soil Properties of Sites Previously Used for Production of Beef Cattle Manure Compost

#### **Beef Products**

Consumer Preference and Value of Beef with Country-Of-Origin Labeling  
Consumer Acceptance and Value of Beef From Various Countries of Origin  
Consumer Acceptance and Value of Wet Aged and Dry Aged Beef Steaks  
Cow Muscle Profiling: A Comparison of Chemical and Physical Properties of 21 Muscles from Beef and Dairy Cow Carcasses  
Carcass Traits and Palatability Attributes of Herdmates Finished as Calves or Yearling Steers

#### **New Technology**

Effect of Conjugated Linoleic Acid on Cell Death in Adipose Tissue  
Conjugated Linoleic Acid Metabolism and Body Fat Loss in Mice  
Effect of Age, Pregnancy, and Diet on Urinary Creatinine Excretion in Heifers and Cows

### **MP0380 – 2003 Beef Cattle Report** — <http://www.ianrpubs.unl.edu/epublic/live/mp100/build/mp0380.pdf>

#### **Cow/Calf**

Evaluation of Cow and Calf Performance and Profit Potential in Beef Systems  
Comparison of Two Heifer Development Systems on a Commercial Nebraska Ranch  
Value of Dry Distillers Grains in High-Forage Diets and Effect of Supplementation Frequency  
Microbial Protein Production in Gestating Cows Supplemented with Different Sources of Rumen Degradable Protein  
Grazing Dormant Range  
Microbial Protein Synthesis and Efficiency in Nursing Calves  
Growing Amino Acid Supplementation to Growing Heifers Fed SoyPass®  
Utilization of Genetically Enhanced Corn Residue on Grazing Steer Performance  
Effects of Grazing Corn Stalks in the Spring on Subsequent Crop Yields

#### **Finishing**

Intervention Strategies for Reduction of *E. coli* O157:H7 in Feedlot Steers  
Wet Corn Gluten Feed Levels for Steam-flaked Corn Based Finishing Diets  
Effects of Corn Processing Method and Crude Protein Level with the Inclusion of Wet Corn Gluten Feed on Finishing Steer Performance  
Corn Steep and Bran:Germ Meal Ratio in Steam-flaked Corn Based Finishing Diets  
Feeding Transgenic (*Bt* Corn Rootworm Protected and Roundup-Ready®) Corn to Feedlot Cattle  
Effects of Starch Endosperm Type and Corn Processing Method on Feedlot Performance, Nutrient Digestibility and Ruminant Fermentation of High-Grain Diets  
Evaluation of Buffering Agents in Feedlot Diets for Cattle  
Feeding Kelp Meal in Feedlot Diets  
Summer vs. Winter Growth Promotant Strategies for Intact Yearling Heifers  
Body Temperature Changes Associated with Moving Feedlot Cattle  
Adjustments for Wind Speed and Solar Radiation to the Temperature-Humidity Index  
Impact of Manure Application on Phosphorus in Surface Runoff and Soil Erosion  
Effect of Organic Matter Addition to the Pen Surface on Feedlot Nitrogen Balance  
Carbon Sequestration Following Beef Cattle Feedlot Manure, Compost, and Fertilizer Applications  
Relationships of Chute-Side Measurements to Carcass Measurements  
Sorting Strategies for Yearlings

#### **Beef Products**

Carcass and Palatability Characteristics of Calf-fed and Yearling Finished Steers  
Cow Muscle Profiling: Processing Traits of 21 Muscles from Beef and Dairy Cow Carcasses  
Quality Traits of Grain- and Grass-Fed Beef: A Review  
The Effects of Tumbler Volume on Roasted Beef Quality  
Ingredient Opportunities for Case-Ready Beef

#### **New Techniques and Technology**

Estimation of Rumen Undegradable Protein in Forages by Using Neutral Detergent Insoluble Nitrogen at a Single In Situ Incubation Time Point  
Estimating Rumen Undegradable Protein in Smooth Bromegrass and Legumes  
Influence of Rinsing Technique and Sample Size on In situ Protein Degradation

