



Goat Newsletter

Cooperative Extension Program
Langston University

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

Spring 2015

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 *Taking Control of Marketing* and you can read more about it on page 3 of this newsletter. This year our featured speakers will be Dr. **Stephanie Clark**, Ms. **Yvonne Zweede-Tucker**, and Ms. **Tess Caudill**. Dr. **Clark** serves as the Associate Director of the Midwest Dairy Foods Research Center at Iowa State University. Ms. **Zweede-Tucker** is the owner/operator of Smoke Ridge, a cashmere/meat goat operation in Choteau, Montana. Ms. **Caudill** is

the Sheep and Goat Marketing Specialist for the Kentucky Department of Agriculture.

The topic of marketing is paramount for all goat producers. It can decide whether an operation is profitable or not. It has been my experience that too many producers are passive about marketing and wait for markets to develop. Frequently, our extension specialists field calls from frustrated goat producers wanting advice on markets better than the local livestock auction. Often, we tell potential goat producers, regardless of milk or meat, to follow a three-step approach before purchasing their first goats. Firstly, talk with goat producers in their area and see how they are marketing their products. Attend the local livestock auction several times and learn about fluctuations in prices and costs such as yardage and commissions. Think creatively about how they might market their potential products. Secondly, take an inventory of their facilities. Fencing is the most critical facilities issue. Shelter is less important; however, goats will need shelter in inclement weather. Take steps to address

a predator issue, if it exists. Thirdly, purchase goats from a reputable breeder. Often, producers will purchase cull goats from the local livestock auction and then they inherit all the disease problems of the previous farms. Unfortunately, novice producers will follow these steps in reverse order and run into a pitfall of problems. After they have secured their fences in order to keep their goats in, then they turn to income generation. They try the local livestock auction and realize that they are losing money. Don't get me wrong, livestock auctions can and do have a role to play in the marketing of goats. However, they must be well-researched beforehand and the producers need to know their break-even price.

One aid to marketing for producers, especially meat goat producers, has been marketing reports. USDA Agricultural Marketing Service (<http://www.ams.usda.gov/AMSV1.0/LPSMarketNews-Page>) reports prices on different classes of goats at several different livestock auctions in several different states. However, these reports are



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generally viewed as historic, that is, after the fact. You can't review the prices and go back in time to take advantage of those prices but these reports certainly do give an excellent indication of yearly fluctuations, if one studies them over time. Another disadvantage with these reports is that they do not cover all livestock auctions and the livestock auction nearest you may not have an AMS reporter. On a recent exploratory trip to Florida to initiate the process of purchasing sheep for a research project, Drs. **Terry Gipson** and **Art Goetsch** talked to a member of the Meat Sheep Alliance of Florida (<http://msasheep.blogspot.com/>). He attends the sheep and goat sale at the Ocala Stockyard, which is the first Friday of every month, and submits a market report back to the MSAF members. In some instances, market reports posted on the Internet are not a convenient medium for some producers, I am thinking of our fellow producers, particularly in Africa. USAID has developed LINKS (Livestock Information Network Knowledge System) to assist African producers to be better situated in the market in Ethiopia, Kenya, Mali, and Tanzania. However, in areas where computers are scarce, the access to market information is available via a simple SMS (Short Message Service or text as we call it here in the States). In Niger, a private telecom company offers a service whereby farmers are able to have the latest market prices from 57 different markets for vegetables, grains, and

livestock via an SMS. They offer push technology, which means that the farmer does not have to initiate the SMS but by subscription, market prices are sent to their telephone. This is practically real-time marketing information. Enough of my diversion into marketing, I would like to talk more about Goat Field Day events and other aspects of the Institute.

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 Dr. **Stephanie Clark** 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).

I implied that Drs. **Terry Gipson** and **Art Goetsch** were in Florida recently and that is correct. They have been busy visiting hair sheep (Dorper, Katahdin, and St. Croix) breeders in four different climatic zones: Pacific Northwest (Oregon and Washington), Southeast (Florida), Southwest (Texas), and Upper Midwest (Minnesota, Iowa and Wisconsin) in order to purchase sheep for the USDA-funded project entitled "The Genomics of Resilience in Sheep to Climatic Stressors." This project will compare resilience within breed across regions and across breeds within region. More on that project later.

I hope to see you at the Goat Field Day.

