Volume 24 Summer2016

Hoof Print

The Small Ruminant Magazine

GENETICALLY SPEAKING

Which Is the Best Ram in the Sale?

SELECTING A REPLACEMENT

Ewe and Doe –Phenotypes

KIO TRI-STATE SMALL RUMINANT SUMMIT

2016 KY SHEEP & GOAT FEMALE REPLACEMENT SALE

Small Ruminant Profit School

Successful goat and sheep operations come down to good management and production of consistent, healthy animals.

Why is SRPS for You?

- Designed for Beginner Farmers in goats and sheep.
- SRPS will help you learn the basics and how to properly implement sound management practices into your operation.
- Producers who have been in the business for three years or less will have a personal mentor to help answer questions and give advice.
- SRPS participants will have a two year, FREE membership to the Goat Herd Improvement Program (GHIP). *This program is designed for goats and sheep.*

SRPS is five classes over 6 months

Dates: September 10, 2016
October 1, 2016 (Tri-State Small Ruminant Summit)
December 10, 2016
January 7, 2017
March 11, 2017

Location: Following Extension Offices

Lyon Co.	Grayson Co.	Barren Co.
Clark Co.	Boyle Co.	Trimble Co.

Cost: **KGPA and KSWPA Member Fee $100**
Non-member Fee $130 (will get you a one year membership to the association of your choice.)

Participants can register either at www.kysheepandgoat.org or by calling 502-682-7780.

Class topics will include:

- Nutrition and Pasture Management
- Breeding and Genetics
- Market Trends and Niche Markets
- Fencing, Shelters, and Equipment
- Parasite Management

KADF KENTUCKY AGRICULTURAL DEVELOPMENT FUND

Collaboration between Kentucky Sheep and Goat Development Office, Kentucky Agriculture Development Fund, University of Kentucky, Kentucky State University, and the American Sheep Industry Association.

Kentucky SHEEP & GOAT DEVELOPMENT OFFICE

Volume 24 Summer 2016

Hoof **Print** Magazine
Published Quarterly
$24 per year
Free with paid membership to one or more of our partner organizations.

***Hoof*Print**: *The Small Ruminant Magazine* is a periodical to promote better animal health, husbandry, and knowledge among sheep and goat producers. ***Hoof*Print** is the joint effort of members of the sheep and goat industries and serves as a united voice for all small ruminant producers.

EDITOR / MARKETING DIRECTOR
Kelley Yates

EDITORIAL BOARD
Tess Caudill, Maggie May, Sonia McElroy, Scott VanSickle, Debra K. Aaron, Donald G. Ely, Mark Powell, Denise Martin, Dr. Beth Johnson, DVM, Kathy Meyer, Jim Mansfield, Dr. Tom Huber, Brent Ballinger

DESIGN & LAYOUT
Maggie May Rogers

OFFICE SUPPORT
Sharon Koontz

PHOTOGRAPHY
Dr. Beth Johnson, Dr. Debra Aaron, Jessica Johnson, Philippe Roca, Shon Wiley
Cover Photo
© iStock.com/agostinosangel

ADVERTISING
Kelley Yates
kyates@kysheepandgoat.org
(502) 682-7780

Kentucky SHEEP & GOAT DEVELOPMENT OFFICE

Executive, Editorial & Advertising Sales directed by Kentucky Sheep & Goat Development Office: P.O. Box 4709 Frankfort, KY 40604-4709

KADF
KENTUCKY AGRICULTURAL DEVELOPMENT FUND

Hoof **Print**
The Small Ruminant Magazine

In This Issue

Special Features

In Every Issue

PRESIDENT'S LETTER

Greetings from East Tennessee! I hope each of you had a very successful lambing season and now have green pasture fields covered with this year's lamb crop. As we move from spring to summer, I know it gets busy on the farm, but I encourage you to get out and support our Tennessee 4-H and FFA youth as the summer show season gets started. The Tennessee Junior Sheep Expo will be held July 18 – 20 at the Wilson County Fairgrounds in Lebanon, Tn. Hundreds of Tennessee young people will have their very best breeding, market and commercial sheep on display. These students will also put their showmanship and skillathon talents to the test as well. The Tennessee Sheep Producers Association is once again helping to provide awards for the young people showing sheep at this year's expo. I would encourage you to lend a helping hand by making a small donation to help provide plaques and other awards. You can do this by sending a check to Tennessee Sheep Producers Association, 4233 Poplar Hill Rd., Watertown, TN 37184.

If you have not yet found the updated Tennessee Sheep Producers Association Web Page, I hope you will take a few minutes to check it out. It has links to educational events, news articles, youth activities and much more. It also has a link for you to join the Sheep Producers Association and classified ads where you can find or list sheep, or sheep products you may have to sell.

In case you have not already heard, there have been a few changes to this year's Agriculture Enhancement Grant. The biggest change is when you can make application. During 2016 you will be able to apply for funds being distributed in 2017 starting October 1st through November 1st. Applications will be distributed from the Tennessee Department of Agriculture on September 1st. Along with the change in application date, there are some new options in which to apply. GPS for pasture sprayers and ultrasound equipment, as well as no-till pasture drills, will be some of the new things you can get cost share to help purchase. You can find out more details about this program at The Tennessee Department of Agriculture Web Page (www.tn.gov/taep).

If you are considering applying for the Agriculture Enhancement Program for your farm, remember you can increase your reimbursement rate from 35 percent to 50 percent if you participate in a Master Goat Producer Class. I know there are some of these classes being offered this summer and fall. The programming covers all small ruminants and has some very helpful information. You can contact your local Extension Office for help in finding a training close to you.

I hope to see lots of enthusiastic Tennessee sheep producers at this year's shows and educational events and as always if I can be of assistance to you, don't hesitate to give me a call.

Alan Bruhin,
TSPA President

TSPA - UPCOMING EVENTS

Date • Details • Location • Website

July 18-20 • TN Junior Sheep Expo, Ward Agriculture Center, Lebanon, TN http://animalscience.ag.utk.edu/Sheep/4-HSheepProject.html

July 22-23 • Southern States Dorper Show & Sale Tennessee Tech University - Hyder Burks Pavillion Cookeville, TN http://www.dorper.org/events.html

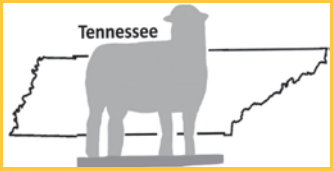
August 2-3 • South Central Katahdin Aassoc. Meeting and Field Day Caney Creek Farms Chapel Hill caneycreekfm@united.net

August 4-6 • 12th Annual Katahdin Hair Sheep International Expo Tennessee Tech University - Hyder Burks Pavillion - Cookeville, TN www.katahdins.org

Oct 1- Nov. 1 TDA Ag Enhancment Application Period www.tn.gov.taep

October 22 Fiber in the Boro Lane Agricultural Park Murfreesboro, TN http://www.fiberintheboro.com/when-and-where/

January 13-14 TSPA Annual Meeting Embassy Suites Hotel, Murfreesboro, TN www.tennesseesheep.org



If you are interested in a committee please select below:

_____ Wool _____ Youth
_____ Jr. Expo _____ Sale
_____ Production Education
_____ Membership/Revenue
_____ Publicity
_____ Annual Meeting

TSPA Membership Application

JOIN TODAY!

Annual Dues: Adult: $30.00 Junior $10.00

Name: _____

Address: _____City:_____State: ___Zip: _____

Phone: _____E-Mail: _____

Breed(s) of Sheep: _____

Please enclose a check for amount made out to TSPA and mail to:
Tennessee Sheep Producer's Association
4233 Poplar Hill Road, Watertown, TN 37184

Tennessee 4-H Sheep Conference

Approximately 65 youth, parents and volunteers participated in State 4-H Sheep Conference, May 27-28, at Tennessee Tech University. Tennessee Farmer's Cooperative, FACCT and Tennessee Sheep Producers Association partnered with UT Extension to sponsor the event.

Activities began Friday night with a session for 8th-12th grade 4-H'ers to learn about record keeping. Participants had the opportunity to use two record keeping apps for their sheep project. The participants used iPads or their personal mobile device to use the 4-H Livestock Record and HerdBoss apps to keep flock, health, financial and activity records.

Saturday's program included sessions on showmanship, fitting, feeding and management of show lambs, Keith Odom, club lamb producer, and Ben Porter, former Georgia 4-Her, led the showmanship and slick shear fitting trainings. Magen Shedden, Oxford breeder, assisted 4-Hers in grooming sheep to be shown in fleece.

Lucy Allen teaches 4-H members how to identify different types of feed

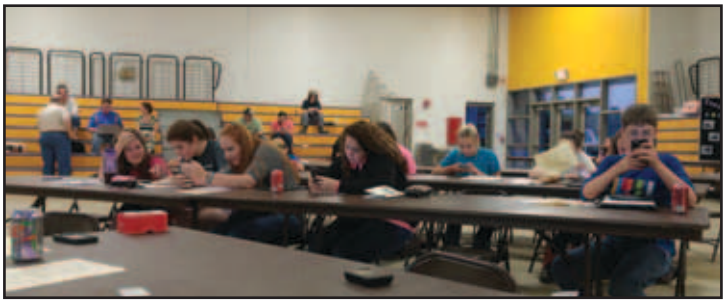
Denny Sells, nutritionist for Tennessee Farmer's Cooperative, gave tips on sheep nutrition and feeding. Each participant made a rope halter to take home. Following lunch, teen leaders were responsible for younger members, and each team worked on learning centers associated with the skillathon.

