

# KSU Sheep and Meat Goat News

Department of Animal Sciences and Industry



Fall Issue - 2011  
KSU Sheep and Meat Goat News

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### KSU Sheep and Meat Goat Center



## We Need Your Help!

Please send questions, comments or ideas for future newsletter topics to Brian Faris at [brfaris@ksu.edu](mailto:brfaris@ksu.edu) or 785-532-1255.



## Brian's Bleats...

Howdy, Kansas sheep and goat producers. I hope everyone is doing well. We have just concluded all of the state livestock shows. Kansas State Fair held the 1<sup>st</sup> Market Goat show in conjunction with the Grand Drive. Approximately 130 goats were exhibited in the inaugural event. Sheep numbers continued to be strong at the State Fair. There were 426 sheep and 185 goats exhibited at the Kansas Junior Livestock Show last weekend. Congratulations to all of the young people who exhibited these animals for the work and effort that was put forth to complete a quality livestock project.

Please find the K-State Sheep & Goat Conference schedule, registration form, and vendor form at the following link:

<http://www.asi.ksu.edu/p.aspx?tabid=246>. This is going to be an outstanding conference that will be well worth your time and money. Register immediately, if you haven't already, as the deadline is October 15<sup>th</sup>. Speakers include professional producers and university professionals such as Mr. Bob Buchholz, Mr. Steve Burton, Dr. Frank Craddock, Mr. Preston Faris, Mr. Noah Goddard, Dr. Terry Houser, Dr. Shelie Lafflin, Dr. Charlie Lee, Dr. Kreg Leymaster, Mrs. Melissa Urick, Dr. Justin Wagoner, and myself. You will have the opportunity to sample different lamb and chevon products as well as dairy goat products. Meals will be delicious along with the Call Hall Ice Cream that is wonderful regardless of the weather.

Construction continues on the new Kansas State University Sheep & Meat Goat Center. Both buildings are up. Exterior surfaces are virtually complete. Windows should be completed soon. A great deal of interior work is currently being performed. Everything is taking shape and we are excited about the opportunity to be in this facility by the beginning on 2012. Continue to follow us on Facebook "K-State Sheep & Meat Goat Unit". Mark your calendars for Saturday, March 3, 2012. This will be K-State Sheep Producer Day and the Ribbon Cutting ceremony for the new facility. The K-State Junior Sheep Day will be held on Saturday, March 31<sup>st</sup>.

In an effort to keep each producer informed of sheep and/or goat related topics, I am trying to expand my list of email contacts. If you have not responded and would like to be added to the K-State Sheep and/or Goat Producers list(s), please send an email to Lois Schreiner at [lschrein@ksu.edu](mailto:lschrein@ksu.edu) and indicate whether you would like to be added to the sheep, goat, or both lists. This list will not be shared with other individuals or groups.

Sincerely,

Brian Faris  
Extension Sheep and Meat Goat Specialist

# What are Aflatoxins?

## Why are they a problem? How do we deal with them?

Aflatoxins are naturally occurring [mycotoxins](#) that are produced by many species of [Aspergillus](#), a [fungus](#), most notably [Aspergillus flavus](#) and [Aspergillus parasiticus](#). Aflatoxins are toxic and among the most [carcinogenic](#) substances known.

While there is not a great deal of information available concerning sheep and goat diets containing aflatoxins, the materials written all agree that feed intake, feed:gain ratio, and average daily gain are all negatively impacted. Furthermore, aflatoxicosis has been shown to decrease fertility, cause abortion, and lower birth weights in sheep.

Aflatoxins can be fed to livestock at rates higher than the 20 ppb level usually targeted for trading grains. Extreme caution should be utilized and appropriate testing should be conducted to ensure you know exactly what levels of aflatoxins are in your animals' diet. Many sources make the statement that sheep and goats tend to tolerate higher levels of aflatoxins. However, like cattle, we still see the reduced performance and reproductive complications listed above when animals are fed increased levels of aflatoxins over extended periods of time. Anyone feeding distiller's grains should be aware that aflatoxins are concentrated like many other nutrients in this useful co-product.

