AMERICAN INSTITUTE FOR GOAT RESEARCH
LANGSTON UNIVERSITY
E (Kika) de la Garza

Goat Newsletter

Cooperative Extension Program
Langston University

The Newsletter of the E (Kika) de la Garza American Institute for Goat Research *Summer 2009*

From the Director's Desk

As I write this article, I am sitting on a Northwest flight coming back from Irbid, Jordan. As I have reported in past newsletters, we have an extensive international program, of which we are very proud. I must humbly say that for a university of our size, we have a very large and impressive international program. As some of these programs come to the end of their funding cycle, we strive to maintain the valuable relationships that we have developed during the project activities. One way that we maintain our ties with other institutions, especially universities, is to enter into a Memorandum of Understanding. A MOU is a legal document, although non-binding, between institutions that recognizes the strengths of each institution while acknowledging the synergy that exists when the two institutions collaborate closely. That was the purpose of my trip to Jordan, where I visited with the administration of the Jordan University of Science and Technology (JUST). Later this year, we will have a signed MOU with JUST after the respective legal departments have examined the MOU. Actually, before this newsletter is mailed to you, Dr. **Terry Gipson** and I will have completed a trip to Butare, Rwanda, where we will have gone to prepare a MOU with the National University of Rwanda (NUR). Both of these universities have been valuable partners in a soon-to-end project entitled "International Collaboration in Goat Research and Production Web-Based Decision Support Aids", which was funded by USDA-CSREES-International Science and Education Competitive Grants Program. Dr. **Art Goetsch** is the principal investigator of the project and he and Dr. **Gipson** have traveled to JUST and to NUR several times to work with Dr. **Laith Alrousan** and Mr. **Juvenal Kanani**, collaborators at JUST and NUR, respectively. Both Dr **Alrousan** and Mr. **Kananai** presented at this year's Goat Field Day and you can read more about that on page 3 of the newsletter. Back to my trip, this was my second visit to JUST and my first visit to NUR and I must say that I enjoyed them both. Even though I only spent a few days in either location, I was impressed with the similarities between the two. Both are peaceful countries in an ocean of conflict. Jordan is a major player of peace in the Israeli-Palestinian conflict and Rwanda has found peace after a terrible Hutu-Tutsi conflict. Believe it or not, both counties have somewhat similar terrain. Jordan, in the north, has gentle rolling hills that are dotted with small farms. Rwanda's nickname is *pays des mille collines*, which means land of a thousand hills. It, too, has a rolling and verdant topography that is dotted with small farms. I enjoy travelling to new places because I always learn so much. I am reminded of what Sir Frances Bacon said "Travel, in the younger sort, is a part of education; in the elder, a part of experience" and to that I say *Bon Voyage*.

Goat Newsletter is published quarterly by the Cooperative Extension Service of the E (Kika) de la Garza American Institute for Goat Research, Langston University, Langston, Oklahoma.

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Farewell, Marvin

On April 20, 2009, Marvin Shurley lost his battle with cancer and the American goat industry lost it's foremost advocate. Marvin was a dear friend to many of us here at Langston University. From the early days of the University's Buck Performance Test, Marvin was a avid supporter of the Test and always enrolled a large number of bucks. He even allowed his ranch to a be used as a collection point for the producers in South Texas who wanted to send bucks to the Test and always opened his arms and ranch house to us with warmth and affection. Everyone that Marvin met was treated with respect and genuine friendship. One year, Marvin graciously accepted an invitation to judge an Oklahoma Youth Meat Goat Association show, which was held at Langston on the day of the end of the Test, even though it meant spending an extra night on the road a long way from home without compensation. He freely gave his time and his attention to those youthful exhibitors. When Langston University began its work on the Web-Based Certification Program and the Meat Goat Production Handbook, Marvin was the obvious choice to author the chapter on Facilities because of his great knowledge on this subject. You see, Marvin was more than a meat goat producer and rancher. Marvin was a fourth generation rancher in the Edwards Plateau area of Texas where his great-grandfather started ranching in Sutton County, Texas in 1893. Marvin was raised in that commercial ranching environment and had been actively involved in meat goat production as his primary ranch enterprise since 1990. He was an active and engaged member of the Texas Sheep and Goat Raisers Association, the American Boer Goat Association, and the American Meat Goat Association. Since 1996, Marvin served on the board of directors of the American Meat Goat Association and was president of that association until his illness prevented him from effectively serving. At the time of his death, he was first vice president of Texas Sheep and Goat Raisers Association and was on many other goat related committees. Marvin believed in the collective power of goat producers and worked tirelessly to develop better inter-association relationships between the various goat breed associations and registries. Marvin was also a pro-active supporter of cooperative efforts between all goat associations and the American sheep industry and its representative organizations. He also spent countless hours in Washington DC working towards positive legislative and regulatory issues affecting the U.S. goat industry. ***Marvin, we will miss you***.

