Experiments

Recently Conducted, In Progress, or Soon to be Initiated

**Title:** Energy Requirements for Gestation  
**Experiment Number:** ITL-03-01  
**Project Number:** OKLX-98-38814-9500  
**Investigators:** I. Tovar-Luna, A. L. Goetsch, R. Puchala, and T. Sahlu  
**Objective:** Determine energy requirements for gestation for goats with litter sizes of 1, 2, and 3.

**Title:** Milk Production by Boer × Spanish and Spanish Does  
**Experiment Number:** RM-03-02  
**Project Number:** OKLX-SAHLU  
**Investigators:** R. C. Merkel, A. L. Goetsch, T. A. Gipson, L. J. Dawson, and R. Puchala  
**Objective:** Evaluate milk production, energy expenditure, and blood metabolite and hormone levels throughout lactation in Boer × Spanish and Spanish does with one or two kids on a moderate nutritional plane.

**Title:** Nutrient Requirements of Goats: Summary - Requirement Tables, Other Considerations, Future Research  
**Experiment Number:** AG-03-03  
**Project Number:** OKLX-98-38814-6241  
**Objective:** Develop a data set of animal and dietary characteristics to develop equations for prediction of feed intake by goats.

**Title:** Evaluation of Stocking Rate Effects with Pastures that Contain Various Forbs and Grasses being Co-Grazed by Goats and Sheep and Subsequent Performance with an Energy-Rich Diet - Second Grazing Season  
**Experiment Number:** GA-03-04  
**Project Number:** OKLX-98-38814-9502  
**Objective:** Evaluate stocking rate effects on diet selection, performance, energy expenditure, and energy accretion of goats and sheep co-grazing pastures containing various forbs and grasses, with or without mimosa, and assess subsequent growth with consumption of a high concentrate diet.
Title: Use of Goats for Sustainable Vegetation Management in Grazing Lands - Second Grazing Season

Experiment Number: JJ-03-05
Project Number: LS01-119

Objectives:
General: Investigate effects of various goat management methods for vegetation rehabilitation/control in different grazing land settings in the south-central US, demonstrate and display appropriate means of vegetation management with goats, and provide education in other related goat management areas.
Specific: Determine effects of different goat grazing treatments on vegetation conditions and animal performance at six Oklahoma sites, in cooperation with the Caddo, Cherokee, Choctaw, Greater Seminole, Osage, and Sac and Fox Nations. Treatments include different stocking rates, rotational grazing, co-grazing with sheep or cattle, no livestock grazing, herbicides, and mowing.

Title: Effects of Stage of Lactation on the Maintenance Energy Requirement of Lactating Alpine Goats

Experiment Number: CTZ-03-08
Project Number: OKLX-98-38814-9500

Objective: Determine energy use for maintenance by lactating Alpine goats in early, mid-, and late lactation with respiration calorimetry.

Title: Effects of the Number of Alpine Doelings per Pen on Feeding Behavior

Experiment Number: AG-03-07
Project Number: OKLX-SAHLU

Objective: Evaluate effects of the number of goats per pen and dietary forage level on feeding behavior with an automated feed intake recording system.

Title: Prediction of Feed Intake by Lactating and Angora Goats

Experiment Number: AG-03-17
Project Number: OKLX-98-38814-6241

Objective: Construct a data set of animal and dietary characteristics to develop equations for prediction of feed intake by lactating and Angora goats.
**Title:** Relationships Between Body Condition Score and Body Weight in Goats  
**Experiment Number:** MV-04-01  
**Project Number:** 2011-52101-11430  
**Investigators:** M. Villaquiran, T. A. Gipson, R. C. Merkel, and A. L. Goetsch  
**Objective:** Develop relationships between body condition score and body weight for different types of goats throughout the year with different planes of nutrition and stages of production

**Title:** Effects of Forage Level and Physical Form of the Diet and Method of Feeding on Performance and Feeding Behavior by Growing Crossbred Boer Wethers  
**Experiment Number:** AG-04-02  
**Project Number:** OKLX-SAHLU  
**Investigators:** A. L. Goetsch, G. Detweiler, T. A. Gipson, R. C. Merkel, and T. Sahlu  
**Objectives:** Determine effects of dietary forage level (100 vs 50%), physical nature of the diet (pelleted vs loose), method of feeding (Calan gates vs automated feed intake recording system), and their interactions on feeding feed intake, average daily gain, and gain efficiency of growing crossbred Boer wethers.

