Goat Newsletter

Cooperative Extension Program
Langston University

The Newsletter of the E (Kika) de la Garza American Institute for Goat Research *Spring 2018*

From the Director's Desk

As usual, 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 and Hair Sheep Field Day is *Preventing Production Losses* and you can read more about it on page 3 of this newsletter. This year our featured speakers will be Mr. **Matthew Branan**, Dr. **David Pugh**, and Dr. **Jim Keen**. Mr. **Branan** is from the USDA/APHIS National Animal Health Monitoring System in Fort Collins, CO; Dr. **Pugh** is from the Alabama Veterinary Diagnostic Lab System in Auburn, AL; and Dr. **Keen** is from the University of Nebraska-Lincoln.

Production loss has many facets. According to the USDA/APHIS NAHMS report entitled "Goat and Kid Predator and Nonpredator Death Loss in the United States, 2015", by the way Mr. **Branan** is associated with this USDA program, about 500,000 adult and kid goats were lost to all causes (nonpredator and predator) in 2015, which represented 10% of U.S. adult goat inventory and 20% of kids born in 2015. The total value of goat and kid losses was $70 million. Texas had the largest inventory of goats and also had the highest percentage of losses: 36% of U.S. adult goat deaths and 38 % of kid deaths. Nonpredator causes accounted for about three-fourths of all adult goat and kid death losses in the U.S. in 2015. Of known losses due to nonpredator causes, internal parasites were the primary cause, resulting in almost 87,000 goat and kid deaths in 2015. For 2015 death losses due to predators, coyotes and dogs accounted for the highest percentages of goat and kid death losses in 2015. Overall, coyotes and dogs accounted for almost 80,000 goat and kid deaths, or about 65% of all losses due to predators.

In the allied USDA/APHIS NAHMS report entitled "Sheep and Lamb Predator and Nonpredator Death Loss in the United States, 2015", about 585,000 sheep and lambs were lost to all causes (nonpredator and predator) in 2014, which represented 7% of U.S. adult sheep inventory and 11% of lambs born in 2014. The total value of sheep and lamb losses was $102 million. As with goats, nonpredator causes accounted for about three-fourths of all adult sheep and lamb death losses in the U.S. in 2014. The top three causes of nonpredator death loss in adult sheep were: old age (24%), unknown nonpredator causes (13%), and lambing problems (12%). The top three causes of nonpredator losses in lambs were: weather-related causes (19%), unknown nonpredator causes (12%), and lambing problems (11%). The top two causes of predator loss were coyotes and dogs for both adult sheep (54% and 21%, respectively) and lambs (64 and 10%, respectively).

We tend to think in the above reports as day-to-day losses from hundreds of thou-

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sands sheep and goat operations. However, sometime production losses can be quick and overwhelming. Hurricane Harvey caused more than $200 million in crop and livestock losses in south Texas in a matter of days. Of that loss, $93 million was in livestock, which included not only cattle and calves but also industry infrastructure. In 2005, Hurricane Katrina caused losses of $15 million for poultry producers and $8 million for cattle producers. Unlike Harvey, Hurricane Katrina losses did not account for infrastructure damages. So the actual losses were probably much greater.

As we can see from the aforementioned studies, sheep and goats have similar concerns in combatting production losses but also have unique concerns. Therefore, it is important for goat and hair sheep producers to prepare against production losses at the micro and macro levels.

I mentioned hair sheep because we recently added a small research flock of Dorper, Katahdin, and St. Croix hair sheep and we want to address research and educational concerns of hair sheep producers in all of our activities. In the Summer 2017 newsletter, I mentioned the hair sheep flock. This fall, we mated a large number of ewes and are awaiting lambing season. This is new territory for us. The farm crew is well versed in kidding and the management of kids but not lambing.

In the winter of 2017, we unveiled our online certification goat producer courses (*http://certification.goats.langston.edu*). Actually, the meat goat online course was a completely revised version of our popular course and the dairy goat online course was a brand new course. With the assistance of the American Dairy Goat Association in promoting the online dairy goat course, we have grown in enrollment exponentially. In just over a month, we have gone from 40 participants to more than 400. Our hope is that the online courses will equip dairy and meat goat producers with the knowledge, skills, and abilities to become better managers of their goats and thereby, preventing future production losses. Currently, we do not have any plans for a hair sheep online course but it is always a possibility for the future.

