



# Goat Newsletter

Cooperative Extension Program  
Langston University

The Newsletter of the E (Kika) de la Garza American Institute for Goat Research

Spring 2016

## From the Director's Desk



This time of year is very busy as we prepare for our annual Goat Field Day and conduct research projects.

This year, the theme for our Goat Field Day is *Keeping Your Goats Healthy* and you can read more about it on page 3 of this newsletter. This year our featured speakers will be Dr. **Lionel Dawson** and Dr. **Katie Simpson**. Dr. **Dawson** is a Professor of Veterinary Clinical Sciences in the College of Veterinary Medicine at Oklahoma State University. Dr. **Simpson** is the owner/operator of Cross Timbers Large Animal Clinic, which provides high-quality, convenient on-site veterinary care for cattle,

goats, sheep, llamas, alpacas, camels, deer, and pigs in the Central Oklahoma area.

Healthy goats are productive goats. Generally, we hear an abundance of press about foreign livestock diseases such as foot-and-mouth disease, bovine spongiform encephalopathy (BSE or mad-cow disease), or avian influenza that could devastate our livestock industry. However, livestock producers need to be aware of the ordinary, day-to-day diseases that chip away at productivity and profitability little by little.

Of course, it is easier to keep goats healthy by starting off with healthy animals. This seems to be a simple task; however, many novice producers will try and cut corners by purchasing cheap but high-risk animals. On many occasions, this is done at the local livestock auction. I have nothing against livestock auctions and I think that they serve a wonderful purpose in marketing of slaughter animals; however, when it comes to breeding stock I prefer to purchase animals from a reputable, established producer.

To emphasize this point, I have included in this note

two illustrations that highlight breeding stock selection for both meat and dairy goat producers. Mr. **Kenneth Williams**, who is a retired Aquaculture Specialist from Langston University and who now has a business in scientific illustrations, was the illustrator for our popular and recently published Meat Goat Production Basics book and for our upcoming Dairy Goat Production Basics book. The latter is a condensed version of our soon-to-be published Dairy Goat Production Handbook.

Drs. **Roger Merkel** and **Terry Gipson** have been working diligently on the Dairy Goat Production Handbook. We are currently in the final stages of producing the handbook, which will contain 29 chapters and over 470 pages of information on dairy goat production. The breadth and depth of topics and information included in this book will serve all dairy goat producers from those persons who raise and milk only a few does in their backyard to producers operating a large commercial dairy. Chapters on herd and udder health, management, kidding, milking systems,



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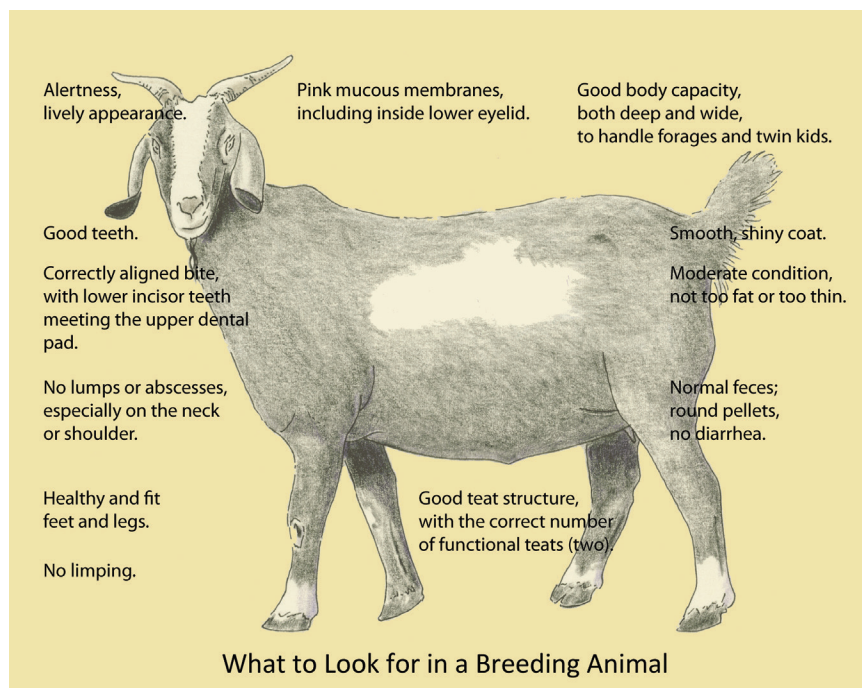
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dairy facilities, goat milk regulations, nutrition, reproduction, and genetics discuss the basic information needed by all dairy goat producers.