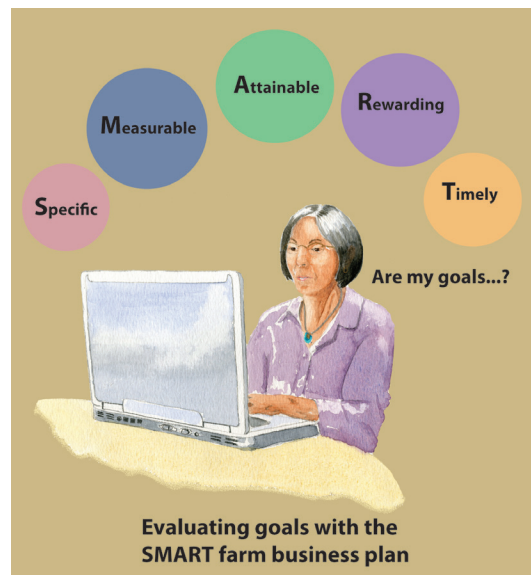
Taking Control of Marketing: Goat Field Day 2015

Our annual Goat Field Day will be held on Saturday, April 25, 2015 at the Langston University Goat Farm with registration beginning at 8:00 a.m. This year's theme will be **Taking Control of Marketing**.

Adult Activity (morning session): This year our featured speakers will be Ms. Tess Caudill, Dr. Stephanie Clark, and Ms. Yvonne Zweede-Tucker.

Tess Caudill is the Sheep and Goat Marketing Specialist for the Kentucky Department of Agriculture where she developed a system of co-mingled, graded sales for the marketing of Small Ruminants. She travels around the state of Kentucky conducting these sales as well as providing education for small ruminant producers. In addition, Tess owns and operates a 200+ acre farm in Mercer County, Kentucky where she rotationally grazes beef cattle, hair sheep and goats. Tess received her B.S. in Animal Science from the University of Kentucky.

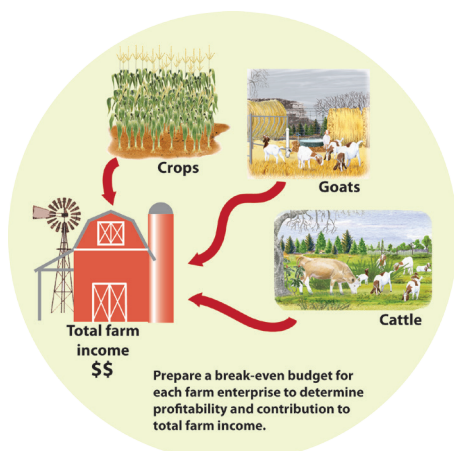
Stephanie Clark grew up on a small farm in Massachusetts, where she first started making cheese from milk of her Nubian dairy goats. She received her BS in Animal Science from Cornell University in 1990, and continued on for a MS in Food Science, which she earned in 1993. Stephanie earned her PhD in Food Science from Cornell University in 1997, then joined the faculty at Washington State University (WSU) in 1998. She was promoted to Associate Professor, with tenure, in 2004. Dr. Clark joined the faculty of Iowa State University (ISU) in August, 2009. She serves as the Associate Director of the Midwest Dairy Foods Research Center, where she oversees the ISU-associated dairy research component of the three-institution center. Her research, which centers broadly around dairy products chemistry, microbiology, processing and sensory evaluation, has been presented in over 55 publications and over 65 posters and presentations. Stephanie teaches courses in dairy products, scientific communication, and sensory evaluation of foods. She has been the research advisor of more than 20 undergraduate, 15 MS, and 5 PhD students. Stephanie has advised successful food product development and dairy products evaluation teams at WSU and at ISU. She is an active member of the Institute of Food Technologists and the American Dairy Science Association. Dr. Clark has served as Editor for the Journal of Dairy Science



Marketing is based upon strengths and weaknesses. (Figure is from Meat Goat Production Basics, illustrated by K. Williams).

and Food Bioscience. She has been the technical advisor of the American Cheese Society Judging & Competition since 2011. In addition to serving as a visiting professor in China, Dr. Clark has also shared her dairy foods and cheese making expertise in Armenia, India, and Mexico.

Yvonne Zweede-Tucker received her BS in International Relations in 1982 from University of California, Davis. She worked in the corporate world for several years before she left southern California for Montana. In 1991, she started Smoke Ridge, a meat goat operation, in Choteau. In the third year of operation, she brought Smoke Ridge into profitability, expanding the herd from 30 head in 1991 to over 500 by the early 2000s. Along with husband, Craig, she manages the operation for production of both breeding stock for raising profitable meat goats and production of market (slaughter) animals, cooperating with nearby producers to offer quantities of animals beyond their production on the limited land base (220 acres) of Smoke Ridge. She organized and conducted a day-long "Making Meaty Meat Goats" field day-seminar in Choteau in 2008 aimed at acquainting area livestock growers with the potential for meat goat production in the Rockies. Subsequently, she organized a four-state goat producer cooperative to collect, and haul, slaughter



Break-even budgets are important.