The 7th-12th grade members participated in a lamb quiz bowl. The winning team from Clay County consisted of: Cora Key, Garrett Franklin and Caroline Patterson

The top educational exhibits were from:
John Buyrl Neeley (Rutherford Co.)
Anna Powell (Wilson Co.)
Luci Allen (Macon Co.)
Grace Powell (Wilson Co.)

Quiz bowl and educational exhibit winners all received prizes from TN Farmer's Cooperative.

Claudia Meeks Baney
4-H Animal Science Specialist
University of Tennessee



4-H members attend a session on how to keep records of their 4-H Lamb Project using an iPad or other mobile device.

Magen Shedden teaches a class on grooming breeding ewes for show.

KSWPA - UPCOMING EVENTS

JULY

7th	**Jessamine Co. Goat and Sheep Assoc.-** Jessamine Co. Fairgrounds; 7:00pm
19th	**South Central Goat & Sheep Producers Assoc.-** Barren Co. Extension Office, 6:30pm
22nd--23rd	**KJLE**

AUGUST

4th	**Jessamine Co. Goat and Sheep Association;** Jessamine Co. Fairgrounds; 7:00pm
16th	**South Central Goat & Sheep Producers Assoc.** Barren County Extension Office, 6:30pm
18th-28th	**KY State Fair - Louisville, KY** Dairy goats 18-21 Youth goats- 19-21 Open goat show- 22-23 Youth sheep show- 23-24 Open sheep show- 24-27

SEPTEMBER

1st	**Jessamine Co. Goat and Sheep Association;** Jessamine Co. Fairgrounds; 7:00pm
13th	**Central KY Goat and Sheep Association;** Marion Co. Extension Office; 7pm
15th	**Fort Harrod Goat and Sheep Assoc. Meeting;** Mercer Co. Extension Office; 6:30 pm potluck and 7 pm meeting
15th -25th	**Gwinnett County Fair** - Open sheep show -21st
20th	**South Central Goat & Sheep Producers Assoc.** Barren Co. Extension Office, 6:30pm

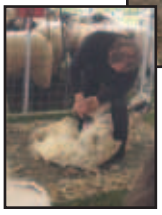
OCTOBER

1st	**KIO Tristate Small Ruminant Summit,** Burlington, KY
6th	**Jessamine Co. Goat and Sheep Association; Jessamine County Fairgrounds; 7:00pm**
6-9th	**KY Female Replacement Sale** www.32auctions.com/KSGDOreplacementsale
11th	**EweProfit School II,** C. Oran Little Research Farm Midway, KY
18th	**South Central Goat & Sheep Producers Assoc.** Barren Co. Extension Office, 6:30pm
20th	**Fort Harrod Goat and Sheep Assoc. Meeting;** Mercer Co. Extension Office; 6:30 pm potluck & 7 pm meeting

2016 Kentucky Sheep and Fiber Festival

by Jaclyn Krymowski, KSFF Intern 2016

The 2016 Kentucky Sheep and Fiber Festival, held May 21-22, was a huge success in both the rain and shine! The event turned out 2,000 visitors, both locally and those from across the country. For people of all walks of the fiber community, there was plenty to do and see. Beautiful fiber and handmade creations ranging from to homemade raw fleeces and vendors, many hand knit sweaters and socks, pottery, to colorfully hand dyed yarns were showcased by over 70 of which were local businesses and producers in the Lexington area. Educational workshops and live demonstrations on sheep shearing and rearing, spinning, weaving, and dying were offered to promote and advance the fiber industry. Competitions for producers and crafters were also held for raw wool and alpaca fleece, as well as several for hand spun skeins. Festival goers even had an opportunity to visit with a variety of live fiber animals including sheep, angora goats and rabbits, llamas, and alpacas. Many of them had the chance to participate in the much loved Hug-a-Sheep event to benefit the local FFA and 4-H programs. The exciting weekend left everyone, visitors and vendors alike inspired and excited for more! The 2017 Kentucky Sheep and Fiber Festival will be held again May 20-21 at the Masterson Station Park, offering more unique opportunities and experiences to educate, entertain, and delight. Hope to see you there!



Kentucky Sheep & Wool Producers Association

JOIN TODAY!

Visit www.kysheepandgoat.org

KSWPA Membership Benefits

- Quarterly issues of HoofPrint Magazine plus the newly designed 2016 Sheep and Goat Management Calendar
- A unified voice for the sheep industry and representation on important state and national committees
- Assistance with new marketing opportunities such as The Kentucky Sheep and Fiber Festival and HoofTrader.com
- Receive a membership to the American Sheep Industry, our national lobbying, marketing and promotional support system.
- Support of various educational and youth activities

Name: _____ **Phone:** _____ **E-Mail:** _____

Address: _____ **City :** _____ **State:** _____ **Zip:** _____

Please enclose a check for $30.00 made out to KSWPA and mail to:

Kentucky Sheep and Goat Development Office

P.O. Box 4709, Frankfort, KY 40604-4709.

PRESIDENT'S LETTER

Raising sheep can be an interesting challenge to say the least. You know this to be the case when phrases like "only the good ones are looking for a way to die" are common place. While this is not necessarily the case, the common ones are just as talented, it is a reminder that we need a strong support network. There are lots of sites online, but there is no substitute for a voice, a face, or hands on advice.

We are very fortunate to have a land grant university that has such resources for those of us interested in raising sheep, that source being the University of Kentucky. Leading the way for many years continues to be Dr. Don Ely. If you haven't had a chance to meet Doc, you are missing out. Intelligent, energetic and caring are key characteristics of this "hands on" professor. He offers no nonsense insight into production, giving point by point facts that can add dollars to the bottom line of anyone's operation. Some of the areas that he has addressed include creep feed ration productivity, mineral management, many grazing topics, and my favorite, the use of copper sulfate as a dewormer. As most sheep folks know, too much copper and sheep are not a good combination. Copperas as a dewormer isn't a new concept, as I had read about a recipe in the Sheep Production book by Mr. Horlacher – University of Kentucky from 1927 that suggested using bluestone (copper sulfate). Dr. Ely has invested several years of research and given sheep producers an updated viable alternative to store bought anthelmintics. I have used this for years now, in tandem with Cydectin and Prohibit, with good success.

Dr. Debra Aaron is another important part of the UK sheep unit team. She offers a statistical look at sheep production, more specifically looking at breeding and genetics. There are very few sources in the United States that offer the insight that she has for sheep production and much of this valuable information she shares in this periodical. The section she authors, Genetically Speaking, takes complicated issues and simplifies them to where any shepherd can increase profitability by paying attention to the details of genetics.

Finally, we have Endre Fink, the shepherd at the C. Oran Little Research Farm Sheep Unit. Endre has a wealth of information on producing sheep. Breeding, lambing, feeding, shearing, showing, these are just a few of the areas that Endre can offer sound advice. Not only is he a great shepherd for UK, but he has a successful flock at home. This shows his interest and dedication to the sheep industry.

This trio that represents the UK sheep unit are folks that you should get to know, if you don't already. They complement each other in their areas of expertise and are always willing to help the individual and the KSWPA. They offer several different schools to teach folks about sheep production: lambing, shearing and the ewe profit series. They are critical components to the success of the Small Ruminant Profit School as well, where they not only present, but developed many of the sheep sections that are taught each year. And of course, you can find them at other extension venues where they are promoting the sheep industry. On behalf of Kentucky sheep producers, we thank each of you for the decades of service that you have offered us.

Please remember to mark your calendar for the KIO (Kentucky, Indiana, Ohio) Tri-state Small Ruminant Summit – Let's Grow Together. This meeting will take place on October 1, 2016, will be our association's annual conference in Burlington, KY at the Boone County Enrichment Center.

Have a blessed summer,

Scott VanSickle

2016 KSWPA Board of Directors

President
Scott VanSickle, Auburn, KY
scottvansickle@wheattech.com

Vice President
Kathy Meyer, Paris, KY
1tkmeyer@bellsouth.net

Past President/ASI Director
Jim Mansfield, Salvisa, KY
jim@fourhillsfarm.com

Secretary
Mary Brown, Lexington, KY
mary.brown929@gmail.com

Treasurer
B.P. Davis, Mt. Sterling, KY
davisclublambs@yahoo.com

ASI Regional Director
Bob Leer, Paris, KY
bobleer@bellsouth.net

Make it with Wool Chair
Dorothy Vale, Nicholasville, KY
kymiww@aol.com

Director- Endre Fink *Lexington, KY*
Director- Madeline Norman *Bagdad, KY*
Director- Bill Decker *Waddy, KY*
Director- Hannah Nilsson *Windsor, KY*
Director- Warren Adcock *Campbellsburg, KY*

Save the Date!

KIO Tri-State Small Ruminant Summit
October 1, 2016
Boone County Enrichment Center
Burlington, KY

Sheep and Goat Replacement Female Consigment Sale
October 6-9, 2016

President's Letter

Hello fellow goat producers!

Summertime is here and the youth are showing, the goats are growing and the Kentucky Goat Producers Association is planning to educate producers through the third series of SRPS (Small Ruminant Profit School).

My question to our members is, " What can the KGPA do for you?"

Where do you need help during your year of goat production? We really want more people to successfully raise goats so, let us know where you are struggling, and we will work to help you.