In addition to our annual Goat Field Day, we will be hosting a cheesemaking workshop on the day before the Goat Field Day. Dr. **Steve Zeng**, our Dairy Foods Technologist, will be coordinating

the cheesemaking workshop and Ms. **Gianacis Caldwell** will be our guest cheese maker. This is a limited-attendance workshop and persons interested in attending should contact Dr. **Zeng** (405-466-6145 or [szeng@langston.edu](mailto:szeng@langston.edu)).

***I hope to see you at the Goat Field Day.***



What to Look for in a Breeding Animal

*Meat goat selection (Figure is from Meat Goat Production Basics, illustrated by K. Williams).*

## Purchasing new animals

Important information to know

1. Examine herd owner records
2. Study milk house records
3. Look for signs of CL
4. Do a bulk milk tank culture
5. Ask about kid rearing practices
6. Have a Johnes' test done on the herd
7. Ask about internal parasites
8. Isolate newly purchased animals

*Additional selection information needed by the dairy goat producer (Figure is from Dairy Goat Production Basics, illustrated by K. Williams).*



# Keeping Your Goats Healthy: Goat Field Day 2016

Our annual Goat Field Day will be held on Saturday, April 30, 2016 at the Langston University Goat Farm with registration beginning at 8:00 a.m. This year's theme will be **Keeping Your Goats Healthy**.

**Adult Activity (morning session):** This year our featured speakers will be Dr. Lionel Dawson and Dr. Katie Simpson.

Dr. Dawson received his D.V.M. from Madras Veterinary College and after completing veterinary school, Dr. Dawson moved to Iowa where he did graduate work in Theriogenology at the School of Veterinary Medicine at Iowa State University. Dr. Dawson then did his residency in Theriogenology at the School of Veterinary Medicine at the University of Missouri specializing in reproduction of farm animals. Since 1982, Dr. Dawson has been a faculty member in the Department of Veterinary Medicine and Surgery in the College of Veterinary Medicine of Oklahoma State University. He has taught a number of courses including Reproductive Herd Health, Obstetrics, Theriogenology and Male Breeding Soundness, and has been an advisor to more than 25 graduate students and residents. Dr. Dawson is board certified with the American College of Theriogenologists. In July of 1998, Dr. Dawson received a joint appointment between Oklahoma State University and Langston University. Dr. Dawson's responsibilities at Langston University include participating in research trials, conducting and assisting in experimental surgeries, managing the health program for the fiber, meat and dairy goat herds and provide veterinary extension education for goat producers.

Dr. Simpson did her undergraduate studies (Animal Science) at Texas A&M where she also received her D.V.M. She was selected for an internship at Oklahoma State University in Food Animal Medicine and Surgery which she completed in 2007. Dr. Simpson then applied for and was accepted for a further three year residency in Food Animal Medicine and Surgery at Oklahoma State University. She passed the highly competitive Large Animal Internal Medicine boards (DACVIM) in 2010, and also was awarded an MS in biomedical studies. Dr. Simpson then worked at the veterinary school at Oklahoma State University as a Clinical Instructor in Food Animal Medicine and Surgery for three more years and



*Monitoring is key for healthy goats. (Figure is from Meat Goat Production Basics, illustrated by K. Williams).*

was awarded outstanding 4th year clinical instructor. She then accepted an Assistant Professorship in Food Animal Medicine and Surgery at the Ohio State University. Starting as a veterinary intern, she has actively published and is on many research and clinical papers. She is also on national veterinary committees dealing with resident training in large animal internal medicine. While in Ohio, her Oklahoma clients continued to contact her regarding the lack of a mobile farm animal veterinarian. In 2015, she decided to return to central Oklahoma to open a state-of-the-art large animal ambulatory practice. Dr. Simpson has a strong interest in internal and emergency medicine, surgery, lameness, gastrointestinal disease, urolithiasis, reproductive care and neonatology.

**Adult Activities (afternoon session):** In the afternoon session, participants will break into small-group workshops. There will be a total of fifteen workshops; however, participants will only have time enough to attend three.