2009 Goat Field Day Report

Our annual Goat Field Day was held on Saturday, April 25, 2009. This year's theme was Breeding for the Future in the Dairy and Meat Goat Industries. Ms. Lisa Shepard spoke on Performance Programs - Your "Genetic Toolbox", and Dr. Richard Browning, Jr., spoke on Breed Evaluation for Commercial Meat Goat Herds: A Research Update.

Ms. Lisa Shepard currently works for the American Dairy Goat Association under contract as the Performance Programs Coordinator. This involves efforts with the DHI Production Testing, Linear Appraisal, Sire Development, DNA Typing, Artificial Insemination, and Type programs. Prior to this, she was employed in the laboratory genetics field for 30 years which evolved into the areas of quality assurance and regulatory affairs. Ms. Shepard is also a representative to the California Dairy Goat Advisory committee, officer in the National Saanen Breeders Association, and on the Board of New Mexico's caprine DHIA. Lisa and her husband raise a small seedstock herd of Saanens in Northern New Mexico. They keep it small so that they can enjoy their other interests of traveling and hiking.

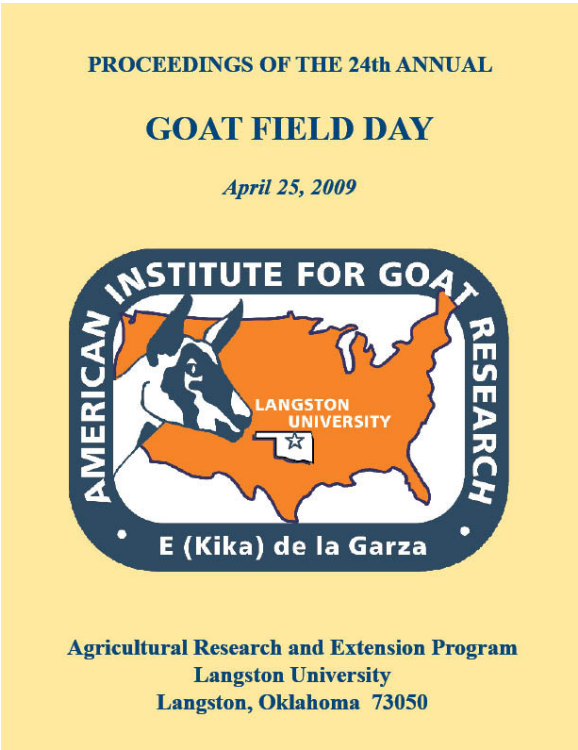
Dr. Richard Browning, Jr. is a faculty member in the Department of Agricultural Sciences at Tennessee State University (TSU) in Nashville. Dr. Browning earned a B.Sc. (1989) from Prairie View A & M University and M.Sc. (1992) and Ph.D. (1994) from Texas A & M University. Dr. Browning initiated meat goat breed evaluation research at TSU in 2001. The main focus of the research has been to study fitness and performance traits among Boer, Kiko, and Spanish does raising straightbred and F1 kids under commercial, pasture management conditions. The work has also included postweaning performance and carcass merit of the offspring.

