

# Goat Newsletter

Cooperative Extension Program Langston University

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

Spring 2012

## From the Director's Desk



We have been working on a report of the activities of the Institute over the past six years that will be published in the near future. However, I want to give you a foretaste of the report. The title of our report is Expanding Boundaries and as I read the draft report and reflect back on the last six years, I must say that it is very appropriately titled.

The number of permanent Institute faculty is not large in comparison with animal science departments in many other Land-Grant universities. Hence, to achieve a strong research, extension, and international program, faculty of the Institute aggressively seek outside support to provide funds for equipment, supplies, and, importantly, support for graduate students (with programs).

grams in collaboration with the Animal Science Department of Oklahoma State University), postdoctoral research associates, and established scientists on sabbaticals, who are termed Visiting Scholars. Over the past six years, we have been very successful in procuring 13 research grants, 10 extension grants, and 11 international grants, which have totaled more than \$4.2 million. I cannot list all of the grants but just to give you a sampling, I will list a few titles and objectives of each type.

One recent research grant is entitled "Effects of Selected Nutritional Components on Immunity to Haemonchus in Goats." In grazing animals, internal parasites cause considerable economic losses world-wide, including the U.S. Among the major nematode parasites in goats and sheep in tropical and subtropical regions, the blood feeder Haemonchus contortus is the most pathogenic. The infection of H. contortus causes anemia and even death of host animals. At present, the use of anthelmintic drugs is an essential measure to control this parasite. However, the problem of widespread

anthelmintic resistance urges development of alternative approaches. One of the potential approaches is to enhance the immunity of host animals. Another recent research grant is entitled "Establishing a Pilot Tannery and Capability for Goat Leather Research at Langston University." Little is known of the quality characteristics of leather produced from U.S. goat skins. A pilot tannery was established at Langston University and research is being conducted to evaluate factors influencing goat skin quality, such as breed, diet, and age.

In the extension arena, a very recent grant is entitled "Extension Education Delivery Tools for Dairy Goat Producers: A Web-based Certification Program and E-book." Dairy goat production in the U.S. is a growing industry with the number of dairy goats having increased by 11.5% since 2008. There is no comprehensive source for information on dairy goat production. Langston University is partnering with other institutions in creating a webbased certification program for dairy goat producers, a printed handbook, and an e-book.



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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Another extension grant is entitled "Enhancing Capabilities of Socially Disadvantaged and Underserved Farmers via Low Literacy Materials in English and Spanish." A portion of meat goat producers are limited resource farmers due to location, educational level, culture, and language abilities. It is important to ensure that these individuals have access to appropriate educational and training materials that can raise their knowledge base and skill levels in farming and animal production. Langston University is partnering with other institutions in developing low-literacy training materials in English and Spanish for production of meat goats for socially disadvantaged, underserved, and limited-resource farmers and ranchers.

Two of our most-visible international grants have been the "Ethiopia Sheep and Goat **Productivity Improvement** Program" and the "Energy Expenditure for Activity in Free-Ranging Ruminants: A Nutritional Frontier." The Ethiopia Sheep and Goat Productivity Improvement Program was a USAID-funded project operating with a goal to sustainably increase sheep and goat productivity in Ethiopia to consequently enhance economic and food securities. This was achieved by addressing a large number of factors, including human and institutional capacity building, applied research and technology transfer and introduction of improved genotypes. In the Nutritional Frontier grant, Langston university partnered with several

research institutions in Israel to develop and evaluate a system to predict the grazing activity energy cost of ruminants by determining effects of stocking rate (influencing available forage mass and forage quality) and animal production state and season (affecting energy demand) on energy expenditure, metabolizable energy intake, energy expended in grazing activity, grazing and walking times, horizontal and vertical distances traveled. and diet quality with grazing females of two breeds of cattle and goats.

Output from these grants is not only measured in activities but also publication. I am very proud to say that over the past six years we have had more than 175 scientific publications, almost equally split between scientific articles in research journals and scientific abstracts presented at scientific meetings.

I hope that we will have the published report available for you at this year's Goat Field Day. This year our theme will be **State of the Goat Industry** and we will have industry leaders here to inform us about happening in the goat world. You can read more about the upcoming Goat Field day in this newsletter.

I hope to see you at the Goat Field Day in April.



# State of the Goat Industry: Goat Field Day 2012

Our annual Goat Field Day will be held on Saturday, April 28, 2012 at the Langston University Goat Farm with registration beginning at 8:00 a.m. This year's theme will be **State of the Goat Industry**.