One of the the things that I think will help out state's goat industry is producing more kids for market. Adding two does would add, on average, four more kids per kidding. During the last Kentucky graded goat sale, 60 pound grade two kids brought 2.97 per pound. In May! That represents $712.80 in gross kid sales.

Another avenue that we should consider exploring is getting our delicious, high quality Kentucky Proud goat into restaurants and high end farmers markets. Any producer out there direct marketing at farmers markets or restaurants please contact me so we can chat about your hurdles.

We want to help you, so let us know what you need. Contact us at info@kysheepandgoat.org, or me, Denise Martin, directly at martinmeadowfarms@gmail.com.

See you at State Fair, as always we will be set up in the West Pavillon, next to the dairy goat show ring opening day Thursday through Saturday. Saturday through Tuesday you can find us in Broadbent Arena. Feel free to enter the arena and come shoot the breeze with me and the rest of the board of directors!

Happy Goat Days

Denise Martin - President,
Kentucky Goat Producers Assoc.

THANKS!

Dear KGPA Board Members & Others,

I have always been the one to sit back.... watch and listen. I've tried to help as much as I can and truly believe the small ruminant industry has a place in Kentucky. I believe all counties should work together to promote and encourage farmers to diverse their operations to include small ruminants. . That being said, I've realized that I have never truly thanked the ones that have put their hearts and souls into the promotion of the goat industry and have gone above and beyond- All board members, past and present; all KGPA members; KSGDO; KDA employees, Tess Caudill and Warren Beeler. There have been an abundance of caring people that gave up their time, and we're talking years here folks, and personal funds to help with whatever has been asked of them. So many that it would be impossible to name them all. So THANK YOU! And thank you for allowing me to hang around now that I've got some years on me and can't jump those gates like I used to.

Sincerely,
KGPA Member and Board Member

2016 KGPA Board of Directors

President
Denise Martin, Magnolia, KY
martinmeadowfarms@yahoo.com

Vice-President
Vincent Thompson, Elizabethtown, KY
vat.farm.345@gmail.com

Correspondence Secretary
Jackie Bremer, Danville, KY
jbremer12@gmail.com

Treasurer
Brent Ballinger, Bardstown, KY
brent@millcreekranch.biz

Membership Secretary
Sheila Duncan, Hardyville, KY
svkennels@srtc.com

2016 KGPA Board Members

- *Beverly Branco* Perryville, KY
  Bevsboergoats@gmail.com
- *Kenny Fenwick* New Haven, KY
- *Angie French* New Haven, KY
  kyfarmgirl@gmail.com
- *Ray Graves* Perryville, KY
  ray.graves@beckyhybrids.com
- *Amy Keach* Bagdad, KY
  kysaanens@gmail.com
- *Donna Puckett* Munfordville, KY
  donnagpuckett@gmail.com
- *Dr. Debbie Reed* Murray, KY
  debbie.reed@murraystate.edu

KENTUCKY GOAT PRODUCERS ASSOCIATION

JOIN TODAY!

KGPA Membership Application

Your $30 membership provides:

- 4 issues of the *Hoof***Print** Magazine plus the newly designed 2016 Sheep and Goat Management Calendar
- A unified voice for the goat industry on the state and national level
- Representation on important committees such as the Check-Off and the Animal Care Standards boards
- Support of various educational and youth activities
- Youth Membership forms can be found at kysheepandgoat.org/KGPA.html
- **And much, much more!**

Visit www.kysheepandgoat.org to join today!

Name: _____

Address: _____City: _____State: _____Zip:_____

Phone: _____E-Mail: _____

Please enclose a check for $30 made out to KGPA and mail to:

Kentucky Sheep and Goat Development Office
P.O. Box 4709, Frankfort, KY 40604-4709.

KGPA - UPCOMING EVENTS

Calendar of event items can be sent to kyates@kysheepandgoat.org with date, location and time.

Northern Kentucky Goat Producers Association Meeting – First Tuesday of every month 6:00pm @ the Kenton Co. Extension Office 10990 Marshall Road

JULY

7th	**Jessamine County Goat and Sheep Association;** Jessamine County Fairgrounds; 7:00pm
9th	**Northern KY District Goat Show**
14th	**Wilderness Trail District Goat Show**
19th	**South Central Goat & Sheep Producers Assoc.** Barren Co. Extension Office, 6:30pm
22nd--23rd-	**KJLE**
30th-	**Pennyrile District Goat Show**

AUGUST

4th	**Jessamine County Goat and Sheep Association;** Jessamine County Fairgrounds; 7:00pm
16th	**South Central Goat & Sheep Producers Assoc.** Barren CountyExtension Office, 6:30pm
18th-28th	**KY State Fair - Louisville, KY** Dairy goats 18-21 Youth goats- 19-21 Open goat show- 22-23 Youth sheep show- 23-24 Open sheep show- 24-27

SEPTEMBER

1st	**Jessamine Co. Goat and Sheep Association;** Jessamine County Fairgrounds; 7:00pm
10th	**Land of Tomorrow Miniature Dairy Goat Show** Franklin County Fairgrounds, Frankfort KY
11th	**ADGA 1 Ring YOUTH Show, Youth Dairy Market Wether Jackpot Classes** (We want to try and get these KY Proud approved), Junior & Senior Does, Judge: Jean Lucas (VA), Location: Franklin County Fairgrounds, Contact: kysaanens@gmail.com
11th	**ADGA 2 Ring Buck Show,** Judge: Jean Lucas (VA) & Katie Wolf (KY), Location: Franklin Co. Fairgrounds, Contact: kysaanens@gmail.com
12th	**ADGA 2 Ring Show, Junior Does, Senior Does,** Judge: Jean Lucas (VA) & Katie Wolf (KY), Location: Franklin Co. Fairgrounds, Contact: kysaanens@gmail.com
13th	**Central KY Goat and Sheep Association;** Marion County Extension Office; 7pm
15th	**Fort Harrod Goat and Sheep Assoc. Meeting;** Mercer County Extension Office; 6:30 pm potluck and 7 pm meeting
20th	**South Central Goat & Sheep Producers Assoc.** Barren County Extension Office, 6:30pm

OCTOBER

1st	**KIO Tristate Small Ruminant Summit,** Burlington, KY
6th	**Jessamine County Goat and Sheep Association;** Jessamine County Fairgrounds; 7:00pm
6-9th	**KY Female Replacement Sale** www.32auctions.com/KSGDOreplacementsale
18th	**South Central Goat & Sheep Producers Assoc.;** Barren County Extension Office, 6:30pm
20th-	**KSU Third Thursday Goat Field Day**
20th-	**Fort Harrod Goat and Sheep Assoc. Meeting;** Mercer Co. Extension Office; 6:30 pm potluck and 7 pm meeting

American Goat Federation Adds New Directors

The American Goat Federation added three new directors at the Annual Meeting in Scottsdale, Arizona on January 26, 2016.

They include:

Matthew Hayes, who is from a livestock background and works as a livestock buyer of specialty products at Superior Farms. As a student on the judging team at San Joaquin Delta College, he was awarded the National Champion High Individual and he and his teammates were named the 2004 National Champion Judging Team. He and his wife, Emmalee operate M&E livestock where they run a small flock of registered Southdown ewes as well as a small herd of Boer does.

Elizabeth Henning from Springfield Oaks Saanens in Arizona, began raising dairy goats in 1979 and has also raised percentage Boers. The dairy herd has been classified/appraised every year since 1986, and has produced many animals excelling in both production and type. Betty is a life member of ADGA, has been a licensed ADGA judge since 1991 and a linear appraiser since 1993. She is an ADGA Director, and has been an active member of many ADGA committees over the past 30+ years. She currently chairs the Genetic Advancement and History committees and serves as a member of the ADGA Executive Committee. She also has been a member of and judge for the United States Boer Goat Association.

Lary Duncan managed Able Acres Boer Goats for several years. He is the CEO of the American Boer Goat Association which he represents on the AGF board. He also is on the board of the Boer Goat Youth Foundation of America. Lary is a licensed judge for ABGA and has a degree in Supervision from Purdue University.

Returning directors are: Tom Boyer from Boyer Land and Livestock in Utah; Dr. An Peischel, who is the Small Ruminant Extension Specialist for Tennessee State University and the University of Tennessee; Sam Abney from Alabama, who raises Boer goats and is a member of several goat groups including the Alabama Meat Goat and Sheep Committee; Dr. Kenneth Andries, who is an animal geneticist working as Assistant Professor and Animal Sciences Specialist at Kentucky State University; David Martin from Georgia, who is the President and CEO of Gotcha Goat, llc; Rebecca Sauder from Texas, who covers the market reports for the sheep and goat sale in San Angelo for the USDA Livestock Market News Service; Linda Campbell from Virginia, who owns and operates Khimaira Farm, an organic farming operation and agri-tourism business. She has been a member of the American Dairy Goat Association Board of Directors since 1982, and represents ADGA on the AGF Board; Bob Buchholz from Texas represents the Texas Sheep and Goat Raisers Association where he has been a director for a number of years.

The American Goat Federation was organized in 2010 to promote and facilitate the development of all segments of the goat industry including dairy, meat and fiber, by encouraging sound public policy, enhancing production and marketing of goat products, and promoting research beneficial to our member organizations and all producers. More information about the American Goat Federation, Board of Directors and activities and services AGF provides is available on the website, www.AmericanGoatFederation.org.