The following are some guidelines to use regarding combating aflatoxins in corn.

- 1) Harvest contaminated fields as quickly as possible
  - a. Once it appears, toxin levels appear to continue to increase in fields due to mold growth
- 2) Clean grain if possible before storage
  - a. Removing damaged kernels lowers toxin levels (approximately 50%)
- 3) Store at less than 15% moisture (13% or less is ideal) to limit further fungal growth and toxin production
- 4) Flush to clean system after handling contaminated corn (put flush in contaminated bin)
- 5) Consider propionic acid addition to corn going into storage if fungus present and a concern (0.5% addition of propionic acid limits further fungal growth )
- 6) Monitor bin temperatures (good grain management is important as hot spots will have increased fungal growth and toxin production)
- 7) Segregate corn into high and low level bins if possible
  - a. Less than 20 ppb (young animals, pregnant and/or lactating females)
  - b. > 20 ppb feed to older, weaned lambs and mature animals in maintenance state
- 8) Use low test weight corn quickly as it does not store well
- 9) FDA regulations on aflatoxin
  - a. Corn must contain < 20 ppb for human consumption, dairy cows, or young animals
  - b. Corn must contain < 100 ppb for breeding animals or mature poultry
  - c. Corn must contain < 200 ppb to be fed to finishing swine that are greater than 100 lb
  - d. Corn must contain < 300 ppb to be fed to finishing beef cattle
  - e. Corn with > 200 ppb must be blended to achieve less than 200 ppb before feeding and blended corn cannot be moved off-site (*only legal to do for your own use*)
- 10) Feeding strategies with high aflatoxin corn:
  - a. Use binder (bentonite or aluminosilicate at 10 lb/ton) for corn with aflatoxin
    - i. Will bind up to 700 ppb of aflatoxin (remember FDA limits from above though)
  - b. Use clean corn (< 20 ppb) for young animals, pregnant and/or lactating females
- 11) Monitor DDGS (aflatoxin may be 4x higher than the corn used to make it)

In summary, pregnant/nursing females and young animals should not be fed diets with aflatoxin concentrations greater than 20 ppb. Mature animals should be able to tolerate up to 100 ppb without affecting general performance. While some publications have indicated older lambs could be fed up to 50 ppb and mature animals up to 400 ppb, I would reiterate that feeding at these higher levels probably comes with some sort of negative impact on performance.

# How do I Feed My Sheep/Goats through the Fall?

This is a difficult question to answer because Kansas is experiencing drought in the south and southwestern parts of the state while the north and northeastern portions of the state seem to be in good shape regarding moisture.

The drought in Texas and Oklahoma has created a significant shortage of hay. If you do not have hay at this point, your only economic options may be to find low quality hay. If you have hay or are planning on purchasing hay, how do you utilize it efficiently? Sheep and goats can often meet their nutritional requirements through a medium to low quality forage alone. Energy levels, often predicted by total digestible nutrient (TDN) values, are the most limiting in sheep and goat diets.

Consider the fact that most of you have just completed breeding season. For the next three months or roughly 100 days, your pregnant females' requirements are at maintenance levels. Below is a chart that lists the nutritional requirements (on a dry matter basis) for crude protein (CP) and total digestible nutrients (TDN) for a small ruminant in early gestation. Notice goats have similar requirements but weigh less. A goat has a faster metabolic rate which requires a higher percentage dry matter intake based on body weight to meet their greater nutrient demand.

Nutritional Requirement of Ewes in Early (First 100 days) Gestation					
Body Weight (lbs)	Dry Matter Intake (lbs/d)	CP (lbs/d)	CP (% of Intake)	TDN (lb/d)	TDN (% of Intake)
132	2.9	0.27	9.3	1.6	55.2
154	3.1	0.29	9.4	1.7	54.8
176	3.3	0.31	9.4	1.8	54.5
198	3.5	0.33	9.4	1.9	54.3

Nutrient Requirements of Sheep, 6<sup>th</sup> Revised Edition, 1985.