On the research side, we said goodbye to Dr. **Dereje Tadesse Gulich**, who returned to Debre Birhan University in Ethiopia. For two years, Dr. **Tadesse** worked on the research project entitled "Genomics of Resilience in Sheep to Climatic Stressors" led by Dr. **Art Goetsch**. Dr. **Tadesse's** studies involved the three hair sheep breeds that we mentioned earlier. We also said goodbye to Ms. **Hiywot Eshetu**, who was an animal technician at the research farm and who is Dr. **Tadesse's** wife. We will miss them both and we wish them well.

I hope to see you at the Goat and Hair Sheep Field Day.

Preventing Production Losses
Goat and Hair Sheep Field Day 2018

Our annual Goat Field Day will be held on Saturday, April 28, 2018 at the Langston University Goat Farm with registration beginning at 8:00 a.m. Recently, Langston University added a small research flock of Dorper, Katahdin, and St. Croix hair sheep and this year we will incorporate topics of interest to hair sheep producers. This year's theme will be *Preventing Production Losses* and our featured speakers will be Mr. **Matthew Branan**, Dr. **David Pugh**, and Dr. **Jim Keen**.

Matthew Branan earned his MS in Statistics from Colorado State University in 2015. His thesis focused on applying information criteria-based model averaging and pseudo-R^2 metrics for linear mixed model evaluation. Throughout his last year at Colorado State University, he worked as a cooperator statistician for the Surveillance Design and Analysis (SDA) unit, within the Center for Epidemiology and Animal Health (CEAH). As a collaborator with SDA, Branan helped to modify, develop, and implement Bayesian models for applications in disease freedom and prevalence estimation settings in the swine, cattle, aquaculture, and equine industries. In August, 2016, he began working for the National Animal Health Monitoring System (NAHMS). He is currently involved in all stages of implementing national studies related to animal health in a variety of industries including aquaculture, swine, cattle, sheep, goat, beef cow-calf, and dairy cattle, with particular focus on the design of the studies and the analysis of study results. The focus of his statistical work currently centers on the use of survey weights in estimation and in linear and Bayesian models.

David Gartrell Pugh earned both DVM and MS (Nutritional Physiology) degrees from the University of Georgia in 1981, and a MAG in Agricultural Entomology (external parasites- 2013). He received post-DVM training at Virginia Tech (Clinical Nutrition) and Texas A&M University (Theriogenology). He is a Diplomate of the American College of Theriogenology (1986), the American College of Veterinary Nutrition (1992), and the American College of Veterinary Microbiology (Parasitology 2012). He has held faculty positions at the University of Georgia and Auburn University (AU), owned a large animal practice in Georgia, has been a consulting veterinarian for Fort Dodge Animal Health and Pfizer Animal Health, project veterinarian and Director of Farm Operations for the AU Equine Source Plasma Project (a multimillion dollar research grant), and is currently Director of the AL Vet Diagnostic Lab System. During his academic career he taught veterinary nutrition for horses, cows, and small ruminants, and was a clinician in ambulatory medicine and theriogenology. He is the author of >600 publications, >100 book chapters, 1 textbook (Sheep and Goat Medicine), and a co-author of a publication of the NRC for Sheep, Goats, Camelids and Cervids. Pugh has received five university and five national awards for teaching, was the 2006 recipient of the UGA's AM Mills Award for contributions to Veterinary Medicine, and was the UGA's College of Vet Med's Alumni of the Year for 2017. He has served on various committees for the American Association of Small Ruminant Practitioners, the Society for Theriogenology, the College of Theriogenology, the American College of Veterinary Nutrition, and the National Research Council, Nutrient Requirement Committee and the American Academy of Veterinary Parasitologists.

Jim Keen earned a DVM and PhD (epidemiology) from the University of Illinois and is a veterinary infectious disease eco-epidemiologist and sustainable agriculture proponent with broad interests and 27 years of research and field experience in livestock health and production medicine, veterinary public health and zoonotic infections, biomedicine and animal protection. He currently is a faculty member at the University of Nebraska-Lincoln in the School of Veterinary Medicine and Biomedical Sciences. Much of Keen's research interest has focused on the diagnosis, epidemiology and control of infectious diseases of sheep and goats, especially Caprine Arthritis and Encephalitis virus, Ovine Progressive Pneumonia virus and Caseous Lymphadenitis. In addition, he kept a small (10-20 does) hobby herd of Alpine and Pygmy goats for 20 years. Keen is author or co-author of 70 peer-reviewed scientific publications and more than 100 scientific abstracts. Keen taught high school science in Togo, West Africa for two years in the 1980s. From 2007 to 2014, he

was a disease surveillance consultant on dangerous veterinary pathogens (zoonoses and transboundary diseases, e.g., brucellosis and foot and mouth disease) in Azerbaijan and Armenia for the Biological Threat Reduction Program of the US Department of Defense.