Selecting a Replacement Ewe or Doe – Phenotype

by Ann Marie Leed – University of Kentucky

Selection is the foundation for flock and herd improvement. Producers have many factors to consider when selecting replacement females. The decision of which animals to keep, purchase, or cull is not always easy, but is critical to move the flock/herd forward. Many factors play a role in the selection process like genetics, past performance, health, economic traits and visual appearance. One should use observations and evaluation skills to make an informed purchase decision. The purpose of this article is to address the visual characteristics producers should be looking for when selecting replacement females.

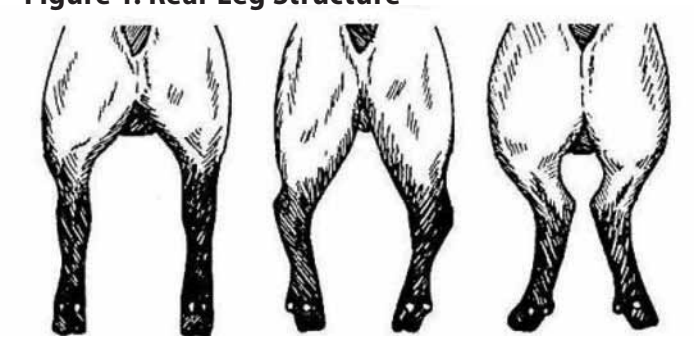
Feet and Legs

The most important phenotypic trait that should be evaluated on replacement ewes and does is the structure of the feet and legs. Ewes and does must be sound on both their front and back legs and be able to move freely in order to remain productive in the flock/herd for many years. During the female's productive lifecycle her structure will need to support her own weight, the weight of her lambs/kids during gestation and allow her to be able to move around the pasture for nutritional purposes.

Females should stand square on all four corners of their body and set down on a strong pastern with a large foot. Legs should be set wide, not close at the rear hocks or have too much set to the rear hocks. For females that have correct leg structure, the rear legs come out of the center of the hindquarter and go straight to the ground and the hocks are set square not angling out or in (Figure 1). Seen in Figure 1, the second rear leg structure is bow legged, while this female has a wide base, her hocks angle out which will cause her stride to be restricted and not fluid when set in motion. Also in Figure 1, the third rear leg structure is cow hocked, her hocks angle in towards themselves, causing her to have a narrow base, which can impact the female's ability to move smoothly and easily around the pasture.

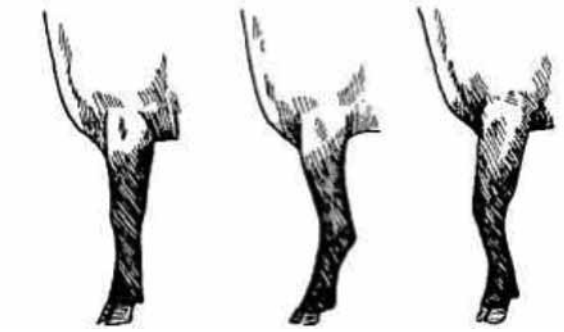
Front leg structure is often times over looked, however it is an important factor to assess when evaluating a replacement female. Ewes and does with correct front leg structure have their knee straight up and down and that knee is in line with the forearm and cannon bone, as seen in the first animal in Figures 2 and 3. Common front leg structure problems include calf-kneed, buck-kneed, pigeon-toed, splay-footed and knock-kneed. Examples of these defects can been seen in Figures 2 and 3. Calf-kneed is when the knee is angled back causing the female's shoulder to be angled forward. Buck-kneed is when the knee is angled forward, causing the ewe or doe to have a steep shoulder and steep pasterns, which can lead to a breakdown in structure early in her lifecycle. Pigeon-toed is when the front hooves angle in toward the body, causing the female to be narrow based. Splay-footed is when front hooves angle out away from the body, and often times, females that are splay-footed are also knocked-kneed.

Figure 1: Rear Leg Structure



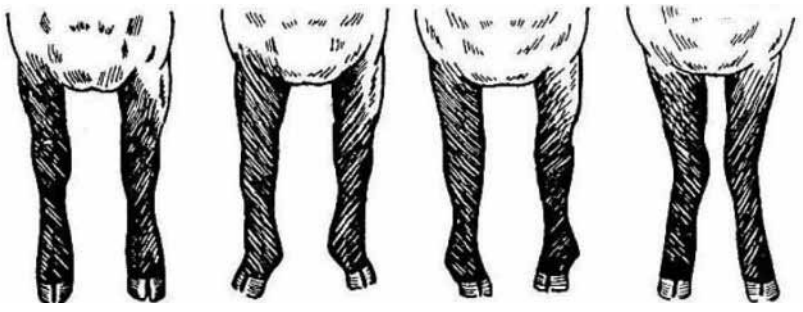
Correct | Bow legged | Cow hocked

Figure 2: Front Leg Structure (side view)



Correct | Calf-kneed | Buck-kneed

Figure 3: Front Leg Structure (front view)



Correct | Splay-footed | Pigeon-toed | Knock-kneed

Volume and Muscle

Almost as important as selecting a ewe or doe with sound structure is selecting a female that has enough volume and muscle. Having adequate volume and muscle is critical for ewes and does to achieve maximum efficiency as breeding females. Volume is how much internal capacity the female possesses and it has three dimensions: length, width, and depth. Females should be selected that are long bodied, have width through their chest, fullness through their heart area, a wide straight top, have spring and depth of rib and uniform depth of body from their forerib to their flank. In terms of muscle, replacement females do not need to have an overwhelming amount of muscle, but they need to have honest muscle shape to complement their volume and capacity. Muscle shape can be evaluated visually by looking at the female's forearm, down her top and out of her hip and dock, and through her leg and stifle. When possible ewes and does should be handled to evaluate muscle in addition to visually assessing muscle shape. By feeling for muscle shape and dimension over the rack and top, measuring length of loin and hindsaddle and wrapping the circumference of leg allows for a more accurate assessment of muscle. When handling for muscle, fat thickness can

also be evaluated. Females should be carrying some degree of fat cover, but should not be so fat that reproductive performance could be impaired.

Skeletal Size and Balance

Females should be selected that are big enough to grow and produce offspring. They should also meet their breed standard for size; adequate size will vary among breeds. Ewes and does should be selected that have height at the top of their shoulders and length of spine and extension. In addition to being large outlined, replacement females should balance when viewing them from the side. Balance contributes to the overall appearance and eye appeal of the animal. Females should be smooth through their shoulder, smooth at the neck shoulder junction, straight and strong topped and, level through their hip and dock. Coarse shouldered, u-necked and weak topped ewes and does should be avoided when selecting replacement females.

Mouth

Mature ewes and does should have eight incisors on their lower jaw. In a correct mouth placement the top and bottom jaws align so the incisor teeth are flush with the pad of the upper jaw, as seen in Figure 4. Parrot mouth occurs when the lower jaw is too short and the incisors are posterior to the upper jaw. Monkey mouth is when the lower jaw is too long and the incisors are anterior to the upper jaw. Females with parrot and monkey mouth should not be selected. The best way to observe mouth soundness is to look at the female's mouth from the side view, as seen in Figure 4.

Udder

The shape of the udder will depend on the age and stage of lactation of the ewe or doe. Ewes and does should have two functional teats that are medium sized which will allow the lambs/kids to nurse unassisted. Also, the udder should be well attached, soft, smooth and balanced. Females with hard, lumpy udders, as well as pendulous or oversized udders should be avoided when making a selection.

Breed Character

If selecting replacement females for a purebred operation, breed character should be evaluated. Each breed association has a set of breed standards. Ear size, wool on legs, color of fleece or skin, wool cap, muzzle width and pigmentation should all be evaluated to make sure the female is in compliance to breed standards.

The selection of high quality replacement females is critical to the success of any operation. Selection lays the foundation for future generations to continue the success of the flock and herd. When making a selection decision on replacement females evaluate all factors: structure, volume, muscle, growth, balance, mouth, udder and breed character. All these factors should be evaluated in tandem to make the best replacement decision.

Figure 4: Mouth Structure

Correct **Parrot Mouth** **Monkey Mouth**

Here is a picture of good rear udder attachment. Medial suspensory ligament is strong and udder/teats are above the hock which is very important to reduce the incidence of trauma leading to mastitis. One can see that the udder is slightly uneven but that is because she is nursing kids and she was not Held away from kids.

Here is a good picture of excellent fore udder attachment, good teat delineation and proper teat size

This side shot demonstrates that the udder is below the hocks. As stated this is undesirable and also makes it harder for the kid to nurse. At birth, many of these udders are so close to the ground that the newborn kid has great difficulty in locating the teat and nursing.

As you can see in this picture, this udder lacks rear udder attachment, is cylindrical in shape (not desirable) and lacks teat delineation. It is also very uneven (this doe is nursing a single kid and the right udder halve has dried up). Although I have seen worse udders then this, anytime the udder drops below the hocks it is susceptible to trauma which can lead to mastitis.

Ann Leed *was raised on a small sheep operation in eastern Pennsylvania and was involved in 4-H and FFA. She received her bachelor's degree at Iowa State University in Animal Science and competed on both the Livestock and Meats Judging Team. At the University of California-Davis, Ann earned her M.S. in Animal Sciences, focusing on swine reproduction. From 2006 until 2011 Ann was an instructor and livestock judging coach at Mississippi State University. Currently, Ann is the academic program coordinator for Animal Sciences at the University of Kentucky*

Happening This October 6th – 9th

Kentucky SHEEP & GOAT REPLACEMENT SALE

No need to travel; Sell Online!

www.32auctions.com/KSGDOreplacementsale

The 2016 Sheep and Goat Replacement Female Sale is an effort to help new producers secure quality breeding females to start herds. All animals in the sale have been pre-screened based on the Replacement Female Sale Guidelines, as outlined at www.kysheepandgoat.org. The sale is conducted by the Kentucky Sheep and Goat Development Office.