## MP79 – 2002 Beef Cattle Report — <http://www.ianrpubs.unl.edu/epublic/live/mp100/build/mp79.pdf>

### Cow/Calf

- Weaning Date for Spring Calving Cows Grazing Sandhills Range
- Replacement Heifer Development for Spring and Summer Calving Herds
- Urinary Allantoin as an Estimate of Microbial Protein Synthesis
- Metabolizable Protein Requirements of Lactating Two-Year-Old Cows
- Use of Sexed (Female) Sperm is Successful in Yearling Heifers
- Estrous Synchronization Programs for Lactating Cows

### Growing

- Windrow Grazing and Baled-Hay Feeding Strategies for Wintering Calves
- Forage Quality and Animal Performance of Steers Grazing Smooth Bromegrass/Legume Pastures
- Supplementing Yearling Summer-Grazing Cattle with Fat and Protein and Subsequent Feedlot Performance
- Subsequent Summer Forage Intake Following Winter Gain Restriction

### Finishing

- Longitudinal Patterns of Fecal Shedding of *Escherichia coli* O157:H7 by Feedlot Cattle
- Implant Programs for Feedlot Heifers Using Synovex® Plus<sup>TM</sup>, Revalor®-H, or Finaplix®-H with MGA
- Summary of Implant Programs for Feedlot Heifers Using Synovex® Plus<sup>TM</sup> or Finaplix®-H with MGA
- Sorting Strategies in an Extensive Forage Utilization Beef Production System
- S Simulated Economic Analysis of Altering Days on Feed and Marketing Cattle on Specific Value-Based Pricing Grids
- Economic Analysis of Calf Versus Yearling Finishing
- Phosphorus Requirement of Finishing Feedlot Calves
- Liming Effects of Beef Cattle Feedlot Manure and Composted Manure
- Effect of Sawdust or Acid Application to Pen Surfaces on Nitrogen Losses from Open-Dirt Feedlots
- Corn Bran Level in Finishing Diets and N Losses from Open-Dirt Pens
- Effect of Sprinkling on Heat Stressed Heifers
- Effect of Altered Feeding and Sprinkling on Performance and Body Temperature of Steers Finished in the Summer
- Effect of Fiber Level in Finishing Diets on Diet Digestibility and Corn Silage Impact on Bacterial Crude Protein Production
- Crude Protein and Wet Corn Gluten Feed Levels for Steam Flaked Corn Finishing Diets
- Type of Corn Bran and Corn Processing Method in Beef Finishing Diets
- Effects of Rumensin Level During an Acidosis Challenge

### Beef Products

- The Effects of Marination and Cook Cycles on High and Low pH Beef Muscles
- Factors Influencing Color Development in Beef
- Using Lean Color and Marbling Score to Sort Beef Carcasses into Tenderness Groups
- Use of Sodium Citrate to Enhance Tenderness and Palatability of Pre-rigor Beef Muscles
- Oral Dosage from NutroCAL<sup>TM</sup> (Calcium Propionate) to Enhance Beef Tenderness
- Effect of Conjugated Linoleic Acid on Insulin Sensitivity
- Influence on Body Fat of Linoleic Acid Isomers
- Evaluation of Calcium Propionate as a Nutrient to Prevent Dark Cutting Beef

## MP76 – 2001 Beef Cattle Report — <http://www.ianrpubs.unl.edu/epublic/live/mp100/build/mp76.pdf>

### Cow/Calf

- A Comparison of Beef Cattle Crossbreeding Systems Assuming Value-Based Marketing
- June Versus March Calving for the Nebraska Sandhills: Production Traits
- June versus March Calving for the Nebraska Sandhills: Economic Comparisons
- June Versus March Calving for the Nebraska Sandhills: Economic Risk Analysis
- Protein Supplements and Performance of Cows and Calves in June-Calving Production Systems
- Performance and Economics of Winter Supplementing Pregnant Heifers Based on the Metabolizable Protein System
- Forage Intake and Nutrient Balance of Heifers Grazing Sandhills Winter Range
- Summer Grazing and Fall Grazing Pressure Effects on Protein Content and Digestibility of Fall Range Diets
- Annual Forage Production and Quality Trials