**Adult Activity (morning session)**: This year our featured speakers will be Dr. Katherine Marshall and Mr. Tom Boyer.

Dr. Katherine Marshall, DVM, is an analytical epidemiologist with the USDA/APHIS Veterinary Services Centers for Epidemiology and Animal Health (CEAH) in Fort Collins, Colo. She has been the minor species commodity specialist with the National Animal Health Monitoring System (NAHMS) since 2000 and was responsible for the NAHMS Sheep 2001, Goat 2009 and Sheep 2011 studies. Prior to her work with CEAH, she completed a residency in preventive medicine and served two years as an epidemic intelligence service officer with the Centers for Disease Control in both Atlanta, Ga., and Honolulu, Hawaii. She also held positions as a field veterinary medical officer in the states of Washington and Hawaii. Marshall completed her master's degree at the London School of Hygiene and Tropical Medicine in England and her DVM at Colorado State University and worked in private practice in Hawaii after graduation.

Mr. Tom Boyer is a third generation rancher and sheep man who was born in Coalville, Utah. He and his wife Carrie, along with their daughter Maren, reside on the home ranch [Boyer Land and Livestock] on which he was born. Tom and his wife Carrie [also a third generation sheep producer] are the instigators of the Boer flock known across the nation as Chalk Creek Boers. They also are originating partners in NUSAA [acronym for Namibia, SA and Australia] with Dirk Louw [Namibia] and Geoff and Ceilia Burnett Smith [Australia] which resulted in the importation of 10 does, 10 bucks and 136 embryos in 2007. They also have a flock of show wether goats. In addition to the goats, they have a flock of registered Rambouillets that has produced several national champions and which also provides commercial rams in the western US.

Tom is currently President of the American Goat Federation, Vice President of the Utah Woolgrowers Association and sits on the Board of Trustees for the Appraisal Foundation. He served as the National President of the American Society of Farm Managers and Rural Appraisers in 2005-6 and has held numerous other leadership positions including President of the American Rambouillet Sheep Breeders Association, Vice President of the International Boer Goat Association, the co-founder [along with Carrie] and first President of the Mountain States Meat Goat Association.

Our ever-popular goat milk cheesemaking workshop has been scheduled on Friday April 27, 2012 (the day before our annual goat field day April 28). Mr. Neville McNaughton, President of Cheez-Sorce, L.L.C. in Davisville, MO will once again be our distinguished Invited Instructor for this year's workshop. Mr. McNaughton is an internationally renowned cheese entrepreneur, creator, designer, evaluator, marketer and writer in the world of cheese. He has hosted cheesemaking workshops, judged cheese contests and designed cheese plants in the U.S. as well as internationally. He will share with us his rich background, hands-on experience and masterful skills in small-scale and homestead cheese manufacture. He will demonstrate basic principles and practical skills of making authentic Chèvre, St. Maure and/or Valencay using our own Grade "A" goat milk. Milk quality, cheesemaking facilities and marketing strategies 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 \$50.00/person, which includes continental breakfast and lunch consisting of goat meat BBQ, sausage, jerky and hamburger, and goat milk ice cream and cheeses. Only the first 20 registrants will be admitted. For registration information, please contact Dr. Steve Zeng, Dairy Product Specialist, at (405)466-6145 or szeng@langston.edu.

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

The afternoon workshops include:

 Neglected Biosecurity and Strategic Use - learn about ways to keep your farm and your animals

- safe with Dr. Katherine Marshall (1:30p and 3:30p ONLY).
- Zoonotic Diseases of Importance for Producers - diseases that every producer should know about and tips to identify them with Dr. Katherine Marshall (2:30p ONLY).
- American Goat Federation and What It Can Do for the Goat Producer - learn more about the American Goat Federation, membership services, and the various avenues it promotes goats with Mr. Tom Boyer.
- *Internal Parasite Control* sustainable internal parasite control program with Dr. Steve Hart (1:30p ONLY).
- Basic Herd Health herd health program including vaccinations, injection sites, and approved drugs with Dr. Lionel Dawson (2:30 and 3:30 only).
- Cheesemaking Overview basics of cheesemaking with Mr. Neville McNaughton.
- Goat Farm Budgeting basics of budgeting and financial recordkeeping with Mr. Roger Sahs.
- Nutrition for Health and Production calculation of energy, protein and feed intake requirements with Dr. Steve Hart (2:30 and 3:30 only).
- Goat Reproduction basics of goat reproduction and techniques and equipment for artificial insemination in goats with Dr. Dave Sparks.
- *DHI Training* supervisor/tester training for dairy goat producers including scale certification with Ms. Eva Vasquez.
- *USDA Government Programs* overview of USDA Natural Resource Conservation Service's work with goats and its cost-sharing program with Mr. Dwight Guy.
- Oklahoma Department of Agriculture Food and Forestry Programs overview of ODAFF services for Oklahoma farmers and ranchers with Ms. Chris Kirby.
- Pack Goats basic goat training as a pack animal and equipment needs with Mr. Dwite Sharp.

