



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

## Beef Cattle Reports and 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**

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**Finishing**

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Grazing Supplementation and Subsequent Feedlot Sorting of Yearling Cattle  
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**Beef Products**

Condensed Distillers Solubles and Beef Shelf Life  
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Effects of Freezing and Thawing Rates on Tenderness and Sensory Quality of Beef Subprimals  
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**Statistics Used in the Nebraska Beef Report and Their Purpose**

**Cow/Calf**

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Influencing Steer Performance Through Maternal Nutrition  
Integration of DNA Marker Information into Breeding Value Predictions  
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**Growing**

Performance of Growing Cattle Fed Corn Silage or Grazing Corn Residue from Second Generation Insect-protected (MON 89034), Parental, or Reference Corn Hybrids  
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**Finishing**

Economics for Feeding Distillers Grains to Finishing Cattle  
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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  
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The Effect of Drying Distillers Grains on Nutrient Metabolism  
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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**

**Cow/Calf**

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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 Bromegrass 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, Ruminant pH, and Ruminant 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**

**Cow/Calf**

Effect of Winter Grazing System and Supplementation on Beef Cow and Progeny Performance  
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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  
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Feeding Distillers Grains and *E coli* O157:H7  
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Using Wet Corn Gluten Feed to Adapt Cattle to Finishing Diets  
The Effects on Ruminant 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 Ruminant Metabolism and Nutrient Digestibility  
Effects of Feeding High Levels of Byproducts in Different Combinations to Finishing Steers  
Sulfur in Distillers Grains  
Ruminant Sulfide Levels in Corn Byproduct Diets with Varying Roughage Levels  
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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 Ruminant pH  
Effects of Environmental Factors on Body Temperature of Feedlot Cattle  
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**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**

**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 Brome Grass: 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**

**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**

**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  
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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 Ruminal 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 Ruminal Buffer and Roughage Level on Ruminal 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  
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Replacement Heifer Development for Spring and Summer Calving Herds  
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June versus March Calving for the Nebraska Sandhills: Economic Comparisons  
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Performance and Economics of Winter Supplementing Pregnant Heifers Based on the Metabolizable Protein System  
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Urinary Allantoin Excretion as a Marker of Microbial Crude Protein Supply for Cattle  
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Replacement Heifer Development Programs  
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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  
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Delayed Implant Strategies Using Synovex® Plus™ on Performance and Carcass Characteristics in Finishing Yearling Steers  
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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  
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Effect of Dry, Wet, or Rehydrated Corn Bran on Performance of Finishing Yearling Steers  
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Dietary Phosphorus Effects on Waste Management and Nutrient Balance in the Feedlot  
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- Effects of Time of Weaning on Cow and Calf Performance
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- 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

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- 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

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- 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
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- 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

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- 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

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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  
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Induction of Estrus in Anestrous Suckled Beef Cows  
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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

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Cull Dry Edible Beans in Growing Calf Rations  
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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 Ruminal pH Monitoring  
Phosphorus Requirement of Finishing Yearlings  
Use of the NRC Model for Predicting Nutrient Balances of Finishing Cattle  
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Nutrient Balance of Nitrogen, Organic Matter, Phosphorus and Sulfur in the Feedlot  
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**Acknowledgments**

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Seasonal Changes in Protein Degradabilities of Sandhills Native Range and Subirrigated Meadow Diets and Application of a Metabolizable Protein System  
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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

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Comparative Grazing of Corn and Soybean Residue  
Grazing Corn Residues in Conventional and Ridge-Till Planting Systems  
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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*  
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Wet Corn Gluten Feed as a Source of Rumen Degradable Protein for Finishing Steers  
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Time of Feeding Influence on Cattle Exposed to Heat  
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Effects of Feeding Level and Diet Energy Density on Cattle Exposed to Heat  
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