This year's sub-theme was "Globalization/Internationalization of Goat Production". Collaborators on the International Collaboration in Goat Research and Production Web-Based Decision Support Aids project discussed goat production in their respective countries. Dr. Jun Luo of the Northwest Agriculture and Forestry University in Yangling, China is the collaborator for the Chinese version and presented on dairy goat production in China. Dr. Ignacio Tovar-Luna of the Universidad Autónoma Chapingo in Bermajillo, Mexico is the collaborator for the Spanish version and presented on dairy goat production in Mexico. Dr. Laith Alrousan of the Jordan University of Science and Technology in Irbid, Jordan is the collaborator for the Arabic version and presented on goat production in Jordan, with emphasis on meat goats. Mr. Juvenal Kanani of the National University of Rwanda in Butare, Rwanda is the collaborator for the French version and presented on meat goat production in Central Africa.

Attendance at the Goat Field Day remained high with slightly more than 300 participants attending the Goat Field Day.

Each attendee received a copy of the proceeding of the Goat Field Day, which includes the presentations by Ms. Shepard and Dr. Browning, as well as, those of Drs. Luo, Alrousan, and Tovar-Luna and Mr. Kanani. In addition all of the afternoon workshop materials are in the proceedings.

If you could not attend the 2009 Goat Field Day but would like a copy of the proceedings, please email Dr. Terry Gipson at tgipson@luresext.edu with your mailing address and he will send you a free copy. Please hurry because copies are limited. Or you can access the complete proceedings at the web site listed below.



http://www2.luresext.edu/goats/library/field.htm

Goat eXtension website launched.

Earlier this year, the goat eXtension (pronounced e-extension) website was launched. Langston University is a member of the Goat Community of Practice (CoP), which helped developed the goat website.

eXtension is an interactive learning environment delivering research-based information from the best goat experts located at the best land-grant universities across America.

eXtension is unlike any other search engine or information-based website. It's a space where university content providers can gather and produce new educational and information resources on wide-ranging topics. Because it's available to students, researchers, clinicians, professors, as well as the general public, at any time from any Internet connection, eXtension helps solve real-life problems in real time.

eXtension offers:

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http://www.extension.org/

Artificial Insemination Workshops

The Goat Extension Program will be conducting three artificial insemination workshops this fall. The schedule will be:

1. Langston University on Saturday, September 12, 2009.
2. Cherokee County Fairgrounds in Tahlequah, OK on Saturday, September 26, 2009.
3. Pushmataha County Fairgrounds in Antlers, OK on Saturday, October 10, 2009.

Workshops will present basic anatomy and physiology of goats, estrus detection and synchronization in goats, and semen handling. Participants will have the opportunity to practice with fresh reproductive tracts and with live animals.

Registration for each workshop is limited to 20 participants. Registration fee is $40 per person. Included in the cost of registration are handouts and lunch.

For information regarding the AI workshops, contact Dr. Terry Gipson at 405-466-6126 or tgipson@luresext.edu. Registration forms are available online at:

http://www2.luresext.edu/goats/extension/workshops_field_day.htm

Dr. Lionel Dawson presenting on estrous detection at the AI workshop in Tahlequah.

Mortality Composting Workshop

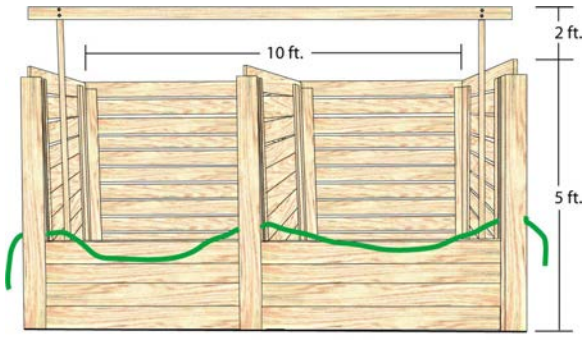
Langston University and Oklahoma State University recently received an Enhanced Model State Program Grant to conduct a mortality composting demonstration. Composting is an underutilized, sustainable agriculture practice that has enormous potential to benefit soils and the environment while at the same time reducing landfill use. Traditionally, composting has been associated with recycling of vegetative waste, i.e., backyard composting. However, carcass composting of farm animal mortality is commonly done on commercial poultry and swine farms and can be practiced by small-scale producers. Every small-scale smallstock producer encounters mortalities and the challenge of carcass disposal. Indiscriminate burial or non-burial of carcasses can compromise water quality and spread disease and incineration is too costly. The number of rendering operations has dramatically decreased in recent years. A viable alternative for these producers is carcass/mortality composting; however, proper techniques as differentiated from those used in backyard composting of vegetative waste are slightly different.