### Growing

- Compensatory Growth and Slaughter Breakevens of Yearling Cattle
- Undegradable Intake Protein Supplementation of Compensating, Grazing Steers

Undegradable Intake Protein Content of Corn Steep Compared to Soybean Meal  
Utilization of Bt Corn Hybrids in Growing Beef Steers  
Wet Corn Gluten Feed Supplementation of Calves Grazing Corn Residue  
Impact of Grazing Corn Stalks in the Spring on Crop Yields

### **Finishing**

Economic Returns of Wet Byproducts as Cattle Feed  
Urinary Allantoin Excretion of Finishing Steers: Effects of Grain Adaptation and Wet Milling Byproduct Feeding  
Programmed Gain Finishing Systems In Yearling Steers Fed Dry-rolled Corn Or Wet Corn Gluten Feed Finishing Diets  
Economic Evaluation of Corn Processing for Finishing Cattle  
Effect of Corn Processing on Degradable Intake Protein Requirement of Finishing Cattle  
High Moisture and Dry-Rolled High-Oil Corn for Finishing Feedlot Steers  
Corn Processing Method in Finishing Diets Containing Wet Corn Gluten Feed  
Implant Programs for Feedlot Heifers Using Synovex® Plus™  
The Effect of Feeding Pressed Sugar Beet Pulp in Beef Cattle Feedlot Finishing Diets  
Effects of Feeding Regimen on Performance, Behavior and Body Temperature of Feedlot Steers  
Restricted Feeding Strategies for Reducing Heat Load of Yearling Steers  
Managing Heat Stress in Feedlot Cattle Using Sprinklers  
The Relationship of the Characteristics of Feedlot Pens to the Percentage of Cattle Shedding *Escherichia coli* O157:H7 Within the Pen  
A Diagnostic Strategy to Classify Pens of Feedlot Cattle by the Prevalence of *Escherichia coli* O157:H7 Fecal Shedding  
Influence of Restricted Intake and Reduced Dietary Starch on Colonic pH and *E. coli* Prevalence  
Phosphorus and Nitrogen-Based Beef Cattle Manure or Compost Application to Corn  
Composting of Feedlot and Dairy Manure: Compost Characteristics and Impact on Crop Yields

### **Beef Products**

Consumer Acceptance and Value of Strip Steaks Differing in Marbling and Country-of-Origin  
Physical and Chemical Properties of 39 Muscles from the Beef Chuck and Round  
Fiber Type Composition of the Beef Chuck and Round  
The Effects of Post-Harvest Time and Temperature on Glycolytic Potential of Beef Muscle  
The Role of Muscle Glycogen in Dark Cutting Beef

### **New Technology**

Dietary Conjugated Linoleic Acids (CLA) and Body Fat Changes  
Changes to the Purine Assay Improve Purine Recovery and Assay Precision  
Urinary Allantoin Excretion as a Marker of Microbial Crude Protein Supply for Cattle  
Evaluation of 1996 Beef Cattle NRC Model and Development of Net Energy Modifiers

## **MP73 – 2000 Beef Cattle Report — <http://www.ianrpubs.unl.edu/epublic/live/mp100/build/mp73.pdf>**

### **Acknowledgments**

#### **Cow/Calf**

Age of Calf at Weaning of Spring-Calving Beef Cows and the Effect on Production Economics  
Supplementing Metabolizable Protein to Yearling Heifers Grazing Winter Range  
Refinement of the MGA/PGF Synchronization Program for Heifers Using a 19-Day PGF Injection  
Replacement Heifer Development Programs  
Copper Levels and Sources in Pre- and Post-calving Diets of First-Calf Cows