Meat, Dairy and Fiber Animals
Commercial and Purebred

Sale will take place online ***October 6-9, 2016***

– Sale starts 10am October 6 and ends 12:00pm October 9th –

All females consigned will be:

- Between 6 months to 2 years old
- Sold in uniform lots from each consigner
- Represented by both photos and video (video links will be provided at www.kysheepandgoat.org)
- Pre-screened for age, appropriate size for breeding, diseases, parasites, body condition, and structure; this information will be provided online for each lot

Buyers will be provided with information regarding vaccinations, internal parasite management records, birthing records and if the females have been exposed to a male.

Meet some of the consigners at the KIO Tri-State Small Ruminant Summit on October 1st!

Current Consigners

Martin Meadow Farm,
Denise Martin, Magnolia, KY

Final Frontier Farm,
Kathy and Tony Meyer, Paris, KY

Hedgespeth Farms
Linda Cundiff, Finley, KY

Bev's Boer Goats,
Beverly Branco, Perryville, KY

Joe's Bars and Suds,
Joe Bremer, Danville, KY

Last Go Round Farm,
Deborah Kerider

Adcock Acre Farm
Warren Adcock , Carroll Co., KY

www.32auctions.com/KSGDOreplacementsale

USDA NSIIC

Kentucky Sheep & Wool Producers Association

Kentucky Goat Producers Association

Kentucky Sheep & Goat Development Office

Kentucky Proud

SAVE THE DATE!!

KIO Tri-State Small Ruminant Summit

Let's Grow Together – Integrated Management For Profitability

The KIO Tri-state Small Ruminant Summit – Let's Grow Together initiative is intended to bring together three neighboring states to share common goals and barriers to production, and then to find innovative solutions to increase sustainable industry productivity, profitability and growth. Emphasis will be placed on integrating genetics, nutrition and health into profitable management systems for sheep and goats.

October 1, 2016; Registration begins at 8:00am (EST)

Boone County Enrichment Center

(next to the Boone County Extension Office)

6028 Camp Ernst Road - Burlington, Kentucky 41005

Individual $25 Couple $40; Children 12 and under free

Register online at: www.kysheepandgoat.org

Speakers:

- Dr. Donald G. Ely, University of Kentucky
- Dr. Kenneth Andries, Kentucky State University
- Dr. Beth Johnson, Kentucky Department of Animal Health
- Dr. David Thomas, University of Wisconsin-Madison
- Dr. Michael Neary, University of Purdue Sheep Extension Specialist
- Mike Corn, Vice-President of the American Sheep Industry Executive Board
- Dr. Robert J. Van Saun, Penn State Extension Veterinarian

Workshops/Demonstrations:

- Predator Trapping Demos- KY Trapping Association
- Cooking Lamb and Goat 101- Taught by Brick Walker, graduate of Sullivan University Culinary and Baking & Pastry Arts. Brick has an extensive background in the restaurant industry, He will demonstrate easy to create lamb and goat products that will be sure to attract customers to your business!
- Hide Tanning
- Soap Making

SPONSORS:

PLATINUM SPONSOR:

premier1supplies.com

GOLD SPONSOR:

BRONZE SPONSOR:

Selection of Replacement Females

Ask the Experts

The selection of replacement females is critical to the success of your operation because they are the foundation of the genetics that will be present in your herd/flock for years to come. Many considerations need to be made when selecting females, as our experts have so eloquently shared...

Replacement Females for Fiber Production

by Madeline Norman & Mary Anne Holmes

Choosing a replacement ewe or doe for your fiber flock requires some extra consideration because a fiber animal's fleece is of paramount importance. As with other physical characteristics, she will pass her fiber traits to her offspring. Since that fiber is your source of income, it bears as much consideration as health and maternal instinct. Your replacement ewes and does are the foundation of your reputation as a quality fiber and livestock producer. Be thorough and select only the best!

Sheep

Before you step foot on the farm to look at your prospective replacement ewe, consider your flock goals. Are you breeding for color or spots? Do you want a larger or smaller framed animal? Do you need to increase your lambing rate or parasite resistance? Do you intend to show animals or fleeces? Do you need to increase staple length, crimp, or luster? Are you looking for less grease or guard hair? Your replacement ewes will shape your flock for the years ahead; make sure they contribute to your vision.

After you have evaluated the ewe's physical condition and seen her move around the pen, get your hands on her. Look at the staple length of her fleece, check for guard hair or scurf, and make sure that the fleece is even across the entire animal. If the ewe has been shorn, ask to see a sample of her fleece, her lambs' fleeces, or any products that have been made from the wool such as yarn or finished objects. If fleece is available and you are able, you may take a moment to spin it and see what kind of yarn she produces. Ask what the grease and finished weights were for her most recent clip, how often she is sheared, and check records such as micron count or clips from years past. Hold a lock up to your ear and test it for breaks. This will tell you if something is off in the animal's health; you may evaluate whether the issue has been resolved or if she will be a liability on your farm.

Madeline Norman *has been raising primitive breed wool sheep since 2008. When she's not shearing, spinning, or knitting by hand, Madeline advocates for sustainability and fiber art through hands-on experiences at schools, festivals, and her podcast, available at ballyhoofiberemporium.com or through iTunes.*

Goats

A fiber goat should have a uniform and fairly dense covering of hair. If it has ringlets or waves, it should cover the entire body. The hair should come up under the chin and go well down the legs. Hair on the face is not as important as on the neck area. They should have the characteristic mohair top-knot. If you do have a goat that has a tremendous amount of facial hair, you may want to trim or tie it up with rubber bands to prevent injury from impaired vision.

Usually the goats that have the loose floppy skin on the neck shear heavier than the smooth neck. This is more noticeable on the traditional white angoras. The colored angoras have made great strides in the last several years to become more competitive with the traditional white.

If fleece weights are not available, you can grab a big handful of hair on either side of the abdomen to give you an idea of the density of the hair. Since you will be using or selling the fleece you want a dense fleece. Keep in mind that the fleece a buyer sees at a sale is not always a true fleece weight depending if it has been heavily skirted.

Kid fleeces are finer than most adults and females finer than males, but then there are always the exceptions. You will hear breeders and spinners refer to the "handle" of the fiber This encompasses the fineness of the fiber, softness, luster, curl,

crimp, and wave of the fleece, length of the lock and lock type, and density of the fiber on the animal. Most processors like the hair to be between 4-6 inches. This allows for approximately 1 inch growth per month with shearing in the spring and fall approximately 6 months apart.

You will want to avoid an animal that has an excessive amount of kemp fibers (fibers which are brittle, coarse, dull, and flat). This type of fiber does not accept dye and breaks off when processed.

Selecting a yearling or 2 year old is a good time to see the body size and structure, and the lock structure will be evident. They have gone through at least 2 shearings and should be ready to breed. Keep in mind that you want them to be at least 60 pounds before breeding.

Mary Anne Holmes *lives with her husband, Earl, on a farm in Pleasureville, KY, where they raise Gotland and Icelandic sheep, angora goats, and beef cattle.*

Replacement Females for Dairy Goat Production

by Kathy Jones

Every dairy goat producer will agree that each breeder of dairy goats has their own style and opinions when it comes to a good dairy doe. Preferences in does will rely heavily on the type of dairy goat being produced and the goal of the operation. For instance, my goal for the past 22 years has been to produce more for the old style Nubian type, emphasizing longevity, health, milk production and personality. However, regardless of the type of goat you want to produce, you should keep some basic things in mind when buying replacement does.

First, look at the doe's physical appearance. The physical appearance can tell you a lot about the health of the doe. Buying healthy females will pay off in the long run. Glossy hair is generally a good indication the doe is not malnourished. Run your hands over the doe's body to make sure you don't feel any lumps and swellings, as this may indicate a disease that you don't want to introduce into your herd. Ask for records on worming, vaccinations and get an idea of the breeder's overall health management practices.

Second, look at the width of body especially in the hip bones. Good width in the hip bones will make it easier for the doe to deliver kids.

Third, if the doe is in milk, check her udder attachment to make sure it is well attached and not pendulous. Make sure the udder is not lop-sided as that could indicate mastitis.

Fourth, ask for the doe's milk records. Look for a consistent production of milk and not one that varies.

Lastly, make notes on the breeder's overall herd management practices. Remember, herd management is a major factor that impacts the production of your dairy herd. You can have the best genetics in the world, but it won't pay off if your animals are unhealthy and managed correctly.

Kathy Jones *has been raising Nubian dairy goats for the past 23 years, in Clark County, KY. She tries to give back to the goat industry by hosting goat related clinics and supporting the goat industry in KY.*

Replacement Females for Commercial Sheep and Goat Production

by Kathy Meyer and Tess Caudill

Whether we are talking about sheep or goats, commercial production is all about getting total pounds of kids or lambs to market as quickly and efficiently as possible. The first aspect of selection is to personally determine your preference of production and management systems. You will want to purchase females that were raised in systems similar to yours in order to maximize your dollars spent. For example, if you would like to lamb in the fall, purchasing black face replacement ewes which have not been selected for fall lambing will probably not be the best fit for that particular production system. Similarly, it would not be prudent to purchase replacement females from a high intensity, full feed, confinement operation and expect those females to perform well for you in a lower intensity, forage based operation.