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 to attend three.

The afternoon workshops include:

- *Tools in the War on Parasites with Dr. David Pugh.*
- *Common Diseases of Small Ruminants and Their Symptoms with Dr. James Keen.*
- *Where Are They Going? A Look at Past and Future NAHMS Goat and Sheep Health National Studies with Mr. Matthew Branan.*
- *Basic Herd Management –hoof trimming, body condition scoring, FAMACHA scoring, etc. with Mr. Jerry Hayes.*
- *What Processors Want – learn from a panel of meat processors concerning the type and weights of lambs and goats that they want with Oklahoma meat processors*
- *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.*
- *Tanning Goat Hides - basic tanning and leather treatment of goat skins with Dr. Roger Merkel.*
- *The Art of Cheesemaking with Dr. Steve Zeng.*
- *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/APHIS: Animal ID with Dr. Michael Pruitt and USDA/WS: Wildlife programs with Mr. Kevin Grant* ***(1:30 p.m. and 2:30 p.m. ONLY)***
- *USDA/NRCS: Conservation programs with Ms. D'Ann Peterson and USDA/FSA: Farm loans with Mr. Phil Estes* ***(1:30 p.m. and 3:30 p.m. ONLY)***
- *USDA/NASS: Animal inventories with Mr. Wil Hundl and USDA/AMS: Market strategies with Mr. Cole Snider* ***(2:30 p.m. and 2:30 p.m. ONLY)***
- *Fitting and Showing for Youth and Adults - tips and pointers on fitting and show ring etiquette with Ms. Janet and Messrs. Robbie and Coleman Sanders (this is a half-day afternoon workshop).*

Registration for the Goat and Hair Sheep 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 Goat Field Day for Kids 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, 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 on Friday April 27, 2018 (the day before our annual goat field day on April 28). Dr. Steve Zeng, Professor and Dairy Product Specialist at Langston University, will be the host/instructor for this workshop. He has instructed cheese workshops in many states and internationally. He has also judged cheeses for the World, the United States, the American Cheese Society and the American Dairy Goat Association cheese championships/contests. He will share his rich background, personal experience and masterful skills in small-scale cheese manufacture, particularly goat milk cheeses. He plans to demonstrate basic principles and practical skills of making soft and surface mold cheeses using our own Grade "A" goat milk. Milk quality, cheesemaking facility, cheese sensory evaluation and federal safety requirements will also be discussed. This one-day hands-on workshop will be held in the pilot creamery at Langston University. There is a registration fee of $60.00/person, which includes continental breakfast, break snacks, and lunch. Only the first 15 registrants will be admitted. To reserve a seat, please send your personal check of $60.00 to LU Ag Res. Sales (Attn: Dr. Steve Zeng, Department of Agriculture & Natural Resources, P.O. Box 1730, Langston, OK 73050).

For information regarding the cheesemaking workshop, please contact Dr. Steve Zeng at 405-466-6145 (O), 405-404-5171 (M), or szeng@langston.edu. For information regarding the 2018 Goat Field Day, please contact Dr. Terry Gipson at 405-466-6126 or tgipson@langston.edu.

You can register online for the 2018 Goat and Hair Sheep Field Day
http://goats.langston.edu/2018-goat-and-hair-sheep-field-day

GOAT FIELD DAY

Saturday, April 28, 2018
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://goats.langston.edu/2018-goat-and-hair-sheep-field-day

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 "LANGSTON UNIVERSITY/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 20, 2018)

Adults ($10.00 each) _____
Children (12 and under) ($5.00 each) _____

TOTAL _____

Make checks payable to:
Langston University/Research Sales

Please mail this form and check to:

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

2018 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: 1. Tools in the War on Parasites with Dr. David Pugh. 2. Common Diseases of Small Ruminants and Their Symptoms with Dr. James Keen. 3. Where Are They Going? A Look at Past and Future NAHMS Goat and Sheep Health National Studies with Mr. Matthew Branan. 4. Basic Herd Management –hoof trimming, body condition scoring, FAMACHA scoring, etc. with Mr. Jerry Hayes. 5. The Art of Cheesemaking with Dr. Steve Zeng. 6. What Processors Want – learn from a panel of meat processors concerning the type and weights of lambs and goats that they want with Oklahoma meat processors. 7. Goat Farm Budgeting - basics of budgeting and financial recordkeeping with Mr. Clark Williams. 8. Pack Goats - basic goat training as a pack animal and equipment needs with Mr. Dwite Sharp. 9. Nutrition for Health and Production - calculation of energy, protein and feed intake requirements with Dr. Steve Hart. 10. Tanning Goat Hides - basic tanning and leather treatment of goat skins with Dr. Roger Merkel. 11. DHI Training - supervisor/tester training for dairy goat producers including scale certification with Ms. Eva Vasquez. 12. USDA/APHIS: Animal ID with Dr. Michael Pruitt and USDA/WS: Wildlife programs with Mr. Kevin Grant (**1:30 p.m. and 2:30 p.m. ONLY**) 13. USDA/NRCS: Conservation programs with Ms. D'Ann Peterson and USDA/FSA: Farm loans with Mr. Phil Estes (**1:30 p.m. and 3:30 p.m. ONLY**) 14. USDA/NASS: Animal inventories with Mr. Wil Hundl and UDSA/RD: Rural development opportunities with Mr. Travis Perrin (**2:30 p.m. and 2:30 p.m. ONLY**) 15. 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: _____	

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 28, 2018.**

The **Goat Field Day for Kids Program** will consist of "*hands on experiences" and recreational games such as basketball, volleyball, dodgeball and jump-rope.* It is intended that these activities will cause the kids to have "so much fun" while challenging their ability to implement creative thinking and socialization capabilities.

Please complete and return the **Goat Field Day for Kids Program Registration Form** along with your Goat Field Day Registration Packet. **Be sure to check their Participation Status indicated on page 2.**

If you have questions or concerns, you may contact Shirlene Hurte at (405) 466 6107 or shurte@langston.edu. We look forward to supporting your Goat Field Day experience.

Sincerely,

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

FORM 1

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

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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 28, 2018

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. 2018

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 indicated 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 extend 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: _____ 2018

OVER►

FORM 2

STUDENT PARTICIPATION STATUS:

☐ **Will attend Fitness and Showing Session** ☐ **Will not attend Fitness and Showing Session**

PARENT/GUARDIAN CONTACT INFORMATION

EMERGENCY CONTACT

Name: _____ **Relationship to child**_____

Mailing Address _____
Street/P O Box City State Zip

Home Address: _____
Street City State Zip County

Work Phone: _____ Cell: _____Email: _____

CAMPER'S MEDICAL/TREATMENT INFROMATION

Family Doctor/Facility: _____ Phone: _____

Medical History: (Diabetes, Allergies, Asthma etc.) _____

I give authorization for (name of student) _____ to self medicate

(Name of medication) _____ according to written instructions.

NOTE:

☐ In the event of an emergency, I authorize all medicinal treatments.

☐ In the event of an emergency, I authorize all medicinal treatments **except blood transfusion.**

MEDIA, PHOTO & VIDEO RELEASE

I, the undersigned parent/guardian of the minor child indicated, hereby grant Langston University, its Board of Regents, Administration, Faculty, Staff, Student Leaders and all other officers, directors, employees and agents (University) the right to reproduce, use, exhibit, display, broadcast, distribute, exploit (market or promote), modify, adapt, and create derivative works of photographs, videotaped images or video/audio recordings of my child (Materials) by incorporating them into publications, catalogues, brochures, books, magazines, photo exhibits, motion pictures films, videos, electronic media, websites, and /or other media, or commercial, informational, educational, advertising or promotional materials or publications related thereto (Works). It is agreed that the Works will be used in connection with University business, the activities of the University, or for promoting, publicizing or explaining University activities or events.

I wave my right to inspect or approve any Works that may be created by the University using the materials and waive any claim with respect to the eventual use of which materials may be applied. I understand and agree that the University is and shall be the exclusive owner of all right, title, and interest including copyright. I also understand that neither I nor my child will receive compensation in connection with the use of my child's image or works. The information I have provides 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 acknowledge that I am signing this document freely and voluntarily. My signature on this document is intended to bind not only myself but also my successors, heirs, representatives, administrators and assigns.

SIGNATURE AND COMPLETED INFORMATION IS REQUIRED

Parent/Guardian Signature: _____ Date: _____2018

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.

- ***H***ead - Managing, Thinking
- ***H***eart - Relating, Caring
- ***H***ands - Giving, Working
- ***H***ealth - 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.