#### **Growing**

Effects of Length of Grain Feeding and Backgrounding Programs on Beef Carcass Characteristics  
Compensatory Growth Response and Breakeven Economics of Yearling Steers on Grass  
Evaluation of the 1996 Beef Cattle NRC Model Predictions of Intake and Gain for Calves Fed Low or Medium Energy Density Diets  
Escape Protein Supplementation of Yearling Steers and Summer Born Calves on Native Sandhills Range  
Metabolizable Protein Estimates of Treated Soybean Meal Products  
Protein Evaluation of Porcine Meat and Bone Meal Products  
Sugar Beet Pulp and Corn Silage for Growing Yearling Steers  
Whole or Cracked Corn in Growing Rations or Steer Calves

## **Finishing**

Influence of Diet on Total and Acid Resistant E. coli and Colonic pH  
Effects of Programmed Gain Feeding Strategies on Performance and Carcass Characteristics of Yearling Steers  
Sorting or Topping-off Pens of Feedlot Cattle  
Growth Implants for Heifers  
Delayed Implant Strategies Using Synovex® Plus™ on Performance and Carcass Characteristics in Finishing Yearling Steers  
Effect of *DiaFil* (Diatomaceous Earth) Fed With or Without Rumensin® and Tylan®, on Performance, Internal Parasite and Coccidiosis Control in Finishing Cattle  
The Effect of V-Max® on Performance and Carcass Characteristics of Finishing Cattle Fed Corn and Corn By-product Finishing Diets  
Effects of Increasing Rumensin Level During a Potential Acidosis Challenge  
Solvent-extracted Germ Meal as a Component of Wet Corn Gluten Feed: Effect on Ruminant Acidosis  
Effect of Dry, Wet, or Rehydrated Corn Bran on Performance of Finishing Yearling Steers  
Phase-feeding Metabolizable Protein for Finishing Steers  
Dietary Phosphorus Effects on Waste Management and Nutrient Balance in the Feedlot  
Effect of Increasing Dietary Corn Silage on Performance, Digestibility and Nitrogen Mass Balance in the Feedlot  
Feed Program Impact on Land Requirements for Managing Manure Nutrients from a Feedlot  
Exporting Feedlot Manure to Off-farm Users  
Cleaning Coliform Bacteria from Feedlot Water Tanks

## **Beef Products**

Adding Value to Low-quality Beef Muscles Through Glycolytic Inhibition in Pre-rigor Muscle  
The Effects of Induced Stress and Supplemental Chromium on Meat Quality of Finishing Heifers

## **MP71 – 1999 Beef Cattle Report** — <http://www.ianrpubs.unl.edu/epublic/live/mp100/build/mp71.pdf>

### **Acknowledgments**

#### **Cow/Calf**

Effects of Time of Weaning on Cow and Calf Performance  
Summer Grazing Date and Fall Grazing Intensity Effects on Protein Content and Digestibility of Fall Diets in the Nebraska Sandhills  
Climate Affects Calf Birth Weights and Calving Difficulty  
Trace Mineral Supplementation and Ovarian and Luteal Function in Pubertal Heifers  
Progesterone Metabolism by the Liver and Brain During the Estrous Cycle of Heifers

#### **Growing**

Cysteine from Feather Meal and Sulfur Amino Acid Requirements for Growing Steers  
Hog Hair Meal as a Protein Source for Ruminants  
Pork Meat and Bone Meal Value Relative to Soybean Meal for Growing Calves  
Steer Performance within Summer Grazing Systems  
Calf Performance Grazing Crop Residues in Combination with Rye in Fall and Winter