Once you have determined your optimum production and management systems, you are ready to look at actual replacement females. When selecting replacement females for a commercial operation it is extremely important that animals are structurally correct, free of signs of disease, free of genetic defects, etc. Look at the physical appearance. Females should have dry tails and noses. Dirty tails can be an indication of parasitism. Runny noses can be an indication of poor nutrition, parasitism, bacterial or viral infection. Replacement ewes/does or ewe lambs/doelings ready for breeding should have enough fat cover over their back and ribs but not too much. Rule of thumb: if the spinal process feels like the back of your hand then they are okay. If you can't feel bone they are too fat, if you feel sharp bone they are too thin. This is an oversimplification of what is called body condition scoring.

Other factors beyond what you can physically see should also be considered as visual perfection does not in any way guarantee performance. New or experienced producers need to look at the production records of the females or in the case of ewe lambs/doelings, the records of their dams. **Records should:**

- Indicate what kind of birth the female had (single, twin, triplet) and if the birth was from a ewe lamb or doeling. Buyers should be looking at females that consistently have multiple births.
- Include the date of birth. Buyers should select females that lamb/kid, or were born in, the first two cycles or first 35 days of lambing/kidding. Those are likely the more productive ewes.
- Note if the female, or dam of the female, had a normal, trouble free birth and if there were any mothering problems. Mothering problems include udder troubles and disposition.
- Indicate what vaccinations the female has received and when were they administered, and when the female was last dewormed and what product was use? If the current wormer is working for the female, then the new owner should continue with that wormer.
- Provide growth performance records such as weaning weight, Average Daily Gain (ADG), etc. as these should be fairly important to most commercial sheep and goat producers. But remember that management system has to be considered when evaluating growth performance. Lambs that are on full feed in confinement should have a better average daily gain that

Experts, continues on pg. 12

lambs grown on pasture so make sure you are comparing apples to apples.

Kathy Meyer *and her husband Tony own Final Frontier Farm, located in Paris, KY. They manage 140 Texel crossbred spring lambing ewes in a companion grazing system with 45 Angus crossbred fall calving cows.*

Tess Caudill *is the marketing specialist for the for the Kentucky Department of Agriculture and has been instrumental in developing a graded marketing program for goats and sheep. She has a B.S. degree from the University of Kentucky in Animal Sciences and currently raises goats, sheep and cattle in Harrodsburg, KY.*

Replacement Females for Whether and Purebred Sheep and Goat Production

by Endre Fink, Denise Martin and Jessica Johnson

Sheep

When selecting wether type ewes to add to a current program or to start a new flock, the first thing you need to do is to determine what your goals and prepare a budget accordingly. Secondly, determine the breed characteristics you want your wethers to exhibit. The most popular breeds are Hampshire, Southdown, Dorset and Suffolk. However, crossbreds are as popular as, or even more popular, than the individual breeds in wether shows. So, when purchasing ewes to produce club lambs, you are not limited to just purchasing registered purebred ewes; crossbred ewes between the breeds mentioned above should also be considered.

Visual appraisal when selecting these females is very important. When selecting ewes to produce club lambs in particular, we need to choose females which are heavily muscled. Muscle is the number one criteria used when evaluating club lambs, so these mothers need to have an adequate amount of muscle, but at the same time they need to exhibit some femininity and refinement throughout the front end. The trend right now in the wether shows is to select club lambs which are moderate in size with a lot of muscle and bone. The lambs winning most of the major shows also carry a great deal of wool on their feet, legs and head, hence the popularity of the Hampshire breed right now.

It is important to mention that within some breeds of sheep, you may find a contrast in breeding programs among producers, meaning there can be two different types of sheep within the same breed. The two types are what we call 1) breeding type or breeding sheep and 2) the other is wether type or wether sheep. I have previously discussed in some detail what characteristics to look for when purchasing wether sheep. If breeding sheep is the type you are looking to purchase, the same general selection criteria discussed earlier will apply however, more emphasis should be placed on overall size and scale, and frame and growth performance. Less emphasis is placed on muscling in breeding sheep ewes than in wether ewes. When purchasing breeding type ewes, more than likely you will be purchasing a registered animal. Just about anything there is to do with breeding sheep, whether it is a show or a sale, will require a registration paper. In recent years, breeding type sheep are not typically commanding the extremely high prices we are seeing with the wether type sheep. However, I feel their popularity is increasing lately due to the increase of slick shorn classes at most shows.

Endre Fink *obtained his B.S. and M.S. Animal Science degrees from the University of Kentucky College of Food and Environmental Sciences. Since that time he has worked as assistant and now Shepherd and Research Specialist at the Oran Little Research Campus Sheep Unit. Additionally, he and his family manage a club lamb operation in Winchester, KY.*

Goat

Although I have a registered herd of show quality does, when selecting replacement does for my full blood Boer goat operation, I remember that Boer goats are meat animals. Therefore, it is important to me that the female has good muscling. I determine the amount of muscling by evaluating the following:

- long level backs that are wide
- long length of the spine between the last rib and the hip
- look at the hip and again select for length
- wide loin area
- wide stance between their front hooves and back hooves (indicates muscling in the chest and between the hind legs
- heavy bone in their legs (I need these girls to make kids with a lot of muscle and a spindly legged doe isn't going to make those kind of kids.)

All of this being said, I also choose does that are feminine, even with these heavy bone and wide stance requirements. Sometimes "bucky" does seem to have hormonal issues that may impact their ability to produce. I always check the vulva to be sure it is appropriately sized, as that may be indicative of reproductive ability.

Denise Martin *and her husband Brian Have been raising meat goats for 15 years in Magnolia, KY.*

By definition, there is no difference between a wether type doe and a fullblood registered doe. The difference, however, lies in the emphasis of certain traits and characteristics.

When selecting wether type does you want style and balance, and rib shape but you want to have a more compressed almost wedge-shaped body type that would create more width over their top to give them a more impressive handle over their rack and loin.

Look for a quality framework, as this is necessary to handle the muscle and growth we want our show and production animals to possess.

Once you have evaluated the physical characteristics of a female, look at the genetic makeup. Do your research and look at a farm's past and present progeny to see how the prospective females can be an asset to improving your herd. Never be afraid to ask the breeder questions. If possible ask to see the dam and sire of the animal you are purchasing and any past production records. You will not always be able to have this luxury but when given the chance, it is a great advantage.

Jessica Johnson *in partnership with her mother, Dr. Beth Johnson, has been actively involved in raising market club goats for 12 years. Her interest in goats began when she was 6 years old when she started showing market goats. After exhibiting as a youth livestock exhibitor and active in the 4-H/FFA livestock judging competition, Jessica has continued her interests in the market goat division as a producer and a livestock judge. She is active in the breeding, kidding and fitting operation at Keinan Boers in Parksville, KY.*

Southern States Dorper
SHOW & SALE

JUDGE: Wes Patton

AUCTIONEER: Pit Kemmer

Hyder-Burks Agricultural Center
Tennessee Tech University

Cookeville, Tennessee

(Located on Interstate 40, just an hour East of Nashville)

Friday, July 22
2:00 p.m. - *Show*
6:00 p.m. - *Youth Showmanship*

Saturday, July 23
10:00 a.m. - *Educational Seminar*
1:00 p.m. - *Sale*

Expecting 200 Head • Catalogs at www.Dorper.org

The right breed for a better bottom line!

Early Maturity • Increased Fertility
Non-Seasonal Breeding • Excellent Maternal Traits • Newborn Lamb Vigor


2015 Champion Dorper Ram


2015 Champion White Dorper Ram


2015 Champion Dorper Ewe


2015 Champion White Dorper Ewe

For further information, contact:
Douglas P. Gillespie, *Executive Secretary*
American Dorper Sheep Breeders Society
Tel: 1-254-681-8793
Email: Dorpers@ymail.com

WHITE DORPERS
DORPERS
AMERICAN DORPER SHEEP BREEDERS' SOCIETY

American Dorper Sheep Breeders Society
Ronda Sparks, *Registrar*
P.O.Box 259 • Hallsville, MO 65255-0259
Tel: 573-696-2550 • Fax: 573-696-2030
www.dorper.org

New Best Practices Aim to Increase Productivity for Lamb Producers

SCOTTSDALE, Ariz.

Lamb producers were introduced to the industry's first set of Productivity Best Practices at the 2016 Sheep Industry Convention January 27-30.

Lambs sold per ewe is the biggest influence on profitability, and implementing the new Best Practices to Increase Your Lamb Crop gives sheep producers more control over price volatility, according to the panel of sheep producers and production experts who developed the best practices.

"The long-term vision is to increase demand and profitability for the entire U.S. lamb industry," says Wes Patton, a California sheep producer who chairs the American Lamb Board. "As demand is increased over time, we want more American Lamb on more consumers' plates. That involves improving consistency and quality, while increasing productivity and reducing costs of production. By using best practices, the U.S. lamb industry can implement change that leads to increased demand and profitability."

The U.S. Lamb Industry Roadmap, adopted less than two years ago, set goals to achieve the long-term vision of increasing demand and profitability for the entire U.S. lamb industry. Improving consistency and quality, while increasing productivity and reducing costs of production, are requirements in order for more American Lamb to be on more consumers' plates. By using best practices, the U.S. Lamb Industry can implement change that leads to increased demand and profitability. Find out more at www.LambResourceCenter.com.