Nutritional Requirement of Ewes in Early (First 100 days) Gestation					
Body Weight (lbs)	Dry Matter Intake (lbs/d)	CP (lbs/d)	CP (% of Intake)	TDN (lb/d)	TDN (% of Intake)
110	3.0	0.28	9.3	1.6	53.3
132	3.4	0.32	9.4	1.8	52.9
154	3.8	0.35	9.2	2.0	52.6

Nutrient Requirements of Small Ruminants, 2007.

As you calculate what your animals are eating to determine if their requirements are being met, you may find these equations helpful. First of all, the way we typically think of feeding animals is on a pound/head basis but this refers to the weight of the feed on an as-fed (AF) or moisture-containing basis. Because moisture varies from feedstuff to feedstuff, we must base our calculations on a dry-basis referred to as dry matter (DM). In order to determine level of nutrient intake, you must have your hay analyzed. You can send your hay/feed sample to Servi-Tech Laboratories in Dodge City, KS. <http://servitechlabs.com/Home/tabid/36/Default.aspx>.

Use the values provided in your analysis to calculate lbs of dry matter fed to your animals.

- $\text{Pounds of DM fed to animals} = \text{lbs of feed (AF)} \times (\% \text{ DM of your feed} / 100)$

In order to calculate nutrient levels use the following equations:

- $\text{Pounds of CP} = \text{Pounds of DM fed to animals} \times (\% \text{ CP in your feed} / 100)$
- $\text{Pounds of TDN} = \text{Pounds of DM fed to animals} \times (\% \text{ CP in your feed} / 100)$

## How do I Feed My Sheep/Goats through the Fall? (cont)

**Average values for feedstuffs (Dry Matter basis)**

Forage Type	Dry Matter (%)	CP (%)	Amt needed to meet req. for 154 lb ewe (lbs. AF)	TDN (%)	Amt needed to meet req. for 154 lb ewe (lbs. AF)
Alfalfa Hay Midbloom	89	17	1.91	58	3.30
Alfalfa Hay Mature	88	13	2.53	50	3.86
Bromegrass Hay	89	10	3.26	55	3.47
Corn Stalks	80	5	7.25	59	3.60
Prairie Hay	91	7	4.55	50	3.74
Soybean Hay	89	15	2.17	52	3.67
Wheat Straw	91	3	10.62	42	4.44
Whole Corn	88	9	3.66	88	2.19

In order to calculate amount of feed needed to meet requirements, use the following equations:

- $(\text{Pounds of Required CP} / (\% \text{ CP in your feed} / 100)) * (\% \text{ DM of your feed} / 100) = \text{Actual pounds of feed for animals}$
- $(\text{Pounds of Required TDN} / (\% \text{ TDN in your feed} / 100)) * (\% \text{ DM of your feed} / 100) = \text{Actual pounds of feed for animals}$

As you can see, it is generally easier to meet the crude protein requirements for sheep/goats than TDN or energy requirements. If you have prairie hay, use this as the base of your ration because it is the cheapest feed source. Add a little alfalfa to bump your protein and corn to lift your TDN value at a fairly low expense.

**Average values for feedstuffs (Dry Matter basis)**

Forage Type	Dry Matter (%)	CP (%)	TDN (%)	Amount to feed (lbs. AF)	Total CP	Total TDN
Prairie Hay	91	7	50	3.0	.19	1.36
Alfalfa Hay Mature	88	13	50	0.5	.05	0.22
Whole Corn	88	9	88	0.5	.04	0.38
Total				4.0	.28	1.96

Recognize this is only one of several ways to make your program work. If you have any other questions, feel free to contact me.