Research Spotlight

Heat Load Index Protocols for Hair Sheep.

Thirty-three yearling Katahdin sheep (KAT, 86 lbs) and Boer (BOE, 63 lbs) and Spanish goat wethers (SPA, 50 lbs) were used to determine conditions appropriate for evaluating resilience to high heat load index (HLI). Grass hay (69% NDF and 9.5% CP) was consumed ad libitum with concentrate supplemented at 0.5% BW. Period 1 was 2 weeks and periods 2–5 were each 1 week. Target HLI for the five periods during the day/night was 70/70, 80/70, 90/76.5, 95/80.75, and 100/85, and measured HLI was 66/66, 80/75, 92/84, 97/86, and 101/89, respectively. Respiration rate increased with advancing period except from period 4–5 when there was a smaller decline for KAT than for BOE or SPA. Rectal temperature also increased as the experiment progressed until period 4 and was similar among animal types in period 5 when values for BOE and SPA were lower than in period 4, in contrast to similar values for KAT. Respiration rate at 13:00 and 17:00 hours increased with advancing period up to a plateau at 150–155 breaths/min converse to much lower rates (i.e., 32–83) at 06:00 in periods 2–5. Respiration rate at 06:00 hour differed more among days of period 5 than at 13:00 or 17:00 hour, with values increasing from day 1–3 and thereafter generally declining from 118 to 37 breaths/minutes on day 7. Rectal temperature for KAT was lower than for goats early in period 5 but similar among animal types on days 6 and 7. In conclusion, a HLI in the range of 95/80.75 and 100/85 seems appropriate, periods longer than 1 week appear necessary for full adaptation, and measures should occur during both night and day.

Mengistu, U.L., R. Puchala, T. Sahlu, T.A. Gipson, L.J. Dawson, A.L. Goetsch. 2017. Conditions to evaluate differences among individual sheep and goats in resilience to high heat load index. Small Ruminant Research 147:89-95 (DOI10.1016/j.smallrumres.2016.12.039).

Editor's Note: Heat Load Index (HLI) is a mathematical expression using ambient temperature and relative humidity and is an indicator of the environmental heat load (stress) on livestock.

Pasture Access and Lactating Goats.

Twenty-eight Alpine goats were used to evaluate the effects of different pasture access regimes on lactation performance, grazing behavior, and energy utilization in a 16-week experiment with four 4-week periods beginning at 26 ± 2.5 days in milk. Treatments were access to grass and (or) legume pasture continually other than during milking in the morning and afternoon (CG); from the time leaf surfaces were dry (measured by leaf wetness sensors) until afternoon milking and thereafter to sunset (ND-D); from the time leaf surfaces were dry until afternoon milking (ND-M); and between morning and afternoon milking (SET). The CG, ND-M, and SET goats were supplemented with approximately 1.5% body weight (BW; dry matter basis) of concentrate immediately following the afternoon milking and ND-D goats were supplemented at sunset. Organic matter digestibility, average daily gain, fecal egg count, and FAMACHA© score were not affected by treatment. Milk concentrations of protein, fat, and lactose and milk energy yield (5.41, 5.06, 5.34, and 5.55 MJ/day for CG, ND-D, ND-M, and SET, respectively) were similar among treatments. Treatment affected time spent grazing (7.43, 6.93, 5.86, and 6.18 hours for CG, ND-D, ND-M, and SET, respectively). Intake of metabolizable energy (ME) was similar among treatments (1111, 1010, 1043, and 874 kJ/kg $BW^{0.75}$), daily heat energy was greatest among treatments for CG (745, 684, 631, and 667 kJ/kg $BW^{0.75}$), and milk energy as a percentage of ME intake was greatest for SET (30.2, 28.3, 27.9, and 36.3% for CG, ND-D, ND-M, and SET, respectively). In conclusion, there appeared potential to improve efficiency of milk production by pasture access between morning and afternoon milking compared with continuous grazing and there were no clear benefits from delaying pasture access until leaf surfaces were dry.

Keli, A., L.P.S. Ribeiro, T.A. Gipson, R. Puchala, K. Tesfai, Y. Tsukahara, T. Sahlu, A.L. Goetsch. 2017. Effects of pasture access regime on performance, grazing behavior, and energy utilization by Alpine goats in early and mid-lactation. Small Ruminant Research 154:58-69 (DOI:10.1016/j.smallrumres.2017.07.004).

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