The American Lamb Board, which administers the lamb checkoff, supported the efforts to develop the lamb crop best practices in collaboration with other industry groups, including the American Sheep Industry Association's "Let's Grow" program.

12 Lamb Crop Best Practices

- **Optimal Nutrition.** Prior to breeding, ewes should be fed a ration that puts them on track for appropriate weight gain. When breeding ewes, they should have a body condition score of 3 or slightly less. Throughout gestation, be sure to meet the nutritional requirements of your bred ewes. Following lambing and through weaning, maintain ewes on quality feed that takes into account factors such as the number of lambs they are rearing. At any stage of production, consider sorting ewes into groups based on body condition in order to allocate feed to dietary needs.
- **Breed Ewe Lambs at 7 to 9 Months of Age.** If managed properly, ewe lambs should be able to lamb at or near their first birthday. Ewes that give birth to their first lamb before they are yearlings tend to be more productive throughout their lifetime compared to those that first lamb as yearlings. When considering this best practice, keep in mind that different breeds of sheep vary in age of puberty.
- **Select for Prolific Genetics.** Select for prolific genetics within rams that produce offspring you will be considering for replacements. Similarly, replacement ewe lambs should be selected from high performing dams. Estimated breeding values (EBVs) produced by the National Sheep Improvement Program (NSIP) are an excellent tool to accomplish this goal.
- **Use Crossbreeding.** First-cross lambs tend to have a 5% higher survival rate than straight-bred lambs, given that genetics are matched with environment. In addition, first-cross ewes tend to have higher lamb crops than purebred sheep.
- **Cull Underperforming Ewes.** Identify and cull ewes that fail to rear a lamb, rear a single-born lamb that is below average in quality and/or weight, fail to rear twins, or lamb outside the first or second heat cycle. Exceptions may be made for reasons outside the ewe's control.
- **Reduce Lamb Loss.** Postnatal lamb loss should be kept below 10% of all lambs born. Identify best management practices for flock health, predator prevention, protection from severe weather conditions, and other factors that will improve lamb survival. Most non-predator lamb loss occurs within the first week, so management decisions during this time period can have large impacts on flock profitability.
- **Test for Pregnancy Status.** Determine pregnancy status via ultrasound. Cull open ewes or market ewe lambs prior to lambing season. Group and feed ewes according to the number of lambs they are raising and stage of pregnancy.
- **Disease Prevention and Treatment.** Work with your veterinarian or consultant to develop an overall health management plan to prevent or eradicate disease, such as aborting agents or chronic disease, which have a negative impact on reproductive efficiency.
- **Match Reproduction to Management.** Your goals for flock reproductive efficiency will vary depending on nutritional and labor resources. However, increasing reproductive efficiency should be a primary goal for most flocks.
- **Test Rams.** Don't overlook ram fertility. Check all rams using a general breeding soundness exam 30 to 60 days prior to breeding. Semen test all rams, or at least any rams that are suspect following a physical exam. Observing rams for breeding activity is another consideration.
- **Manage for Seasonal Changes in Reproduction.** Pregnancy and lambing rate are reduced in ewes that are bred outside the normal breeding season. Ovulation rates peak during October and November in the northern hemisphere. Genetics, improved nutritional management, ram effect, light treatment, and/or hormone therapy can assist in meeting aseasonal breeding goals.
- **Accelerate Lambing Cycles.** For flocks with management practices which allow for more than one lambing season per year, accelerated lambing can improve reproductive efficiency. There are multiple accelerated lambing programs. Identify the program that fits your flock and resources.

To make best practice information as accessible as possible, it is part of the new U.S. Lamb Resource Center website (www.LambResourceCenter.com). Funded by the national lamb checkoff program to support the efforts of the entire industry, the Lamb Resource Center pulls together important information from major sheep organizations into one central location. Topics on the site include the lamb checkoff, industry and market news, marketing, Productivity Best Practices, and other production resources.

Best practices are a cornerstone of many industries – from computer manufacturing to education – and guide processes to achieve a desired result. For the lamb industry, Productivity Best Practices identify ways to produce more with comparable resources, which is a critical component of profitability.

"Because they are based on both time-tested practical experience and research, the Best Practices to Increase Your Lamb Crop are reliable, worthwhile actions for U.S. sheep producers. Best practices help you find ways to be more efficient and allow you to take more control of your flock's productivity – actions you can take now to protect against price volatility," says Reid Redden, Ph.D., who chaired the team charged with developing the best practices.

Redden emphasizes even though sheep production practices in the U.S. vary, there are lamb crop best practices that will benefit every flock. Most sheep producers will be able to identify at least three of the 12 best practices that will help them gain efficiency and improve profitability.

For example, the lamb crop best practice topics include optimizing nutrition, selecting prolific genetics, culling underperforming ewes, pregnancy testing, disease prevention and reducing lamb loss. Another best practice involves breeding ewe lambs at the age of seven to nine months so they lamb at or near their first birthday. Research shows ewes that give birth to their first lamb before they are yearlings tend to be more productive throughout their lifetime compared to those that first lamb as yearlings. Yet, Redden points out, in this case, the specific practice requires management considerations that may not be an option for every flock.

"Our team recognizes that some of the lamb crop best practices mean challenging the status quo. Yet, that is what is required to take action so the U.S. lamb industry can be more competitive," Redden says.

Key indicators have also been developed to help identify which lamb crop best practices will be most beneficial for various production styles. For example, a range flock should have no more than seven to 10 percent of dry ewes, whereas a farm flock should have no more than five to seven percent.

"Best practices are an important way to implement the changes identified in the U.S. Lamb Industry Roadmap. These best practices will help increase demand while driving profitability for all industry segments," concluded Patton.

The American Lamb Board (ALB) *is a national promotion, research and information organization whose purpose is to strengthen the position of lamb and lamb products in domestic and foreign markets. The work of the Board is overseen by the U.S. Department of Agriculture's (USDA) Agriculture Marketing. For more information, go to www.LambResourceCenter.com.*

Which Is the Best Ram in the Sale?

By Debra K. Aaron, Professor, Department of Animal and Food Sciences, University of Kentucky

You are at a consignment sheep sale (not a sale barn or a terminal livestock auction, but a sale specifically for breeding sheep). You are there to buy a ram. You feel like a kid in an Apple Store (or for those of you of a different vintage, a kid in a candy shop). There are so many rams to choose from, but you can only buy one. The question is, ***"Which is the best ram in the sale?".***

Just how important is a ram?

To set the stage for your ram buying excursion, and to help you justify the money you are about to spend, let's first consider the importance of this purchase.

The buying decisions you make now can have a big impact on future production of your sheep flock. The ram you select can increase, maintain, or (hopefully not) decrease your flock's performance.

If you purchase a ram for use as a terminal sire (that is, a ram that can sire crossbred lambs that will reach a desired market weight quickly and efficiently), he will end up being ***half*** of your flock. The ram you purchase will contribute half of the production efficiency of every lamb. And, he will sire many lambs while each of your ewes will likely only produce two or three lambs during the year. It does not take too many pounds of lamb to justify using a high quality ram as opposed to an average one.

If you purchase a ram for producing replacement ewes, his genetic contribution will be even greater. You buy fewer rams than ewes, and the genes from these rams will be distributed far more widely in your flock than those of individual ewes. Your flock may live with these genes for many generations. In fact, after a few generations (**Figure 1**), the genes from these rams will contribute ***80 to 90%*** of your flock's genetic change.

The greatest impact on sheep performance can be made through ram selection.

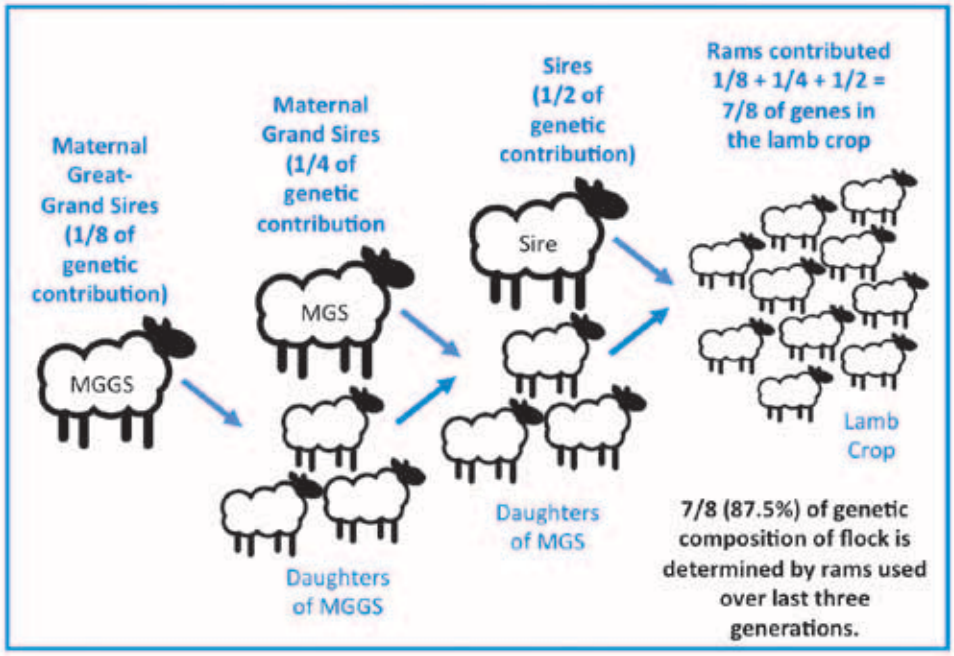


Figure 1. Genetic Change Is Largely Driven by Rams when Replacement Ewes are Produced in the Flock

How much should you pay for a ram?