(Figure is from Meat Goat Production

Basics, illustrated by K. Williams).

goats to a commercial packing plant in northwest Illinois. Producer payment was based on-the-rail carcass quality grade and reflected live-prices paid at the San Angelo, TX goat/sheep auction. The IL plant currently buys/pays for goats from IA, MO, MN, and WI as well as MT. She also organized The Profitable Meat Goats Conference in Indianapolis in March, 2010. She wrote and sourced photographs for The Meat Goat Handbook, published by Voyageur Press in January of 2011. She organized the first Great Goat Gathering on October 18, 2014. Since August of 2007, she has been a monthly columnist for Goat Rancher Magazine, sharing experiences with readers about life on a meat goat ranch on Montana.

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:

- *Factors affecting the marketability of meat goat kids with Ms. Tess Caudill.*
- *What IS a goat worth? with Ms. Yvonne Zweede-Tucker (1:30 p.m. ONLY).*
- *The other 8/9 of your Business Plan with Ms. Yvonne Zweede-Tucker (2:30 p.m. ONLY)*
- *Good news! We've got customers. Reaching them on paper, on-line, and on a trailer with Ms. Yvonne Zweede-Tucker (3:30 p.m. ONLY)*
- *The art of cheesemaking with Dr. Stephanie Clark.*
- *Internal Parasite Control - sustainable internal parasite control program with Dr. Barry Whitworth.*
- *Basic Herd Health - herd health program including*

vaccinations, injection sites, and approved drugs with Dr. Lionel Dawson.

- *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.*
- *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)*
- *Tanning Goat Hides - basic tanning and leather treatment of goat skins with Dr. Roger Merkel.*
- *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.

Fun Tent Youth Activity: Langston University Cooperative Extension will host a full day of activities for youth ages 5-12 in the Fun Tent. This will allow the parents and older teens to enjoy the workshops knowing that their little ones are having fun in a safe environment.

Cheesemaking Workshop: Our ever-popular goat milk cheesemaking workshop has been scheduled on Friday, April 24, 2015 (the day before our annual Goat Field Day on April 25). This one-day hands-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. 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 2015 Goat Field Day, please contact Dr. Terry Gipson at 405-466-6126 or at tgipson@langston.edu.

You can register online for the 2015 Goat Field Day
<http://www2.luresext.edu/goats/library/fd2015.html>



GOAT FIELD DAY

Saturday, April 25, 2015

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://www2.luresext.edu/goats/library/fd2015.html>

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 17, 2015)

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 730
Langston, OK 73050
ATTN: FIELD DAY**

2015 Goat Field Day Registration - Adult

Morning	9:00 - 11:45 a.m.	IMPORTANT!! 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. Please choose your three afternoon workshops below.	
Afternoon Sessions	1:30 - 2:20 p.m.	Please Select a Workshop for this session and Enter the Workshop number here: _____	Afternoon Workshop Choices: The afternoon workshops include: <ol style="list-style-type: none"> Factors affecting the marketability of meat goat kids with Ms. Tess Caudill. What IS a goat worth? with Ms. Yvonne Zweede-Tucker (1:30 p.m. ONLY). The other 8/9 of your Business Plan with Ms. Yvonne Zweede-Tucker (2:30 p.m. ONLY) Good news! We've got customers. Reaching them on paper, on-line, and on a trailer with Ms. Yvonne Zweede-Tucker (3:30 p.m. ONLY) The art of cheesemaking with Dr. Stephanie Clark. Internal Parasite Control - sustainable internal parasite control program with Dr. Barry Whitworth. Basic Herd Health - herd health program including vaccinations, injection sites, and approved drugs with Dr. Lionel Dawson. 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. 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) Tanning Goat Hides - basic tanning and leather treatment of goat skins with Dr. Roger Merkel. 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).
	2:30 - 3:20 p.m.	Please Select a Workshop for this session and Enter the Workshop number here: _____	
	3:30 - 4:20 p.m.	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: (405) 466-3836

Fax: (405) 466-6177

Greetings Goat Field Day Participants:

This letter is to invite you to bring your youth (ages 5-13) to enjoy a full day of Fun, Food & Excitement during Goat Field Day, **Saturday, April 25, 2015**. This is the 13th year that the Cooperative Extension Program has hosted a "Fun Tent" filled with activities to keep your youth engaged while you enjoy your workshops and seminars. This year we are offering some new activities for the youth to enjoy. ***Please Note: If your youth will be signing up for the ½-day Fitting & Showing session, please check the box on the Youth Registration. We will need to know how many youth will be leaving the Fun Tent to attend that afternoon workshop.***