The afternoon workshops include:

- *Common Abortions in Goats – diagnosis of causes and proper sample submission with Dr. Lionel Dawson (1:30 p.m. and 3:30 p.m. ONLY).*
- *Extra-label Drug Use - why it is important and what to know with Dr. Lionel Dawson (2:30 p.m. ONLY).*
- *CAE and Mastitis - prevention and control of these very important diseases with Dr. Katie Simpson (1:30 p.m. ONLY).*

- *CL and Urinary Calculi - prevention and control of these very important diseases with Dr. Katie Simpson (2:30 p.m. and 3:30 p.m. ONLY).*
- *The art of cheesemaking with Ms. Gianaclis Caldwell.*
- *Internal Parasite Control - sustainable internal parasite control program with Dr. Barry Whitworth.*
- *Basic Goat Husbandry - hoof trimming, body condition scoring, FAMACHA scoring, farm management calendar, etc. with Mr. Jerry Hayes.*
- *Nutrition for Health and Production - calculation of energy, protein and feed intake requirements with Dr. Steve Hart.*
- *Goat Farm Budgeting - basics of budgeting and financial recordkeeping with Mr. Brent Ladd.*
- *Pack Goats - basic goat training as a pack animal and equipment needs with Mr. Dwite Sharp.*
- *DHI Training - supervisor/tester training for dairy goat producers including scale certification with Ms. Eva Vasquez.*
- *USDA/NASS: Animal inventories with Mr. Wil Hundl and USDA/AMS: Market strategies with Mr. Cole Snider (1:30 p.m. and 2:30 p.m. ONLY).*
- *USDA/NRCS: Conservation programs with Mr. Kenneth Hitch and USDA/FSA: Farm loans with Mr. Phil Estes (1:30 p.m. and 3:30 p.m. ONLY).*
- *USDA/WS: Wildlife programs with Mr. Kevin Grant and OK Depart of Ag: Home Slaughtering regulations with Mr. Stan Stromberg (2:30 p.m. and 3:30 p.m. ONLY).*
- *Fitting and Showing for Youth and Adults - tips and pointers on fitting and show ring etiquette with Messrs. Robbie and Coleman Sanders (this is a half-day afternoon workshop).*

Registration for the Goat Field Day is **FREE** but there is a \$10.00 per person charge for the optional lunch of barbecued goat and goat milk ice cream. You can bring your own lunch, if you desire. Regardless of lunch preferences, we ask everyone to pre-register.

**Goat Field Day Program for Kids (Old Fashioned Fun):** The Langston University E (Kika) de la Garza American Institute for Goat Research provides the opportunity for kids to explore and enjoy “old-fashioned fun activities” while their parent(s) participate in the Goat Field Day Program. With all of today’s technological gizmos from the iPod to high-end smart phones and handheld games, most kids are no longer exposed to the old-fashioned games and activities that shaped the imaginations and innate creativity of their parents and grandparents. The Goat Field Day for Kids Program is intended to challenge and enhance cognitive and social skills. The development of intellectual and socialization

practices have been determined as prerequisites for helping children to learn more complex concepts, thereby enhancing their personal capabilities.

**Cheesemaking Workshop:** Our ever-popular goat milk cheesemaking workshop has been scheduled for Friday, April 29, 2016 (the day before our annual Goat Field Day on April 30). Mrs. Gianaclis Caldwell, Owner/President of Pholia Farm Creamery will be our distinguished Invited In-

structor for this year's workshop. Ms. Caldwell is an internationally renowned goat cheese entrepreneur, creator, designer, marketer and author in the world of cheese. She has owned a goat farm, designed cheese plants and managed cheese operation in her unique and creative manners. She is also an excellent instructor and speaker with vast personal experiences. She will share with us her rich background, hands-on experience and masterful skills in small-scale cheese manufacture, particularly goat milk cheeses. She will demonstrate basic principles and practical skills of making soft, semi-soft and hard cheeses using our own Grade "A" goat milk. Milk quality, cheesemaking facility and marketing strategies will also be discussed. This one-day hand-on workshop will be held in the pilot creamery at Langston University. For the cheesemaking workshop, there is a registration fee of \$100.00/person. You must contact Dr. Steve Zeng to be registered for this workshop and only the first 20 registrants will be admitted.