**Title:** Enhanced Goat Production Systems for the Southern United States - Phase 3  
**Experiment Number:** MV-04-03  
**Project Number:** 2011-52101-11430  
**Investigators:** M. Villaquiran and T. A. Gipson  
**Objectives:** Determine user-friendly means of deriving inputs for use of a web-based simulation program to appraise use of available resources and production conditions in different goat production systems

**Title:** Composition of Tissue Loss and Gain by Mature Meat Goats  
**Experiment Number:** TN-04-04  
**Proposal Number:** 2003-03779  
**Investigators:** T. Ngwa, A. L. Goetsch, T. Sahlu, R. C. Merkel, G. Detweiler, T. A. Gipson, and R. Puchala  
**Objectives:**  
1) Determine the composition of tissue loss by mature meat goats in high body condition when placed on a low nutritional plane  
2) Determine the composition of tissue gain by mature meat goats in low body condition when placed on a high nutritional plane  
3) Develop relationships between body condition score and body composition for mature meat goats  
4) Develop equations to predict body composition of mature meat goats based on shrunk body weight and urea space
Title: Effects of Tethering on Forage Intake and Grazing Behavior With High Forage Quality and Availability
Experiment Number: AG-04-05
Project Number: USDA-CSREES-NRI 03-03289
Objectives: Investigate effects of grazing unrestrained versus tethered on grazing behavior, energy expenditure, forage intake, and composition of forage selected by meat goats on pastures with high forage quality and available mass

Title: Effects of Creep Grazing by Meat Goats of Pastures With the Tree Legume Mimosa
Experiment Number: AG-04-06
Project Number: OKLX-SAHLU
Objectives: Investigate performance effects of creep grazing by meat goat kids of pastures with the tree legume mimosa compared with different stocking rates on mixed grass/forb pastures

Title: Composition of Tissue Gain by Growing Meat Goats
Experiment Number: TN-04-07
Proposal Number: 2003-03779
Objective: 1) Determine the composition of tissue gain by growing Boer × Spanish and Spanish meat goats at different ages and on different planes of nutrition
2) Develop relationships between body condition score and body composition for growing meat goats
3) Develop equations to predict body composition of growing meat goats based on shrunk body weight and urea space

Title: Preliminary Research on An Alternative Method of Inactivating CAEV in Colostrum
Experiment Number: KW-04-08
Project Number: OKLX-SAHLU
Investigators: K. E. Washburn, R. N. Streeter, L. J. Dawson, J. T. Saliki, T. Lehenbauer, and A. L. Goetsch
Objectives: Investigate treatment of colostrum with phenothiazine dye and light to deactivate CAEV
Title: Effects of Tethering on Forage Intake and Grazing Behavior With Low Forage Quality and Availability
Experiment Number: AG-04-09
Project Number: USDA-CSREES-NRI 03-03289
Objectives: Investigate effects of grazing unrestrained versus tethered on grazing behavior, energy expenditure, forage intake, and composition of forage selected by meat goats on pastures with low forage quality and available mass.

Title: Effects of Extended Storage and Season on Microbiological Quality and Composition of Goat Milk
Experiment Number: SZ-04-10
Project Number: OKLX-SAHLU
Investigators: S. Zeng and B. Bah
Objectives: Determine the effects of lactation season and extended storage time on farm on composition and microbiological and sensory qualities of goat milk and to monitor the changes of pH, bacteria counts, and processing characteristics of goat milk.

Title: Effects of Vacuum-Packaging and Storage Temperature on Quality and Shelf-Life of Goat’s Milk Soft Cheese
Experiment Number: SZ-04-11
Project Number: OKLX-SAHLU
Investigators: S. Zeng, B. Bah, R. Puchala, and K. Tesfai
Objectives: Determine the effects of vacuum-packaging and storage on quality and shelf-life of goat’s milk soft cheese and to monitor the changes of pH, bacteria counts, and sensory qualities in the cheese during storage.

Title: Effects of Level of Feed Intake on Partitioning of Nutrients to Tissue and Mohair Fiber Growth in Growing Angora Goats
Experiment Number: RP-04-12
Project Number: OKLX-SAHLU
Objectives: Determine effects of different levels of feed intake on nutrient partitioning to tissue and mohair fiber gain by growing Angora goats, as well as effects on subsequent partitioning with a high nutritional plane.
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