A one-day training session on mortality composting will occur on October 20, 2009 at the Langston University composting demonstration site. Half of the day will be used for a workshop and the other half for demonstration (see tentative program below).

Time	Topic
9:00-9:40	Registration/Refreshments
9:40-9:45	Opening
9:45-10:00	Where Does Composting Fit in Sustainable Agriculture?
10:00-11:20	The Basics of Mortality and Backyard Composting
11:20-12:30	Issues with Mortality, and Mortality Composting and Compost Use
12:30-1:30	Lunch
1:30-3:00	Langston University Experience with Small Stock Mortality Composting, and Composting and Compost Use
3:00-3:45	On-Farm Composting Demonstration
3:45-4:15	Open Discussion, Workshop Evaluation and Adjourn

A factsheet on mortality composting is being produced that will have step by step instructions on composting along with detailed plans for constructing composting bins, which can range from constructed salt-treated lumber bins to a wooden-pallet-t-post bin.

The mortality composting workshop is limited to 20 participants and there is a $10 registration fee. To register for the workshop, download the registration form at http://www2.luresext.edu/goats/extension/MortalityCompostReg.pdf or contact Dr. Terry Gipson at tgipson@luresext.edu or 405-466-6126.



Salt-treated lumber double-bin composting unit.

A simple wooden pallets and t-posts composting bin.

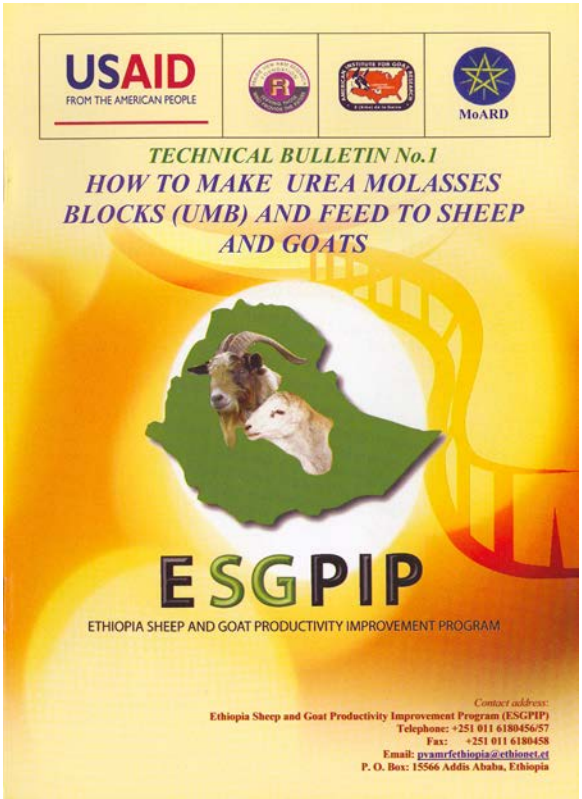
ESGPIP Mid-term Conference

The Ethiopia Sheep and Goat Productivity Improvement Program (ESGPIP) is an USAID-funded development project that works with six regions in Ethiopia with the aim of improving sheep and goat production in the country. Partners in the project include USAID/Ethiopia, the Ministry of Agriculture and Rural Development of Ethiopia, regional Bureaus of Agriculture, several Ethiopian universities, Prairie View A&M University of Texas, and Langston University.