- Mortality Composting basic composting techniques and equipment for disposing of goat mortalities with Dr. Roger Merkel.
- Fitting and Showing for Youth and Adults tips and pointers on fitting and show ring etiquette with Ms. Kay Garrett (this is a half-day afternoon workshop).

Fun Tent Youth Activity: Ms. Sheila Stevenson 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. Last year, some activities included Pony Rides; Kid Petting Area; Face Painting; Exercise; Photo Greeting Cards; a Movie Room and many others. This year's Youth Fun Tent activities will include those activities as well as some new activities including Cool Science (ages 9 & up); Geo Boards (9 & up); Leather Craft (9 & up); Environmental Exploration (9 & up), and Kite Aerial Photography. We will still have a ½-day GPS scavenger hunt on campus, , for older youth as well. Youth will learn the basics of GPS and will use a GPS unit to find "hidden" objects.

GPS Scavenger Hunt Youth Activity: Ms. Sheila Stevenson will also organize a ½-day GPS scavenger hunt on campus, weather permitting. Youth will learn the basics of GPS and will use a GPS unit to find "hidden" objects.

**Fitting and Showing Youth Activity**: In the afternoon, youth and interested adults will be able to participate in a half-day clipping, fitting, and showing workshop conducted by Ms. Kay Garrett of the Oklahoma Meat Goat Association. Participants will have the opportunity to have hands-on practice of clipping, fitting, and showing a goat.

Registration for the Goat Field Day is *FREE* but there is a \$10.00 per person charge for the optional barbecued goat lunch and goat milk ice cream for dessert. You can bring your own lunch and picnic on the grounds or you can pre-register for a lunch of barbecued goat.

For information regarding the 2012 Goat Field Day, contact Dr. Terry Gipson at 405-466-6126 or at tgipson@langston.edu.

You can register online for the 2012 Goat Field Day <a href="http://www2.luresext.edu/goats/library/fd2012.html">http://www2.luresext.edu/goats/library/fd2012.html</a>



### GOAT FIELD DAY

### Saturday, April 28, 2012 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/fd2012.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: \_\_\_\_\_ (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. Make checks payable to: **Lunch Pre-Registration (Deadline April 15, 2012) Research Sales** Adults (\$10.00 each) Please mail this form and check to: Children (12 and under) (\$5.00 each) Agric. Res. and Ext. Prog. **Langston University** TOTAL P.O. Box 730 Langston, OK 73050