*For information regarding the cheesemaking workshop, please contact Dr. Steve Zeng at 405-466-6145 or szeng@langston.edu.*

*For information regarding the 2016 Goat Field Day, please contact Dr. Terry Gipson at 405-466-6126 or at tgipson@langston.edu.*



You can register online for the 2016 Goat Field Day  
<http://www.luresext.edu/?q=content/2016-goat-field-day-april-30>



# GOAT FIELD DAY

**Saturday, April 30, 2016**

**Registration at 8:00 a.m.**

**Langston University Goat Farm**

**Registration for the Goat Field Day is FREE**

**For more information call (405) 466-6126**

**or register on-line at**

***<http://www.luresext.edu/?q=content/2016-goat-field-day-april-30>***

**Bring your own lunch or you can Pre-Register for Lunch**

**(BBQ goat, beans, potato salad,  
refreshments, and goat ice cream; only \$10)**

## **INSTRUCTIONS FOR PRE-REGISTRATION (one form per person):**

- 1.- Write your name, address, and telephone number below. Indicate if you will be registering for lunch.
- 2.- Select afternoon workshops from each time period to attend from the schedule on the back of this form.
- 3.- Write a check payable to "RESEARCH SALES" for the amount, if registering for lunch.
- 4.- Mail this form and the check as soon as possible.

## **PRE-REGISTRATION FORM**

**NAME:** \_\_\_\_\_ **TELEPHONE:** (\_\_\_\_) \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_  
\_\_\_\_\_ **ZIP:** \_\_\_\_\_

**Email:** \_\_\_\_\_

**(If you include an email address, you will receive verification of your registration.)**

Registration for Goat Field Day is FREE; however, there is a fee for lunch. You may bring your own lunch.

**Lunch Pre-Registration (Deadline April 22, 2016)**

Make checks payable to:  
**Langston University/Research Sales**

Adults (\$10.00 each) \_\_\_\_\_

Children (12 and under) (\$5.00 each) \_\_\_\_\_

**TOTAL** \_\_\_\_\_

Please mail this form and check to:

**Agric. Res. and Ext. Prog.  
Langston University  
P.O. Box 1730  
Langston, OK 73050  
ATTN: FIELD DAY**

# 2016 Goat Field Day Registration - Adult

<b>Morning</b>	<b>9:00 - 11:45 a.m.</b>	<b>IMPORTANT!!</b> Adult participants will attend a general morning session starting at 9:00 a.m. and will be able to attend three breakout sessions in the afternoon. <b>Please choose your three afternoon workshops below.</b>	
<b>Afternoon Sessions</b>	<b>1:30 - 2:20 p.m.</b>	Please Select a Workshop for this session and Enter the Workshop number here:  _____	<b>Afternoon Workshop Choices:</b>  The afternoon workshops include: <ol style="list-style-type: none"> <li>Common Abortions in Goats – diagnosis of causes and proper sample submission with Dr. Lionel Dawson (<b>1:30 p.m. and 3:30 p.m. ONLY</b>).</li> <li>Extra-label Drug Use - why it is important and what to know with Dr. Lionel Dawson (<b>2:30 p.m. ONLY</b>).</li> <li>CAE and Mastitis - prevention and control of these very important diseases with Dr. Katie Simpson (<b>1:30 p.m. ONLY</b>).</li> <li>CL and Urinary Calculi - prevention and control of these very important diseases with Dr. Katie Simpson (<b>2:30 p.m. and 3:30 p.m. ONLY</b>).</li> <li>The art of cheesemaking with Ms. Gianaclis Caldwell.</li> <li>Internal Parasite Control - sustainable internal parasite control program with Dr. Barry Whitworth.</li> <li>Basic Goat Husbandry - hoof trimming, body condition scoring, FAMACHA scoring, farm management calendar, etc. with Mr. Jerry Hayes.</li> <li>Nutrition for Health and Production - calculation of energy, protein and feed intake requirements with Dr. Steve Hart.</li> <li>Goat Farm Budgeting - basics of budgeting and financial recordkeeping with Mr. Brent Ladd.</li> <li>Pack Goats - basic goat training as a pack animal and equipment needs with Mr. Dwite Sharp.</li> <li>DHI Training - supervisor/tester training for dairy goat producers including scale certification with Ms. Eva Vasquez.</li> <li>USDA/NASS: Animal inventories with Mr. Wil Hundl and USDA/AMS: Market strategies with Mr. Cole Snider (<b>1:30 p.m. and 2:30 p.m. ONLY</b>)</li> <li>USDA/NRCS: Conservation programs with Mr. Kenneth Hitch and USDA/FSA: Farm loans with Mr. Phil Estes (<b>1:30 p.m. and 3:30 p.m. ONLY</b>)</li> <li>USDA/WS: Wildlife programs with Mr. Kevin Grant and OK Depart of Ag: Home Slaughtering regulations with Mr. Stan Stromberg (<b>2:30 p.m. and 3:30 p.m. ONLY</b>)</li> <li>Fitting and Showing for Youth and Adults - tips and pointers on fitting and show ring etiquette with Messrs. Robbie and Coleman Sanders (<b>this is a half-day afternoon workshop</b>).</li> </ol>
	<b>2:30 - 3:20 p.m.</b>	Please Select a Workshop for this session and Enter the Workshop number here:  _____	
	<b>3:30 - 4:20 p.m.</b>	Please Select a Workshop for this session and Enter the Workshop number here:  _____	