Youth ages 5 to 8 will enjoy a host of activities throughout the day including some of our favorites: Pony Rides; Kid Petting Area; Face Painting; Exercise; Photo Greeting Cards; a Movie Room and much more. ***Due to increasing numbers of youth participants, we strongly encourage an adult or older sibling to accompany younger youth.***

Included in this letter is the youth registration form, Waiver of Liability form, and Participant Stamp card. Complete one form per child (make as many copies as needed) and return with your Goat Field Day Registration. Lunch will be provided onsite for youth participants. We are excited to have the opportunity to make a positive investment in the lives of our youth.

If you have any questions or concerns, please contact me at 405-466-6126 or tgipson@langston.edu.

Sincerely,



Terry A. Gipson, Ph.D.
Goat Extension Leader
Cooperative Extension Service
Langston University

Youth Registration

Langston University
School of Agriculture and Applied Sciences
Goat Field Day 2015

Please Print

Youth Name: _____
Last MI First

Age as of April 25, 2015: _____ Grade as of Jan. 2015: _____ Male or Female (circle one)

Youth Address: _____
Street/POB/RR Apt# City State Zip

Home phone: () _____ Email Address: _____

Parent or Guardian Name: _____ Relationship: _____

Name and Phone to contact of Parent or Guardian during Field Day Activities:

Name: _____ Cell Phone: () _____

☐

will be attending the ½-day Fitting & Showing session (afternoon)

Optional Information

Member of 4-H: ☐ Yes ☐ No

Member of FFA: ☐ Yes ☐ No

4-H Club and County: _____

FFA Chapter: _____

Please fill out the attached Goat Field Day Youth Registration forms to complete your packet.

Goat Field Day 4-H Fun Tent 2015 Youth Registration

Waiver and Release of Liability

(Minors must have signature of Parents/Legal Guardian)

PLEASE TYPE OR PRINT

Name of participant: _____
(Last) (First) (Middle)

DOB: _____ Age _____ Race _____ Gender () M () F
(Month) (Day) (Year)

Address: _____
Street City/Town State Zip

Emergency & Event Pickup contact:

Name: _____ Relationship to youth: _____

Cell Phone () _____

If you have any serious health issues/problems or food allergies that we should be aware of, please list:

WAIVER, RELEASE AND INDEMNITY AGREEMENT

In consideration of receiving permission for _____ to participate in the Cooperative Extension Program "Goat Field Day – 4-H Fun Tent" and any other Goat Field Day sponsored activity, event, contest or meeting, the undersigned hereby releases and forever discharges the Cooperative Extension Program at Langston University and Board of Regents for the Oklahoma State University and Agricultural and Mechanical Colleges, their heirs, executors, or corporations liable or who might be claimed to be liable, none of whom admit any liability to the undersigned but all expressly deny any liability, from any and all claims, demands, damages, actions, causes of action or suits of any kind or nature whatsoever, and particularly on account of all wrongful death caused by negligence, injuries, known and unknown, both to person and property, which have resulted or may in the future develop from an accident which occurred while attending this event.

I acknowledge that I have read the foregoing and have been fully and completely advised of the potential dangers incidental to engaging or receiving instruction in the activity described here in above and am fully aware of the legal consequences of signing this form.

Parent or Legal Guardian (Sign name here)

Relationship to Minor

Undersigned (**Print name here**)

Cell Phone

Address (if different from Minor)

E-Mail address

Date

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Name: _____					
(Nickname): _____ Age: ____ Gender: M or F Allergies: _____ Emergency Contact Person: _____ Phone with Area Code: _____ Session #s _____ / _____ / _____ / _____ / _____					Team Leader(s)
<u>Age Group Names--(Please circle one)</u> <div style="display: flex; justify-content: space-between;"> 3 to 5 year olds—(Cubs) 6-8 year olds—(Explorers) </div> <div style="display: flex; justify-content: space-between;"> 9-11 year olds—(Trackers) 12 and up—(Lions) </div> <p>Youth will receive a stamp for each activity they complete.</p>					

Name: _____					
(Nickname): _____ Age: ____ Gender: M or F Allergies: _____ Emergency Contact Person: _____ Phone with Area Code: _____ Session #s _____ / _____ / _____ / _____ / _____					Team Leader(s)
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Research Spotlight

Forage and Concentrate Interaction.