On March 13 and 14, 2009, the ESGPIP held their mid-term conference at Hawassa University located in the southern Ethiopia town of Hawassa. The first day of the conference began with overviews and progress reports on the four programs of the ESGPIP, Genotype, Health, Production, and Technical Services and Training. This was followed by tours of a village where improved goats have been given to smallholder farmers and the nucleus Boer goat herd and Boer x local crossbred herds at Hawassa University. Three invited papers were presented in the morning of the second day. One paper outlined the successes and challenges of a previous Ethiopian sheep development program that used the Awassi breed to increase wool production. The remaining two papers reported on the successful efforts of Haramaya University in eastern Ethiopia in turning their research farms into self-sustaining units used both for research and production. These papers were followed by discussion on how to sustain and enhance the successes of the ESGPIP after the formal funding period ends. The full conference proceedings can be seen at www.ESGPIP.org under the Documents & Publications section.

The newly published Sheep and Goat Production Handbook for Ethiopia is available in its entirety in the Documents & Publications section as well as 19 technical bulletins that have been produced by ESGPIP. You can see a listing of the available technical bulletins below.

Technical Bulletins Produced by the ESGPIP



1. How to Make Urea Molasses Blocks (UMB) and Feed to Sheep and Goats
2. Urea-Ammonia Treatment of Low Quality Roughages
3. Control of Internal Parasites in Sheep and Goats
4. Selecting Breeding Stock for Sheep Production
5. Feeding Management of Sheep and Goats
6. How to Make and Conserve Hay
7. The Lambing/Kidding Process and Providing Assistance
8. Body Condition Scoring of Sheep and Goats
9. Is My Sheep or Goat Sick?
10. Giving Injections to Sheep and Goats
11. Short-term Intensive Fattening of Sheep and Goats
12. Bag Silage – Appropriate Method of Feed Conservation for the Smallholder Farmer
13. Strategies for Sheep and Goat Feeding and Management During Drought
14. Genetic Improvement of Sheep and Goats at Village Level
15. Successful Rearing of Lambs and Kids
16. Formulation of Rations for Sheep and Goats
17. Fodder Establishment, Management and Utilization Techniques for the Smallholder
18. Castration of Sheep and Goats
19. Common Sheep and Goat Skin Defects and Prevention Methods

Research Spotlight

CLA and milk yield.

The effect of conjugated linoleic acid (CLA) supplements containing trans-10, cis-12 CLA for reducing milk fat synthesis has been well described in dairy cows and sheep. The current study investigated the efficacy of a lipid-encapsulated trans-10, cis-12 CLA supplement (LE-CLA) on milk production and milk fatty acid profile in dairy goats. Thirty multiparous Alpine lactating goats in late lactation were used in a 3 x 3 Latin square design (14-d treatment periods separated by 14-d intervals). Does were fed a total mixed ration of Bermuda grass hay, dehydrated alfalfa pellets, and concentrate. Does were randomly allocated to 3 treatments: A) unsupplemented (control), B) supplemented with 30 g/d of LE-CLA (low dose; CLA-1), and C) supplemented with 60 g/d of LE-CLA (high dose; CLA-2). Milk yield, dry matter intake, and milk protein content and yield were unaffected by treatment. Compared with the control, milk fat yield was reduced 8% by the CLA-1 treatment and 21% by the CLA-2 treatment, with milk fat content reduced 5 and 18% by the CLA-1 and CLA-2 treatments, respectively. The reduction in milk fat yield was due to decreases in both de novo fatty acid synthesis and uptake of preformed fatty acids. Milk fat content of trans-10, cis-12 CLA was 0.03, 0.09, and 0.19 g/100 g of fatty acids for the control, CLA-1, and CLA-2 treatments, respectively. The transfer efficiency of trans-10, cis-12 CLA from the 2 levels of CLA supplement into milk fat was not different between treatments and averaged 1.85%. In conclusion, trans-10, cis-12 CLA reduced milk fat synthesis in lactating dairy goats in a manner similar to that observed for lactating dairy cows and dairy sheep. Dose-response comparisons, however, suggest that the degree of reduction in milk fat synthesis is less in dairy goats compared with dairy cows and dairy sheep.

A. L. Lock, M. Rovai, T. A. Gipson, M. J. de Veth and D. E. Bauman. 2008. A conjugated linoleic acid supplement containing trans-10, cis-12 conjugated linoleic acid reduces milk fat synthesis in lactating goats. Journal of Dairy Science 91:3291-3299.

CLA and cheese yield.