*The Cooperative Extension Program at Langston University, provides educational programs to individuals regardless of race, color, national origin, religion, sex, age, disability or status as a veteran. Issued in furtherance of Extension Work, Act of September 29, 1977, in cooperation with the U.S. Department of Agriculture.*

**In compliance with the ADA Act, participants with special needs can be reasonably accommodated by contacting Dr. Terry Gipson at (405) 466-6126 at least five business days prior to the Goat Field Day.**



Cooperative Extension Program  
Langston University  
P O Box 1730  
Langston, OK 73050

Phone: 404 466 6107

Fax: 405 466 6177

Greetings Goat Field Day Participants:

The Langston University E (Kika) de la Garza American Institute for Goat Research provides the opportunity for children ages 5-13 to engage in the **Goat Field Day for Kids Program** while their parent(s) participate in Goat Field Day workshops and seminars, **Saturday, April 30, 2016.**

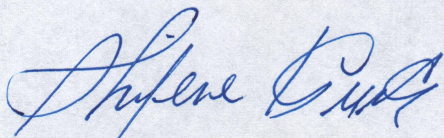
With all of today's technological gizmos from the iPod to high-end smart phones and handheld games, most kids are no longer exposed to the *old-fashioned games and activities* that shaped the imaginations and innate creativity of their parents and grandparents.

The **Goat Field Day for Kids Program** will consist of "*old-fashioned fun and games*" intended to challenge and enhance cognitive and social skills. The development of intellectual and socialization practices have been determined as prerequisites for helping children to learn more complex concepts, thereby enhancing their personal capabilities. We anticipate that the program will cause your child(ren) to have "so much fun" while exploring and challenging their gifts of innovation.

We encourage you to complete and return the enclosed **Goat Field Day for Kids Program Registration Form**. Be sure to indicate **your child(ren) Participation Status**.

If you have questions or concerns, please contact Shirlene Hurte at (405) 466 6107 or [shurte@langston.edu](mailto:shurte@langston.edu). We look forward to receiving your reply and having the opportunity to serve you.

Sincerely,



Shirlene Hurte, Extension Specialist  
Cooperative Extension Service  
4-H Youth Development



# 4-H Fun Facts

## **History**

4-H, the current informal, educational program that promotes youth development began between 1890 and 1900. The educational climate of that decade saw educators for the first time recognize the needs of young people; educators began to stress that education should meet those needs. Then progressive educators in town and city schools also introduced nature study into the curriculum, and school gardens attracted attention in many places throughout the country. Rural educators, in response to a demand from farm people, introduced subjects that taught boys and girls to understand and appreciate rural life while emphasizing rural opportunities. College educators in the late 19th and early 20th centuries were reaching beyond the campus to teach. Agricultural college professors in nearly all states were organizing “farmers’ institutes” meetings to bring the latest scientific agricultural information to farmers and their wives. College educators soon recognized the need to also provide some agricultural instruction for farm boys and girls as well as instilling an appreciation for life in the country.



*Source: <http://www.extension.iastate.edu/4h/page/history-4-h>*

## **The 4-Hs**

Head, Heart, Hands, and Health are the four Hs in 4-H, and they are the four values members work on through fun and engaging programs.

- **Head** - Managing, Thinking
- **Heart** - Relating, Caring
- **Hands** - Giving, Working
- **Health** - Being, Living

## **The 4-H Pledge**

I pledge my head to clearer thinking,  
My heart to greater loyalty,  
My hands to larger service,  
and my health to better living,  
for my club, my community, my country, and my world.

## **4-H Mission**

4-H empowers youth to reach their full potential, working and learning in partnership with caring adults.