Negative associative effects between supplemental concentrate and forage were investigated with 12 growing (average of 53 lbs) and 12 yearling (average of 104 lbs) goats. Treatments in the different Latin squares were 0, 0.6, 1.2, and 1.8 lbs/head/day of supplemental concentrate (primarily ground corn), and in periods within squares 3 sources of grass hay were consumed *ad libitum* (A: 5% CP; B: 8% CP; C: 12% CP). Forage intake on a body-weight basis was similar between animal types (1.4 and 1.2 lbs for growing wethers and yearlings), greatest among forages for B (1.2, 1.7, and 1.0 lbs for A, B, and C, respectively), and ranked 0 and 0.6 > 1.2 > 1.8 lbs of concentrate (2.0, 1.7, 1.0, and 0.6 lbs). There was an interaction in forage intake between animal type and level of supplementation (1.0, 1.0, 0.8, and 0.4 for growing wethers and 1.8, 1.6, 0.8, and 0.5 for yearlings with 0, 0.6, 1.2, and 1.8 concentrate). There also was an animal type by concentrate level interaction in digestibility (57.3, 60.6, 61.4, and 58.4% for growing wethers and 56.6, 62.9, 56.8, and 30.0% for yearlings with 0, 0.6, 1.2, and 1.8 lbs of concentrate). Based on digestibility without concentrate, the decrease in digestibility in yearlings given 1.8 lbs of concentrate was substantial compared with moderate effects of 1.8 lbs with growing wethers and 1.2 lbs with yearlings. The web-based goat nutrient calculation system of Langston (<http://www2.luresext.edu/goats/research/supcon.html>) addresses negative and positive associative effects. The system was accurate in predicting TDN intake, particularly with the low level of supplementation and the moderate level with growing wethers. These production scenarios would be much more common than with the highest level of supplementation with either animal type or the moderate level with the yearling wethers and their relatively low nutritional requirements.

Dolebo, A.T., R. Puchala, T.A. Gipson, L.J. Dawson, T. Sahlu, and A.L. Goetsch. 2015. *Effects of supplemental concentrate level and forage source on intake and digestion by growing and yearling Boer goat wethers and evaluation of a method of predicting negative feedstuff associative effects.* p. 39, *Abstracts of American Society of Animal Science, Southern Section meeting, January 31-February 3, 2015, Atlanta, GA.*

Measuring Energy Expenditure.

Heat energy (HE) of 11 yearling Boer goat wethers (average of 96 lbs) consuming fresh Sudangrass *ad libitum* while confined in 4×4 ft pens (Conf) or grazing a 2-acre pasture (G) was determined from heart rate (HR) measured over 24 hours and the ratio of HE to HR (HE:HR) estimated 2 ways. The BARN method involved a prior period in metabolism cages with head-boxes of an indirect calorimetry system measuring oxygen production and emission of carbon dioxide and methane for 24 hours (i.e., 96 individual measurements) while consuming a moderate quality grass hay. The SPOT method entailed a portable face mask system measuring oxygen consumption and carbon dioxide production for 5 minutes while standing near grazing and confinement areas at 08:00, 12:00, 16:00, and 20:00 hours, after 30 minutes of adaptation. With both methods, HR, HE, and HE relative to bodyweight were greater for G vs. Conf. There was no difference between methods for Conf in HR (76.4 and 70.0 beats/minute) or HE (2.0 and 1.9 Mcal/day) for BARN and SPOT, respectively. For G, HR (100.9 and 92.5 beats/minute) and HE (2.7 and 2.3 Mcal/day) were greater for BARN vs. SPOT. There was a treatment × time interaction in HR and HE with SPOT. Accordingly, greater HE was observed at 16:00 vs. 08:00 and 12:00 hours (Conf: 1.8, 1.8, 2.0, and 1.9; G: 2.2, 2.1, 2.6, and 2.5 Mcal/day at 08:00, 12:00, 16:00, and 20:00 hours, respectively), HE:HR tended to be also greatest at 16:00 vs. 08:00 and 12:00 hours. In conclusion, though HE:HR differed between methods, the relatively small magnitude (i.e., 4.7%) indicates that both could be used to estimate HE based on HR in grazing or confined settings; however, multiple measurements would be beneficial with SPOT to address potential differences among times of the day.

Brassard, M.E., R. Puchala, T.A. Gipson, T. Sahlu, and A.L. Goetsch. 2015. *Effects of method of determining heat energy: heart rate of confined and grazing Boer goats.* p. 38, *Abstracts of American Society of Animal Science, Southern Section meeting, January 31-February 3, 2015, Atlanta, GA.*

Goat Field Day 2015

Taking Control of Marketing

You can register online

<http://www2.luresext.edu/goats/library/fd2015.html>



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

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