#### **Finishing**

Predicting Amount of Compensatory Gain  
Corn Bran, Solvent-Extracted Germ Meal, and Steep Liquor Blends for Finishing Yearlings  
Corn and Sorghum Distiller Grains for Finishing Cattle  
Fat Addition and Restricted Feeding of Corn Gluten Feed Diets for Cattle Exposed to Environmental Stress  
Performance of Yearling Steers Fed Beet Pulp or Chicory Pulp Rations  
Crude Protein and Energy Combinations for Finishing Yearling Steers  
Effects of Rumensin Level and Bunk Management Strategy on Finishing Steers  
Dietary Management for Starting Finishing Yearling Steers on Feed  
Effects of Programmed Gain on Performance and Carcass Characteristics in Calves  
Evaluation of Revalor®-G as an Initial Implant for Yearling Steers  
Evaluation of Growth Promoting Systems for Heifer Calves Finished in the Feedlot  
Implant Strategies on Performance and Carcass Characteristics of Finishing Steers  
Feedlot Marketing/Sorting Systems to Reduce Carcass Discounts  
Effects of Matching Protein to Requirements on Performance and Waste Management in the Feedlot

## **New Methods and Technology**

- N-alkane as an Internal Marker for Predicting Digestibility of Forages
- Protein Evaluation of Treated Soybean Meal Products
- Use of Neutral Detergent Insoluble Protein in Omasal Samples to Estimate Escape Protein

## **Beef Products**

- Hormonal Influence on Fat Synthesis in Cattle
- Glycolytic Inhibition in Pre-rigor Muscle: An Alternative Method to Improve Beef Tenderness
- The Relationship of Beef Primal Cut Composition to Overall Carcass Composition
- Optimal Conditions of Cooler Aging for Beef

## **MP69 – 1998 Beef Cattle Report** — <http://www.ianrpubs.unl.edu/epublic/live/mp100/build/mp69.pdf>

### **Acknowledgments**

#### **Cow/Calf**

- Spring versus Summer Calving for the Nebraska Sandhills: Production Characteristics
- Performance of Summer- and Spring-Born Calves Finished as Calves or Yearlings
- Use of the NRC Model for Evaluating Nutrient Balances of Grazing Beef Cattle
- Dried Poultry Waste as a Protein Supplement for Cows Grazing Winter Forages
- Escape Protein Supplementation and Weaning Effects on Calves Grazing Meadow Regrowth
- Calving Difficulty and Calf Response to Stress
- Effect of Summer Grazing on Crude Protein and Digestibility of Winter Diets of Cattle in the Nebraska Sandhills
- Ruminal Degradation of Rubisco by Beef Cattle Grazing Switchgrass and Big Bluestem
- Evaluating Stress in Calves Weaned at Three Different Ages
- Induction of Estrus in Anestrous Suckled Beef Cows
- A Novel Estrous Synchronization Program for Beef Cattle Using Melengestrol Acetate
- Effects of Luteinizing Hormone Releasing Hormone Antagonist On The Bovine Corpus Luteum
- Regulation of LH Secretion by Progesterone in Heifers
- Prolonged Elevated Concentrations of Estradiol Do Not Affect Conception Rates in Beef Cattle

#### **Growing**

- Evaluation of Feather Meal for Calves Grazing Cornstalks
- Feather Meal as a Source of Sulfur Amino Acids for Growing Steers
- Cull Dry Edible Beans in Growing Calf Rations
- Comparative Calf Grazing of Corn and Soybean Residues

#### **Finishing**

- Solvent-Extracted Germ Meal for Receiving Calves
- Solvent-Extracted Germ Meal, Corn Bran and Steep Liquor Blends for Finishing Steers
- Lipid Sources in Finishing Diets for Yearling Steers
- An Enzyme-Microbial Feed Product for Finishing Steers
- Lime Filtrate as a Calcium Source for Finishing Cattle
- Extended Grazing and Byproduct Diets in Beef Growing Finishing Systems
- Effect of Winter Gain on Summer Rate of Gain and Finishing Performance of Yearling Steers
- Summer and Fall Forage Grazing Combinations: Five-Year Summary
- Metabolism and Digestibility of Corn Bran and Corn Steep Liquor/Distillers Solubles
- Effects of Feed Intake Variation on Acidosis and Performance of Finishing Steers
- Observations on Acidosis Through Continual Feed Intake and Ruminant pH Monitoring
- Phosphorus Requirement of Finishing Yearlings
- Use of the NRC Model for Predicting Nutrient Balances of Finishing Cattle
- Evaluation of 1996 NRC for Protein and Phosphorus Requirements of Finishing Cattle
- Nutrient Balance of Nitrogen, Organic Matter, Phosphorus and Sulfur in the Feedlot
- Nutrient Balance on Nebraska Feedlots