## **4-H Vision**

A world in which youth and adults learn, grow and work together as catalysts for positive change.





**Langston University 4-H Youth Development**  
**Informed Consent, Voluntary Waiver, Release of Liability & Assumption of Risks Form**

FORM 1



**American Institute for Goat Research**  
**E (Kika) de la Garza**  
**Goat Field Day Program For Kids**  
**E. L. Holloway Agricultural Research Education and Extension Center**  
**Enrollment Form**  
**April 30, 2016**

**PLEASE TYPE OR PRINT**

**Name of Student**

\_\_\_\_\_  
Last

\_\_\_\_\_  
First

\_\_\_\_\_  
Middle

DOB \_\_\_\_\_ Age \_\_\_\_\_ Race \_\_\_\_\_ Gender ☐ Male ☐ Female  
*Month Day Year* *Optional*

Grade \_\_\_\_\_ Name of School: \_\_\_\_\_  
*Aug./Sept. 2016*

**PLEASE READ THIS DOCUMENT CAREFULLY BEFORE SIGNING. THIS IS A LEGALLY BINDING DOCUMENT. THIS FULLY SIGNED FORM MUST BE SUBMITTED BY A PARENT OR LEGAL GUARDIAN BEFORE ANY CHILD IS ALLOWED TO PARTICIPATE IN THE ABOVE REFERENCED PROGRAM/CAMP/EVENT SPONSORED BY 4-H.**

I, the undersigned, wish for my Child (hereafter "child") to participate in the above referenced youth program (hereafter "program") on the date(s) and location(s) indicated above and, in consideration of my child's participation, I hereby agree as follows:

I acknowledge, understand and appreciate that as part of my Child's participation in the Program there are dangers, hazards and inherent risks to which my Child may be exposed, including the risk of serious physical injury, temporary or permanent disability, and death, as well as economic and property loss. I further realize that participating in the youth program may involve risks and dangers, both known and unknown, and have elected to allow my Child to take part in the Program. Therefore, I, on behalf of my Child, voluntarily accept and assume all risk of injury, loss of life or damage to property arising out of training, preparing, participating, and traveling to or from the Program.

I, on behalf of my Child, hereby release Oklahoma 4-H, Langston University (hereafter "LU"), its Board of Regents, Administration, Faculty, Staff, Student Leaders, the Program Staff and all other officers, directors, employees, volunteers and agents from any and all liability as to any right of action that may accrue to my heirs or representatives for any injury to my Child or loss that my Child may suffer while training, preparing, participating and/or traveling to or from the above indicted event. This agreement is binding on my heirs and assigns.

In the event of an accident or serious illness, I hereby authorize representative of LU to obtain medical treatment for my Child on my behalf. I hereby hold harmless and agree to indemnify LU from any claims, causes of action, damages and/or liabilities, arising out of or resulting from said medical treatment. I further agree to accept full responsibility for any and all expenses, including medical expenses that may derive from any injuries to my Child that may occur during his/her participation in the Program. **I furthermore understand that an accident insurance policy carried by American Income Life <http://www.americanincomelife.com/> who-we-serve/4H-insurance #A Plan, if any will provide only minimum coverage.**

This RELEASE shall be governed by and construed under the laws of Oklahoma. I agree that any legal action or proceeding related to this RELEASE, or arising out of any injury, death, damages or loss as a result of my Child's participation in any part of the Program, shall be brought only in Oklahoma.

This RELEASE contains the entire agreement between the parties to this agreement and the terms of this RELEASE are contractual and not a mere recital. The information I have provided is disclosed accurately and truthfully. I have been given ample opportunity to read this document and I understand and agree to all of its terms and conditions. I understand that I am giving up substantial rights (including my right to sue), and acknowledge that I am signing this document freely and voluntarily, and intend by my signature to provide a complete and unconditional release of all liability to the greatest extent allowed by law. My signature on this document is intended to bind not only myself and my Child but also the successors, heirs, representatives, administrators, and assigns of myself and my Child.