KSU Sheep and Goat Conference  
November 4-6, 2011  
Weber Hall, Kansas State University  
Manhattan, Kansas

**Registration form attached to the end of the newsletter.  
For more information, contact Brian Faris (785-532-1255; brfaris@ksu.edu).**



# UPCOMING EVENTS.....

## October 22, 2011: Kansas Sheep Association Fall Tour

The Kansas Sheep Association will be hosting a Fall tour on Saturday, October 22, 2011. This tour will include four stops demonstrating purebred, hairsheep, rotational grazing, and specific breed management strategies. For more information contact Matt Clark, Kingman County Extension Agent, at 620-532-5131 or [mkc@ksu.edu](mailto:mkc@ksu.edu). You may also follow the Kansas Sheep Association's website at <http://kansassheep.com/>.

## November 4-6, 2011: Kansas State Sheep & Goat Conference

Kansas State University will host a Sheep & Goat Conference on November 4-6, 2011 on the KSU campus. This conference is open to everyone and will begin Friday, November 4, at 1:00 pm and conclude at 12:00 noon on Sunday, November 6. This program is designed as an intensive learning opportunity for commercial and purebred sheep and goat producers to attend every two to three years. Subject areas will include alternative feed stuffs, use of small ruminants to control sercica lespedeza, live animal and carcass evaluation, health, predation, marketing, parasitism, crossbreeding/composite genetics, and more. Breakout sessions will also be available related to specific species, types, and/or breeds. Mark the date on your calendar and plan to attend this event. A conference agenda and registration information will be available soon. If you have any questions or would like to participate as an attendee or sponsor, please contact Dr. Brian Faris, K-State Extension Sheep & Meat Goat Specialist, at 785-532-1255 or [brfaris@ksu.edu](mailto:brfaris@ksu.edu).

## March 3, 2012: Kansas State Sheep Producer Day

Kansas State University will host a Sheep Producer Day on March 3, 2012. Location will be confirmed later, but we hope to meet in our new K-State Sheep & Meat Goat Center. This annual program will include topics related to sheep production, a sheep judging contest and fun activities. If you have any questions or would like to participate as an attendee or sponsor, please contact Dr. Brian Faris, K-State Extension Sheep & Meat Goat Specialist, at 785-532-1255 or [brfaris@ksu.edu](mailto:brfaris@ksu.edu).

## March 31, 2012: Kansas State Junior Sheep Producer Day

Kansas State University will host a Junior Sheep Producer Day on March 24, 2012. The program will be held in Weber Hall on the K-State campus. A tour of the new K-State Sheep & Meat Goat Center will be available at the end of the event. This biennial event consists of topics related to sheep/lamb production, market lamb projects, and fun activities for our young sheep producers. If you have any questions or would like to participate as an attendee or sponsor, please contact Dr. Brian Faris, K-State Extension Sheep & Meat Goat Specialist, at 785-532-1255 or [brfaris@ksu.edu](mailto:brfaris@ksu.edu).



### **Kansas State University Agricultural Experiment Station and Cooperative Extension Service**

K-State Research and Extension is an equal opportunity provider and employer. Issued in furtherance of Cooperative Extension Work, Acts of May 8 and June 30, 1914, as amended. Kansas State University, County Extension Councils, Extension Districts, and United States Department of Agriculture Cooperating, Gary Pierzynski, Interim Director

### A. Registration Information

\_\_\_\_\_  
Name (First) (Last)

\_\_\_\_\_  
Name As It Should Appear On Your Badge

\_\_\_\_\_  
Company or Organization

\_\_\_\_\_  
Mailing Address

\_\_\_\_\_  
City State Zip

\_\_\_\_\_  
Phone # E-Mail Address (Required)

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### B. Additional Spouse/Family Member Information

1. Name \_\_\_\_\_  
(First) (Last)

\_\_\_\_\_  
(Name As It Should Appear on Your Badge)

