

**SERA-IEG 8
2007
Annual Report**

Arkansas Report

**Endophyte Strain Effects on Drought Survival of Tall Fescue
in a Greenhouse Screening Trial**

**Endophyte Strain Effects on Drought Survival of Tall Fescue
in a Greenhouse Screening Trial**

**Growth Performance and Immune Function of Fall-Born Beef Calves Weaned
From Endophyte Infected Tall Fescue Pastures on Different Dates in the Spring**

**Cow and Calf Performance While Grazing Tall Fescue Pastures with Either the
Wild-Type Toxic Endophyte or a Non-Toxic Novel Endophyte**

**Department of Animal Science,
Physiological Genetics Group**

**Relationships between Cattle Genetic Polymorphisms and Profitability Traits in
Tall Fescue Forage Systems**

**Forage-Animal Production Research Unit (FAPRU)
USDA-ARS Investigations: Tall Fescue
Alkaloids and Toxicosis**

**Microarray and Real-Time PCR Comparisons of Tall Fescue Gene Expression in
Endophyte-Infected and Endophyte-Free Plants**

**Blood Flow Characteristics of Heifers Exposed to Varying Levels
of Ergot Alkaloids**

Effects of Feeding Heat Stressed Steers Non- And Endophyte Infected Tall Fescue Seed on the Contractability of Bovine Lateral Saphenous Vein

Improvements on Our LC/MS Method for Alkaloid Analysis

Vasoactivity of Selected Ergot Alkaloids

**Georgia Report
USDA-ARS**

**Environmental and Production Responses
From Tall Fescue-Endophyte Associations in Georgia**

Kentucky Report

Evaluation of *Neotyphodium coenophialum* Exposure on Carcass Mass, Ribeye Area, and Meat Quality of Growing Steers Grazing High versus Low Endophyte Infected Forages

Endophyte Effects on Soil Nutrient Pools, Microbial Communities, and Litter Decomposition Rates in Tall Fescue Pasture

Fungal Endophytes Affect Seedling Establishment of *L. multiflorum*

Effects of the Herbicides Plateau and Cimarron on Pregnancy Maintenance in Broodmares

Effects of Clipping and Implants on Rates of Hair Growth and Sweating, and Rectal Temperature of Steers Grazing Endophyte-Infected Tall Fescue

The Genome of *Epichloë festucae*

Loline Alkaloid Studies

Ergot Alkaloid Studies

Weed Management in Horse Pastures After Renovation

**Assessment of Tall Fescue Pastures with the Normalized Difference
Vegetation Index**

Spatial Variation of Tall Fescue in Pastures

**Using Microhistological Techniques to Predict Botanical Composition of Horse
Diets on Cool-Season Grass Pasture**

**Germination Rate and Seedling Vigor of Tall Fescue As Affected By Endophyte
Status and Seed Density**

Agronomic Performance of 'Kentucky 31' and Scandinavian Ecotype Tall Fescue

Alkaloid Accumulation in Native Tall Fescue

Mississippi Report

**NMR-based Metabonomic Analysis of Pregnant Mares Serum as a Reflection of
Fescue Toxicosis Onset and its Outcome**

**Identification and Role of Inflammatory Cytokines and Ergot Alkaloids on
Pregnancy Outcome in Mares Exposed to Endophyte-Infected Tall Fescue**

**Persistence under Grazing of Advanced Breeding Lines of Novel Endophyte-
Infected Tall Fescue in Central Mississippi, a Non-Traditional Growing Area**

Missouri Report

Evaluation of physiological differences in heat tolerant (Romosinuano) and heat susceptible (Angus) *Bos taurus* cattle during controlled heat challenge.

Adaptive Responses of Steers to Heat Stress and Fescue Toxicosis

Gene Regulation in Liver of Cattle Exposed to Heat Stress

Endophyte Infection Level of Tall Fescue Stockpiled For Winter Grazing Does Not Alter the Gain of Calves Nursing Lactating Beef Cows

Effect of Ergot Alkaloids Associated with Fescue Toxicosis on Hepatic Cytochrome P450 and Antioxidant Proteins

Effects of Short-term Heat Stress on Ergot Alkaloid-induced Alterations in Hepatic Gene Expression

Short- and Long-Term Responses to Fescue Toxicosis at Thermoneutrality or During Heat Stress

The Effects of Subacute Exposure to Endophytic Toxins in Tall Fescue, Heat Stress and Reduced Feed Intake on Male Rats

New Zealand Report

6th International Endophyte Symposium

Noble Foundation Report

Development of Non-Toxic Tall Fescue Cultivars

Identification and Characterization of Novel Endophytes

Determining Genetic Factors Required for Epichloe Endophyte Host Interaction

Economics of Grazing Perennial vs Annual Grass Systems

Response of Summer Active and Dormant Tall Fescue Cultivars to Stockpiling

Oregon Report

Monitoring Major Ruminal Bacteria in Sheep during Adaptation to Fungal *Neotyphodium Coenophialum*-Infected Tall Fescue Straw with Real-Time PCR

Discovery of Novel Microorganisms Involved in Ergot Alkaloid Detoxification: An Approach

Determination of the Toxic Threshold of Lolitrem B in Cattle Eating Endophyte-Infected Perennial Ryegrass

The Ability of a Yeast-Derived Cell Wall Preparation to Minimize Toxic Effects of High Ergot- Alkaloid Tall Fescue Straw in Beef Cattle

Clinical Manifestations of Tall Fescue (*Festuca arundinacea*) and Perennial Ryegrass (*Lolium perenne*) Toxicosis in Oregon and Japan

Tennessee Report

Supplementation of Digestible Fiber and Glucomannan to Tall Fescue Pastures: Dry Matter Intake and Fecal Alkaloid Concentration

Evaluation of Endofighter™ in a Tall Fescue Grazing System for Beef Cattle

Evaluation of Endofighter™ for Stocker Cattle Grazing Endophyte-Infected Tall Fescue Pastures during Summer

Discovery of a Genetic Test to Identify Cattle Resistant to the Effects of Fescue Toxicosis.

Evaluation of a Potential Marker for Susceptibility to Fescue Toxicosis in Beef Cattle.

Semen Quality of Bulls Grazing Tall Fescue Pastures