**DATE OF EFFECT: I agree to the terms listed until such time that I am asked to complete a new or revised Consent Form.**

Parent/Guardian (PRINT) \_\_\_\_\_

Parent/Guardian Signature \_\_\_\_\_ Date: \_\_\_\_\_ 2016

**OVER ►**





# Research Spotlight

## **Feed Requirement Estimation Methods.**

Ten Katahdin (KAT) sheep and 10 Spanish (SPA) goat wethers were used to develop a simple method to estimate dry matter intake (DMI) required for maintenance ( $DMI_m$ ) with feed restriction. Grass hay was fed in a 5-week maintenance phase, initially at 5.1 and 5.4 lb/cwt of metabolic body weight ( $BW^{0.75}$ ) for KAT and SPA, respectively, and then varied by 0 to 5% every 2 to 3 days to maintain constant body weight (BW). Individual wether  $DMI_m$  was the intercept of regressing DMI against BW change in 2- and 3-day periods of weeks 3 and 4. In the subsequent 8 weeks, wethers consumed hay at 70% or 55% of their maintenance  $DMI_m$ . Restricted  $DMI_m$  was average DMI in week 8 when no individual wether intercept of regressing BW against day differed from 0.  $DMI_m$  was not influenced by animal type (5.2 and 5.0 lb/cwt of  $BW^{0.75}$  for KAT and SPA, respectively). Animal type and restriction level tended to interact in restricted  $DMI_m$  (3.4, 3.9, 3.1, and 3.9 lb/cwt of  $BW^{0.75}$  for KAT-55%, KAT-70%, SPA-55%, and SPA-70%, respectively), suggesting greater ability of Spanish to lessen energy use with appreciable feed restriction. Correlation coefficients of 0.89, -0.06, 0.96, and 0.85 between  $DMI_m$  in the two phases for KAT-55, KAT-70, SPA-55, and SPA-70, respectively, suggest preference for the 55% level for evaluating resilience to feed restriction. In conclusion, frequent determinations of BW and DMI can be used to compare  $DMI_m$  of individual animals with restricted feeding.

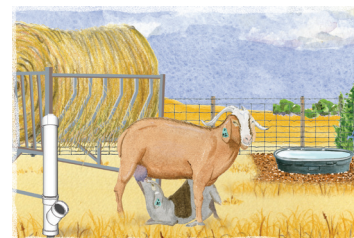
Goetsch, A.L., R. Puchala, A.T. Dolebo, T.A. Gipson, Y. Tsukahara, L.J. Dawson. 2016. Simple methods to estimate the maintenance feed requirement of small ruminants with different levels of feed restriction. *Journal of Applied Animal Research* (DOI: 10.1080/09712119.2015.1129342).

*Editor's Note: Metabolic body weight is a term that is often used by animal nutritionists. This is because an animal that is twice as large as another does not need twice the nutrients. Metabolic body weight is calculated by raising body weight to the  $\frac{3}{4}$  power ( $BW^{0.75}$ ), which scales the amount of metabolically active tissue in the animal.*

## **Nutritional Requirements During Grazing.**

Many factors affect the nutrition of goats while grazing, and their influences can be assessed with an interactive web-based nutrient-requirement-calculation system to determine the quantity and composition of supplement required for desired levels of performance. Among areas identified as being of special importance to goats in grazing settings are the activity energy cost and lack of methods to predict forage intake. Relatedly, goats can consume diets very different in nutritive value than the average of vegetation available, and there has been insufficient research to accurately predict the quality of the actual diet ingested. Equations to project associative effects between feedstuffs have been proposed but not evaluated. Previous nutritional plane can have a substantial effect on energy requirements, with greater fluctuations in the nutritional plane and maintenance energy need during the year for grazing relative to confinement settings. Likewise, based on some findings with sheep, internal parasitism influences both energy and protein requirements, the effect of which may increase as the problem of anthelmintic resistance worsens. There are many plant secondary metabolites consumed by goats in varying quantities that can affect feed intake, digestion, metabolism, and other physiological conditions, with the nature of changes influencing nutritional conditions most limiting to performance. In summary, special attention should be given in future research to conditions affecting nutrition that differ between grazing and confined goats, although factors important to both grazing and confined animals also should be considered.

Goetsch, A.L., T.A. Gipson. 2014. REVIEW: Use of a web-based nutrient-requirement-calculation system to assess potential influences of various factors on nutrient needs of goats while grazing. *The Professional Animal Scientist* 30(2):192-214 (DOI:10.15232/S1080-7446(15)30104-2).



# Goat Field Day 2016

## *Keeping Your Goats Healthy*

You can register online

<http://www.luresext.edu/?q=content/2016-goat-field-day-april-30>



Goat Newsletter

E (Kika) de la Garza American Institute for Goat Research

Langston University

P.O. Box 730

Langston, OK 73050