## **New Methods and Technology**

- In Situ Method for Estimating Forage Protein Degradability

## **Beef Products**

- Tenderness and Retail Stability of Hydrodyne-Treated Beef
- Dietary Calcium and Phosphorus: Relationship to Beef Tenderness and Carcass Maturity

## **Acknowledgments**

### **Cow-Calf**

Seasonal Changes in Protein Degradabilities of Sandhills Native Range and Subirrigated Meadow Diets and Application of a Metabolizable Protein System  
First Limiting Nutrient of Native Range for Summer Calving Cows During the Breeding Season and Late Lactation  
Rumen Degradable Protein Requirement of Gestating Summer Calving Beef Cows Grazing Dormant Native Sandhills Range  
Supplemental Protein on Performance of Lactating Beef Heifers  
Evaluation of Feather Meal for Cows Grazing Cornstalks  
Effects of Supplementing High Levels of Cu, Co, Mn, and Zn after Calving on Productivity of Two-Year-Old Cows  
Effects of Copper and Selenium Injections on Cow Productivity and Concentration of Copper in Liver Biopsy Samples  
Effects of Sire EPD, Dam Traits and Calf Traits on Calving Difficulty and Subsequent Reproduction of Two-Yr-Old Heifers

### **Growing**

Cornstalk Grazing in Protected and Unprotected Fields  
Comparative Grazing of Corn and Soybean Residue  
Grazing Corn Residues in Conventional and Ridge-Till Planting Systems  
Continuous vs Rotational Stocking of Warm-season Grasses at Three Stocking Rates  
Cover Crops in Crop/Livestock Production Systems  
Effect of Crop Residue Grazing on Crop Production-Update of Research Activities

### **New Methods and Technology**

Estimating In Situ Degradability of Protein in Forages  
Ammonia (NPN) Utilization by *Prevotella ruminicola* is Affected by the Availability of Peptides  
Mutants of *Prevotella ruminicola* Defective in Peptidase Activity Impact on Ammonia  
Biochemical Characterization of a Peptidase Enzyme from the Ruminal Bacterium *Prevotella ruminicola*  
Effect of Rumensin and Feed Intake Variation on Ruminal pH

### **Finishing**

Evaluating Breakeven for Various Management Systems for Different Breed Types from Weaning to Slaughter  
Forage Combinations for Summer and Fall Grazing  
Synchronizing Micotil Treatment with Time of Sickness in Newly Received Calves  
Digestibility of Dry-rolled Corn, Wet Corn Gluten Feed, and Alfalfa Hay in Receiving and Finishing Diets  
Lysine Requirements for Feedlot Cattle  
Effect of Dried Poultry Waste on Performance of Finishing Yearling Steers  
Wet Corn Gluten Feed as a Source of Rumen Degradable Protein for Finishing Steers  
Evaluation of Corn Bran and Corn Steep Liquor for Finishing Steers  
A Bacterial Preservative for Ensiled High-Moisture Corn  
A Low Roughage Diet Alternative for Finishing Cattle  
Time of Feeding Influence on Cattle Exposed to Heat  
Effects of Heat Exposure on Adapting Feedlot Cattle to Finishing Diets  
Effects of Feeding Level and Diet Energy Density on Cattle Exposed to Heat  
Composting of Feedlot Waste-Update of Research Activities