2. Name \_\_\_\_\_  
(First) (Last)

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(Name As It Should Appear on Your Badge)

3. Name \_\_\_\_\_  
(First) (Last)

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(Name As It Should Appear on Your Badge)

4. Name \_\_\_\_\_  
(First) (Last)

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(Name As It Should Appear on Your Badge)

5. Name \_\_\_\_\_  
(First) (Last)

\_\_\_\_\_  
(Name As It Should Appear on Your Badge)

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### C. \*Break-out Session Selection (Tentative)

Saturday, November 5<sup>th</sup>

Please Select One Topic Per Time Slot

1:00-2:00

Predator Management & Guardian Dogs \_\_\_\_\_  
 Common Diseases and Abortion Storm \_\_\_\_\_  
 Managing Parasites \_\_\_\_\_  
 Natural Fiber \_\_\_\_\_

3:30-4:30

Use of Distiller's Grains \_\_\_\_\_  
 Fencing & Facilities \_\_\_\_\_  
 Reproductive Management \_\_\_\_\_  
 More than Meat \_\_\_\_\_

2:15-3:15

Predator Management & Guardian Dogs \_\_\_\_\_  
 Common Diseases and Abortion Storm \_\_\_\_\_  
 Managing Parasites \_\_\_\_\_  
 Use of Distiller's Grains \_\_\_\_\_

4:45-5:45

Fencing and Facilities \_\_\_\_\_  
 Reproductive Management \_\_\_\_\_  
 Disbudding, Hoof trimming \_\_\_\_\_  
 More than Meat \_\_\_\_\_

PLEASE ONLY select 1 topic per time frame

\*Session selection is tentative. Attendees are encouraged to attend the Pre-selected session.

### D. Payment

Conference ~ Friday, November 4<sup>th</sup> – Sunday, November 6<sup>th</sup>

		Amount	Total
Primary Registrant (Attendee)	Early	\$100.00	_____
	After October 15 <sup>th</sup> Late	\$150.00	_____
Additional Attendees (Family)			
	# of Additional Attendees		
Early	_____ X	\$75.00	_____
Late	_____ X	\$100.00	_____
FRIDAY ONLY REGISTRATION (Attendee)			
	Early	\$60.00	_____
	After October 15 <sup>th</sup> Late	\$70.00	_____
FRIDAY ONLY Additional Attendees (Family)			
Early	_____ X	\$40.00	_____
Late	_____ X	\$50.00	_____
# of Additional Proceedings	_____ X	\$25.00	_____

\*Registration for the conference includes on electronic copy of the Conference proceedings and meals during conference sessions

Please pay this amount

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

### E. Payment Method

Payment methods for the symposium consist of check or money order ONLY made payable to:

**Livestock and Meat Industry Council.**

Please make your check and/or money order to:  
 Livestock and Meat Industry Council  
 Department of Animal Sciences and Industry  
 Kansas State University  
 Attn: Brian Faris  
 228 Weber Hall  
 Manhattan, KS 66506

E-mail confirmation will be sent to the primary registrant to confirm receipt of payment. Receipts for the conference will be available during conference check-in.

For questions or concerns, please contact Brian Faris at the Kansas State University Dept. of Animal Sciences and Industry  
 Phone: (785) 532-1255  
 Fax: (785) 532-7059  
 E-mail: [brfaris@ksu.edu](mailto:brfaris@ksu.edu)

#### TO COMPLETE REGISTRATION

Please submit this registration form by sending your completed registration form via mail; fax (785-532-7059) or e-mail ([lschrein@ksu.edu](mailto:lschrein@ksu.edu)). A confirmation e-mail will be sent within 1-3 business days upon receipt of registration information.

A block of rooms are available at several hotels in Manhattan. Contact them directly for reservations and ask for the "KSU Sheep and Meat Goat Conference" rate.

Holiday Inn at the Campus	Clarion
785-539-7531	785-539-5311