ATTN: FIELD DAY

## 2012 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.					
		Please Select a Workshop for	Afternoon Workshop Choices:				
		this session and Enter the Workshop number here:	The afternoon workshops include:				
	0 p.m.		<ol> <li>Neglected Biosecurity and Strategic Use - learn about ways to keep your farm and your animals safe with Dr. Katherine Marshall (1:30p and 3:30p ONLY).</li> </ol>				
	1:30 - 2:20 p.m.		<ol> <li>Zoonotic Diseases of Importance for Producers - diseases that every producer should know about and tips to identify them with Dr. Katherine Marshall (2:30p ONLY).</li> </ol>				
	1,		3. American Goat Federation and What it can Do for the Goat Producer - learn more about the American Goat Federation, membership services, and the various avenues it promotes goats with Mr. Tom Boyer.				
		Please Select a Workshop for this session and Enter the Workshop number here:	4. Internal Parasite Control - sustainable internal parasite control program with Dr. Steve Hart (1:30p ONLY).				
70	1.		<ol> <li>Basic Herd Health - herd health program including vaccinations, injection sites, and approved drugs with Dr. Lionel Dawson (2:30 and 3:30 only).</li> </ol>				
Afternoon Sessions	2:30 - 3:20 p.m.		<ol> <li>Cheesemaking Overview - basics of cheesemaking with Mr. Neville McNaughton.</li> </ol>				
oon Se	30 - 3:		<ol> <li>Goat Farm Budgeting - basics of budgeting and financial recordkeeping with Mr. Roger Sahs.</li> </ol>				
ftern	2:		8. Nutrition for Health and Production - calculation of energy, protein and feed intake requirements with Dr. Steve Hart (2:30 and 3:30 only).				
<b>₩</b>			<ol> <li>Goat Reproduction - basics of goat reproduction and techniques and equipment for artificial insemination in goats with Dr. Dave Sparks.</li> </ol>				
		Please Select a Workshop for this session and Enter the Workshop number here:	10. DHI Training - supervisor/tester training for dairy goat producers including scale certification with Ms. Eva Vasquez.				
	1.		<ol> <li>USDA Government Programs - overview of USDA Natural Resource         Conservation Service's work with goats and its cost-sharing program with Mr. Dwight Guy.     </li> </ol>				
	3:30 - 4:20 p.m.		<ol> <li>Oklahoma Department of Agriculture Food and Forestry Programs - overview of ODAFF services for Oklahoma farmers and ranchers with Ms. Chris Kirby.</li> </ol>				
	30 - ,		<ol> <li>Pack Goats - basic goat training as a pack animal and equipment needs with Mr. Dwite Sharp.</li> </ol>				
	<i>a,</i>		<ol> <li>Mortality Composting - basic composting techniques and equipment for disposing of goat mortalities with Dr. Roger Merkel.</li> </ol>				
			15. Fitting and Showing for Youth and Adults - tips and pointers on fitting and show ring etiquette with Ms. Kay Garrett (this is a half-day, afternoon workshop).  **gston University, provides educational programs to individuals regardless of race, color, national origin,				

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4-H Youth Development 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 28, 2012**. This is the 11<sup>th</sup> 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.

**New Activities** include: Cool Science (ages 9 & up); Geo Boards (9 & up); Leather Craft (9 & up); Environmental Exploration (9 & up), and Kite Aerial Photography. We will still have a ½-day GPS scavenger hunt on campus, (weather permitting), for older youth as well. Youth will learn the basics of GPS and will use a GPS unit to find "hidden" objects.

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 Sheila Stevenson @ 405-466-6118 or Dr. Terry Gipson @ 405-466-6126.

Sincerely,

Sheila Stevenson Extension Specialist II

4-H Youth Development Cooperative Extension Service

Langston University

### **Youth Registration**

# Langston University School of Agriculture and Applied Sciences Goat Field Day 2012

### **Please Print**

Youth Name:						
	Last	MI		First		
Age as of April 28, 2	2012:	Grade as of Jan.	2012: Male o	or Female (circle one)		
Youth Address:						
	Street/POB/RR	Apt# City	State	Zip		
Home phone: (	)	Email Addre	ess:			
Parent or Guardian Name:			Relationship:			
Name and Phone to	contact of Pare	nt or Guardian durin	ng Field Day Activities:			
Name:			Cell Phone: ( )			
		Optional Info				
Member of 4-H: □ Y	es □ No		Member of FF	FA:   Yes   No		
4-H Club and County	y:					
FFA Chapter:						

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

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### Goat Field Day 4-H Fun Tent 2012 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 ( )	М	( ) F
(Month) (Da	y) (Year)				
Address:	<b>L</b>	C:L /T		Charles	
Str	eet	City/Town	1	State	Zip
Emergency & Event	Pickup contact:				
Name:		R	elationship to youth:		
Cell Phone ( ) _		<u>_</u>			
If you have any seri	ious health issues/p	roblems or food alle	ergies that we should be	aware of,	please list:
	WAIVER	, RELEASE AND I	NDEMNITY AGREEME	:NT	
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consequences of sig	_	uction in the activit	cy described here in abov	e and am	rully aware of the legal
Parent or Legal Guard	ian (Sign name here)	R	elationship to Minor		
Undersigned ( <b>Print n</b>	ame here)		ell Phone		
Address (if different fr	rom Minor)		-Mail address		
Date			heila Stevenson, Coordir coperative Extension Repre		

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Name:						
			or F		1 ()	
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Emergency Conta	ct Person:					
Phone with Area Session #s	/ /	/ /				
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# Research Spotlight

