

REPORTS FROM GROUP MEMBERS

ARKANSAS

Title: Hepatic metabolism of Ergot alkaloids in beef cattle by cytochrome P450

Project Personnel: Wayne Coblentz, Ken Coffey, Zelpha Johnson, David Kreider, Ali Moubarak, Mike Nihsen, Rick Rorie, Charles Rosenkrans, Jr., and Chuck West

Contact author: Ken Coffey, kcoffey@uark.edu

Title: Modulation of the cytochrome P450-mediated metabolism of ergotamine by ergonovine and dihydroergotamine

Project Personnel: Wayne Coblentz, Ken Coffey, Zelpha Johnson, David Kreider, Ali Moubarak, Mike Nihsen, Rick Rorie, Charles Rosenkrans, Jr., and Chuck West

Contact author: Ken Coffey, kcoffey@uark.edu

Title: Effects of stockpiled fescue cultivars on cattle development

Project Personnel: Wayne Coblentz, Ken Coffey, Zelpha Johnson, David Kreider, Ali Moubarak, Mike Nihsen, Rick Rorie, Charles Rosenkrans, Jr., and Chuck West

Contact author: Ken Coffey, kcoffey@uark.edu

Title: Forage systems to reduce long-term impacts of tall fescue toxicosis on cattle

Project Personnel: Ken Coffey, Wayne Coblentz, Tim Smith, Jim Turner, Dean Scarbrough, Byron Humphry, and Charles Rosenkrans, Jr.

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Title: Biochemical Responses to Endophyte Infection and Water Deficit in Tall Fescue

Project Personnel: Charles P. West, Rachel D. Carson, B. de los Reyes, and S. Rajguru. Department of Crop, Soil & Environmental Sciences

Contact author: Charles P. West, cwest@uark.edu

GEORGIA

Title: Herbicide Applications and Subsequent Ergot Alkaloid Content of Renovated Toxic Tall Fescue

Project Personnel: John Andrae, Nick Hill, and Tim Murphy

Contact author: nhill@arches.uga.edu

Title: Effect of tall fescue endophyte status and white clover addition on ergot alkaloid urinary excretion and performance of stocker cattle grazing tall fescue.

Project Personnel: John Andrae, Nick Hill, and Joe Bouton

Contact author: nhill@arches.uga.edu

Title: Steer Performance on 'Jesup' Tall Fescue Containing Different Endophyte Strains and Inter-Planted with 'Durana' White Clover

Project Personnel: Joe Bouton, John Andrae, Nick Hill, and Carl Hoveland

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Title: Effect of Tall Fescue Cultivar and Endophyte Status on Reproduction of Lesion (Pratylenchus spp.) and Stubby Root (Paratrichodorus spp.) Nematodes

Project Personnel: Patty Timper, Joe Bouton, and Roger Gates

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Title: Long-Term Assessment of Using Non-Ergot Alkaloid Producing Endophytes to Alleviate Tall Fescue Toxicosis in Stocker Cattle

Project Personnel: J. H. Bouton

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Title: Production and Environmental Quality of Tall Fescue Pastures: Cattle Performance and Production during First 18 Months

Project Personnel: Alan J. Franzluebbbers (afranz@uga.edu), Project coordinator, soil analyses John A. Stuedemann (jstuedem@uga.edu), animal production Dinku M. Endale (dendale@uga.edu), water runoff and quality Dorcas H. Franklin (dfrankln@uga.edu), nutrients in water runoff Michael B. Jenkins (mjenkins@uga.edu), soil microbial diversity University of Georgia, Athens GA Nicholas S. Hill (nhill@uga.edu), alkaloid determinations Joseph H. Bouton (jbouton@uga.edu), plant genetic development Raymond M. Kaplan (rkaplan@vet.uga.edu), gastrointestinal parasites Texas A&M University, College Station TX David A. Zuberer (dzuberer@tamu.edu), soil microbial diversity Technical support (USDA-ARS) Eric Elsner, Steve Knapp, Dwight Seman, Devin Berry, Stephen Norris, Robert Martin, Beth Barton, Shaheen Humayoun, Robert Sheats, Fred Hale

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Illinois

Title: Microarray analysis of endophyte-infected fed heifer luteal tissues is completed.

Project Personnel: Karen L. Jones, M. Javed Iqbal, and Sheryl S. King

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Title: Domperidone Can Ameliorate Deleterious Reproductive Parameters and Weight Gain Reductions Associated With Fescue Toxicosis in Heifers

Project Personnel: K. L. Jones, S. S. King, K. E. Griswold, D. Cazac, and D. L. Cross

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MISSISSIPPI

Title: Pregnancy Outcome in Mares Grazing Endophyte-Infected Tall Fescue in the Fall

Project Personnel: D. Christiansen, G. Olsen, R. Hopper, N. Filipov, D. Lang, N. Hill, B. Fitzgerald, and P. Ryan