Dietary supplements of conjugated linoleic acid (CLA) containing trans-10, cis-12 CLA reduce milk fat synthesis in lactating goats. This study investigated effects of milk fat depression induced by dietary CLA supplements on the properties of semi-hard goat cheese. Thirty Alpine does were randomly assigned to 1 of 3 groups and fed diets with lipid-encapsulated CLA that provided trans-10, cis-12 CLA at 0 (control), 3 (CLA-1), and 6 g/d (CLA-2). The experiment was a 3 x 3 Latin square design. Periods were 2 wk in length, each separated by 2-wk periods without CLA supplements. Bulk milk was collected on d 3 and 13 of each of 3 periods for cheese manufacture. The largest decrease (23.2%) in milk fat content, induced by the high dosage (6 g/d per doe) of trans-10, cis-12 CLA supplementation at d 13 of treatment, resulted in decreases of cheese yield and moisture of 10.2 and 10.0%, respectively. Although CLA supplementation increased the hardness, springiness, and chewiness, and decreased the cohesiveness and adhesiveness of cheeses, no obvious defects were detected and no significant differences were found in sensory scores among cheeses. In conclusion, milk fat depression induced by a dietary CLA supplement containing trans-10, cis-12 CLA resulted in changes of fat-to-protein ratio in cheese milk and consequently affected properties of semi-hard goat cheese.

S. X. Chen, M. Rovai, A. L. Lock, D. E. Bauman, T. A. Gipson, F. Z. Ren, and S. S. Zeng. 2009. Effects of milk fat depression induced by a dietary supplement containing trans-10, cis-12 conjugated linoleic acid on properties of semi-hard goat cheese. Journal of Dairy Science 92:2543-2538.

Editor's note: According to the National Dairy Council, the potential human health benefits of conjugated linoleic acid include:*

1. *anticarcinogenic effects.*
2. *antiatherogenic effects.*
3. *body composition changes.*
4. *enhanced immune function.*
5. *increased bone formation.*
6. *anti-diabetic effects.*

Dairy products and other foods derived from ruminant animals (cattle, sheep, and goats) are the main dietary sources of conjugated linoleic acid.

**http://www.nationaldairycouncil.org/NationalDairyCouncil/Health/Digest/dcd71-4Page1.htm*

Noteworthy News

In April, Dr. **Art Goetsch** traveled to Addis Ababa, Ethiopia to assist the Ethiopia Sheep and Goat Productivity Improvement Program team draft the annual report and the upcoming year's scope of work.

In May, Dr. **Steve Hart** traveled to Creek County, OK to conduct a goat management workshop.

In May, Dr. **Terry Gipson** traveled to Lincoln University in Jefferson City, MO to work with the leadership of the Goat Industry Community of Practice of eXtension.

In May, Dr. **Steve Hart** traveled to McAlester, OK to participate in an organizational meat goat marketing meeting.

In May and June Drs. **Terry Gipson** and **Steve Hart** traveled to Dover, OK to conduct a series of goat management workshops for the Langston University Outreach Program.

In May, Dr. **Art Goetsch** traveled to Addis Ababa, Ethiopia to conduct applied research for the Ethiopia Sheep and Goat Productivity Improvement Program.

In June, Dr. **Steve Hart** traveled to Mitchell, NE to conduct a FAMACHA workshop for the Panhandle Meat Goat Expo.

In June, Dr. **Roger Merkel** traveled to Niavasha, Kenya to participate in the Global Livestock CRSP Final Conference.

In June Dr. **Steve Hart** traveled to Sallisaw, OK to conduct a controlling internal parasites workshop for the American Kiko Goat Association annual meeting and show.

In June, Dr. **Tilahun Sahlu** traveled to the Jordan University of Science and Technology in Irbid, Jordan to draft a Memorandum of Understanding and to review the International Collaboration in Goat Research and Production Web-Based Decision Support Aids project.

In June, Drs. **Terry Gipson** and **Tilahun Sahlu** traveled to the National University of Rwanda in Butare, Rwanda to draft a Memorandum of Understanding and to review the International Collaboration in Goat Research and Production Web-Based Decision Support Aids project.

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