### Feeding Agricultural ByProducts in Ethiopia.

Khat (Catha edulis) is a lucrative cash crop in many African countries and other areas of the world. Leftover khat can be used as a feedstuff for ruminants, although seasonal production limits the extent of utilization. Practical methods of feed conservation to preserve nutritional value would be beneficial. Thus, a study was conducted to investigate effects of feeding different forms of leftover khat on growth performance of a tropically adapted indigenous goat genotype of eastern Ethiopia. Twenty-four (six per treatment) individually housed Hararghe Highland yearling male goats with an initial body weight of  $40 \pm 0.9$ lbs were used in an on-station experiment, and 32 similar yearlings with an initial body weight of 42  $\pm 0.9$  lbs were employed under on-farm conditions. The on-farm experiment occurred at two villages, with four farmer groups (two farmers per group co-managing animals) per village. Four animals in each farmer group were subjected to each of the four different treatments (none or control, fresh, dried, and ensiled). Experiments were 90 days in length, with inclusion of a subsequent 10-day period on-station to determine digestibility. Khat in fresh, dry, and silage forms was fed at 1.5% body weight (dry matter basis), whereas control animals did not receive khat. Animals on-station consumed grass hay ad libitum and those on-farm grazed/browsed surrounding areas. Average daily gain (ADG) was increased by khat regardless of form on-station (0.03, 0.11, 0.07, and 0.09 g), and on-farm ADG was less for control than for fresh and dry forms (0.07, 0.12, 0.10, and 0.09 g for control, fresh, dry, and silage, respectively). In conclusion, feeding leftover khat to Highland goats consuming low to moderate quality foragebased diets can increase growth performance. Khat can be preserved for use as a feedstuff throughout the year by drying or ensiling without marked effect on performance.

M. Wallie, Y. Mekasha, M. Urge, G. Abebe, A.L. Goetsch. 2012. Effects of form of leftover khat (Catha edulis) on feed intake, digestion, and growth performance of Hararghe Highland goats. Small Ruminant Research 102:1-6.

#### Feeding Broiler Litter to Goats.

Forty-eight Boer goat doelings  $(10.4 \pm 0.13 \text{ months})$ of age and  $60 \pm 2.2$  lbs in body weight) were used in a 9-week experiment to compare feeding value of deep-stacked (DS) and ensiled (EN) broiler litter. The broiler litter was processed for 82 days before use. Treatments were feeding 1% of body weight (dry matter basis) 3:1 corn-soybean meal mixture and moderate-to-high-quality grass hay free choice (Cont-F); 1% of body weight hay and the concentrate mixture free choice (Cont-C); 1% of body weight hay, 1.1% of body weight corn, and DS or EN free choice (DS-L and EN-L, respectively); and 1% of body weight hay and DS or EN free choice (DS-H and EN-H, respectively). Daily samples of DS and EN averaged 21.8 and 23.2% CP, and 34.0 and 37.2% NDF, respectively. Total intake was less for DS-H and EN-H versus DL-L and EN-L broiler-litter treatments, similar between DS-L and EN-L, and greater for EN-H than for DS-H (2.26 lbs/day for Cont-F, 2.64 lbs/ day Cont-C, 1.83 lbs/day for DS-L, 2.09 lbs/day for EN-L, 1.04 lbs/day for DS-H, and 1.39 lbs/ day for EN-H). There were similar differences in ADG (0.28 lbs/day for Cont-F, 0.52 lbs/day Cont-C, 0.13 lbs/day for DS-L, 0.17 lbs/day for EN-L, -0.19 lbs/day for DS-H, and -0.02 lbs/day for EN-H). In conclusion, feeding values of DS and EN for yearling meat goat doelings appear similar with moderate dietary levels, but with limited consumption of other feedstuffs, feeding value of EN may be greater.

A. L. Goetsch, G. D. Detweiler, B. Bah, T. Sahlu and J. Hayes. 2011. Feed intake and performance by yearling Boer goat doelings consuming deep-stacked or ensiled broiler litter. Professional Animal Scientist 27:553-560.

[Editor's Note: In 2003, the Food and Drug Administration (FDA) banned the feeding of poultry (broiler) litter to livestock due to a case of bovine spongiform encephalopathy (BSE; mad cow disease) in an adult Holstein cow in Washington State. At that time, a component of poultry diets was ruminant protein byproducts and spilled poultry feed in the litter presented a BSE risk factor. Therefore, FDA required the removal of all ruminant protein that presented a BSE disease risk from poultry diets. As a result in 2005, poultry litter was again approved as a feedstuff for livestock.]

# Goat Field Day 2012 State of the Goat Industry

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Goat Newsletter

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