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MISSOURI

Title: Markers of fescue toxicosis

Project Personnel: Don Spiers, Jim Williams, George Rottinghaus, Peggy Ann Eichen, Laura Wax, Raja Settivari, and Lori Thompson

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Title: Pretreatment with *Ascophyllum nodosum* for Relief of Fescue Toxicosis

Project Personnel: Don Spiers, Jim Williams, George Rottinghaus, Peggy Ann Eichen, Laura Wax, Raja Settivari, and Lori Thompson

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Title: Effect of Dose of Ergovaline and Time of Administration on Steer Response to Heat Stress

Project Personnel: Don Spiers, Jim Williams, George Rottinghaus, Peggy Ann Eichen, Laura Wax, Raja Settivari, and Lori Thompson

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Title: Core Temperature and Growth Responses to Different Ergovaline Doses Administered During Heat Stress

Project Personnel: Don Spiers, Jim Williams, George Rottinghaus, Peggy Ann Eichen, Laura Wax, Raja Settivari, and Lori Thompson

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NORTH DAKOTA

Title: Ergovaline Transport across Human Gastrointestinal Cells (Caco-2)

Project Personnel: N.W. Shappell, and D.J. Smith

Contact author: N.W. Shappell, shappeln@fargo.ars.usda.gov

Title: Preliminary Assessment of Tasco and YCWP on Ergovaline Toxicity in Caco-2 Cells

Project Personnel: N.W. Shappell, and L.O. Billey

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OKLAHOMA

Title: Development of non-toxic tall fescue cultivars

Project Personnel: Andy Hopkins

Contact author: ahopkins@noble.org

Title: Performance of steers grazing various tall fescue – endophyte combinations

Project Personnel: Andy Hopkins

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OREGON

Title: Effects of endophyte-infected feed

Project Personnel: A. Morrie Craig

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SOUTH CAROLINA

Title: Effect of Domperidone on Milk Production and Physiological Parameters in Beef Cows Grazing Endophyte-Infected Fescue

Project Personnel: C. E. Campbell, D. L. Cross, J. W. Irwin, W. C. Bridges, and C. E. Thompson

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TENNESSEE

Title: Steer performance and forage productivity from tall fescue pastures with different endophyte/fescue combinations, with and without at Knoxville

Project Personnel: J. C. Waller, J. W. Oliver, F. N. Schrick, G. E. Bates, D. Rose, B. McKee, M. A. Mueller, K. D. Gwinn, and R. B. Simpson

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Title: Comparison of rumen parameters of steers grazing endophyte infected (E+), endophyte free (E-), and nontoxic endophyte (Max Q) tall fescue

Project Personnel: A. M. Corrigan, J. C. Waller, C. J. Richards, and K. D. Gwinn
Animal Science Department, and Entomology and Plant Pathology Department

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Title: Steer performance and forage productivity from cool-season forages with and without clovers at Ames Plantation

Project Personnel: J. C. Waller, F. N. Schrick, G. E. Bates, M. C. Dixon, M. C. Smith, M. A. Mueller, K. D. Gwinn, and R. J. Carlisle

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Title: Forage Systems To Add Value To Stocker Cattle

Project Personnel: J. C. Waller, G. E. Bates, C.J. Richards, C. Riggins, and K. D. Gwinn. Animal Science Department, Plant Sciences Department, Highland Rim Experiment Station Entomology and Plant Pathology

Contact author: jwaller@utk.edu

Title: Evaluation under grazing of tall fescue cultivars infected with different endophytes at Ames Plantation, Springfield, and Knoxville

Project Personnel: J. C. Waller, H. A. Fribourg, and G. E. Bates

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Title: Reproductive development of bulls and performance of steers grazing tall fescue cultivars with different endophytes and/or clover

Project Personnel: J. C. Waller, F. N. Schrick, F. M. Hopkins, M. Davis, B. Pitt, G. E. Bates, G.M. Pighetti, J. L. Edwards, J. W. Oliver, K. D. Gwinn, M. A. Mueller, and B.D. Sims

Contact author: jwaller@utk.edu

Title: Update on Tennessee Tall Fescue Mineral Study

Project Personnel: A. E. Fisher, W. W. Gill, C. D. Lane, Jr., D. K. Joines, and J. B. Neel

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Virginia

Title: CRIS Experiment Station Project

Project Personnel: William D. Hohenboken, Ron M. Lewis

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Title: In the fescue belt, the ability to achieve greater animal performance may be realizable through the use of selected endophytes (e.g. AR542) or use of other forage species compatible with the region. To test their potential to support steer gain, four pasture types (KY 31 E+ and E- fescue, Jessup + AR542, and 'Lakota' prairiegrass (*Bromus willdonowii*)) were seeded in spring of 2003 at the Kentland Research Farm outside of Blacksburg, Virginia. Pastures serve as the experimental unit, with four pasture replications and three steers per pasture.

Project Personnel: A. O. Abaye, S. R. Smith, J. H. Fike, J. P. Fontenot

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New Zealand

Title: Invertebrate research

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Title: Wildlife Avian studies

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Title: Pasture studies

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