It is always difficult to determine how much money you can justify paying for a ram. It really depends on what the ram can and will be used for. Even though they may be of equal genetic merit, registered rams that will be used in a purebred operation will have a different value than commercial rams that will be used to sire slaughter lambs. **A general rule of thumb is that a high quality, commercial ram is worth four to five times the value per hundredweight (cwt) of a slaughter lamb.** Thus, if lambs sell for $150 to $160 per cwt, you should expect to pay $500 to $800 for a ram.

Remember, the ram will contribute 50% of the genetics of the lamb crop. If daughters are saved as replacements, then his influence may contribute to the genetics of your flock for years or generations. Also, a ram can affect management inputs at breeding, at lambing, and throughout the growth cycle of his lambs. Thus, the genetic value of a ram is high. You should expect to pay for that value. **Nearly always the best ram will prove to be the cheapest.** Likewise, a poor ram will certainly be the most expensive.

Do a little homework on what rams are worth before embarking on a ram spending spree. There are many internet sites that report the price of feeder and slaughter lambs. In addition, many purebred operations advertise commercial rams, often listing sale prices online and in trade magazines. Results of previous sales may also be posted.

Which is the best ram *for my flock*?

Now back to the original question: Which is the best ram in the sale? The answer is not as easy as you might think. First, rephrase the question: **Which is the best ram *for my flock?*** Now the question is in the proper context. Next, consider your breeding objectives. Spend a few minutes writing down precise goals, including desired levels of performance and the time frame for achieving them.

To make intelligent ram purchasing decisions, you must have an idea of what it is you want to produce. Without an end product in mind at the time of selection, it will be difficult to select a ram that will increase profitability.

Consider the following questions:

- Are you purchasing a terminal sire?
- How will you market the resulting lamb crop? At weaning? As lightweight ethnic lambs? As traditional heavyweight slaughter lambs?

- Will replacement ewe lambs be retained in the flock?
- What trait(s) do you want to improve and what trait(s) do you want to maintain at current levels?

Answers to these questions will serve as the basis for sire selection and provide direction as to traits with the most economic importance.

How are potential sires evaluated?

With your breeding objectives in mind, you are now ready to evaluate rams in the sale. Obviously, the most immediate job of rams is to get ewes pregnant, but the most important selection criterion is the anticipated performance of their progeny relative to those traits that are most economically important to your flock.

Some tips:

- Use all of the information available to you. This includes (arranged in order of increasing intensity and accuracy) pedigree, visual appraisal, measurement of individual performance, and estimated breeding values. The more information you have, the better your selection decision will be. Never buy a ram on sight alone. Always request performance data.
- Select rams of multiple births. Progress can be made in increasing lambing percentage by selecting for twining.
- Select fast-gaining rams that meet your other standards. These animals usually make the most efficient use of feed and can be marketed at younger ages.
- Select rams that are structurally sound. Rams should stand squarely on their feet. They should have short, strong pasterns, and straight legs with plenty of width between them.
- Select rams with adequate scrotal circumference.
- Select rams with good dispositions. While the temperament is not important to the reproductive success of your ram, it is important to your management system and should be kept in mind when purchasing a ram.

The goal is to maximize the chance that selected rams will improve flock performance. This is where you need to understand both the genetic and non-genetic factors that can affect performance. For example, a single-born lamb from a mature ewe born early in the lambing season is likely to be heavier than a twin lamb from a two-year-old ewe born late in the lambing season. It is simply a case of a higher level of nutrition at a critical time in the lamb's life. But, is this single lamb genetically any better than the twin lamb? Modern genetic evaluations (such as the National Sheep Improvement Program or NSIP) correct for these non-genetic effects so they do not cause biases in our evaluation.

Figure 2. Five Hampshire Ram Lambs Available for Purchase at a Consignment Sale.

What if you were in one of these situations?

You have a commercial Hampshire flock of 50 ewes. You have evaluated your flock's production records and your primary goal is to find a Hampshire ram that will transmit high genetic values for growth traits. The ram you purchase will be used to sire market lambs and to produce some replacement ewes. You lamb in January/February and lambs are marketed in the spring as traditional, heavyweight slaughter lambs.

Arriving at the consignment sale, you head out to the sale pens. Five commercial Hampshire ram lambs have been consigned by a breeder you consider to be reputable, whose sheep are generally of high quality, and who is known for maintaining good and dependable records. Consider what you would do in the three situations below.

Situation A. Visual Appraisal Only

In this situation, all you have are the ram lambs in the pens in front of you **(Figure 2)**. No performance data are available. The seller explains he got busy with other farm operations and just didn't have time to collect data on these five rams. That is the primary reason he is marketing them as commercial rams. ***What do you do?***

You can inspect each ram for structural soundness and condition as these characteristics relate to the ram's ability to serve ewes and its longevity in your flock. You can evaluate scrotal circumference, which is one of the most useful measures of a ram's breeding ability (a ram lamb of this age should have a scrotal circumference of at least 30 cm). You can eliminate any of the rams that do not meet your specifications. After that, it's a gamble.

Remember, what you see is not always what you get. Less than half of what can be seen visually is due to genetic differences. The rest (over half) is due to what we geneticists call **environmental differences**. Was the biggest ram a single? Was the smallest ram out of a two-year-old ewe lambing for the first time? Did one ram eat more feed? The only portion of a ram's su-

Genetically Speaking continues on pg. 20

Speaking continued from pg. 19

periority that can be passed on to its progeny is the portion that is due to genetic differences. In many cases, these differences are masked by environmental differences. Knowing this, you conclude that picking the best ram for improving traits like lambing percentage, weaning weight, and so forth by visual appraisal alone is not likely. *It's too big a gamble, so you may choose not to bid on any of these rams.*

Table 1. Individual Performance Data for Five Hampshire Ram Lambs Available for Purchase at a Consignment Sale.

Ram Lamb ID	Birth Date	Dam Age	Sire ID	Birth Weight (lb)	Type of Birth/ Rearing	Weaning Age (d)	Adjusted Weaning Weight (lb)	Post-weaning ADG (lb/d)	Adjusted 120-d Weight (lb)
6316	1/9	5	Miller 833	16.0	Tw/Tw	71	63.4	1.64	145
6335	1/9	5	UK 5688	13.6	Tw/Tw	71	63.2	1.23	125
6336	1/9	5	UK 5688	15.3	Tw/Tw	71	66.9	1.46	139
6338	1/9	5	UK 5688	16.0	Tw/Tw	71	65.9	1.53	141
6415	1/12	3	UK 5725	16.8	S/S	74	74.5	1.08	115

Situation B. Incorporating Individual Performance Data with Visual Appraisal

In this situation you have the five ram lambs in the pens in front of you **(Figure 2)** and you have individual performance data on each of them **(Table 1)**. The seller explains that although he kept records on these rams, their records were accidently omitted from the flock records he submitted to NSIP. ***Now, what do you do?***

You visually inspect the rams, just as you did in Situation A. Any that don't meet structural specifications are eliminated. Then, you study the performance data for the remaining rams **(Table 1).**

The performance data in **Table 1** is useful if the following applies:

- Rams received equal nutrition and were managed the same.
- Traits measured are heritable. Traits that are highly heritable are those where individual selection will be most successful. Generally, reproductive traits are lowly heritable and growth traits are moderately heritable.
- Weaning records take into account birth and rearing status of the individual (for example, born and raised a single, born a twin but raised a single, born and raised a twin) as well as age of the dam (for example, two-year-old ewe versus mature ewe). If the breeder does not provide this information, then you will almost certainly favor the single lambs reared by mature ewes. This will be at the expense of the genetically heavier rams that happen to be lighter because they were twins or born to yearling ewes. In this situation, adjusted weights are provided. (For more information on adjustment factors, see *Genetically Speaking, Hoofprint, Volume 5, Fall 2011.*)

With this additional information, you may choose to bid on one of the twin ram lambs with good individual growth performance (Ram #6316, #6336, or #6338), assuming structural specifications were met. Even if his post weaning performance had been better, Ram #6415 would not have made your bidding group because he is a single-born lamb.

Keep in mind, performance data like those in **Table 1** are useful but are very limited in value; they only apply to that individual ram in that particular production system and do not necessarily indicate that ram's genetic potential as a sire. So, it's still a gamble, but you a little more confidence in the outcome.

Situation C. Incorporating Estimated Breeding Values (EBVs) with Visual Appraisal and Individual Data

In this situation you have it all: visual appraisal, individual data, and estimated breeding values along with their accuracies (**Table 2**). ***Now, what do you do?***

Comparing the five ram lambs is easier and more accurate now that you have their EBVs for growth traits because non-genetic differences, such as those associated with nutrition and management, have been removed. You could also compare these rams with those from different breeders (whether at opposite sides of the country or having had quite different management) if they all provide EBVs for the same trait. If breeders do not provide EBVs, it is hard to determine which are the best rams within the breeder's flock and also how they compare to rams from other breeders.

Of the five rams, you eliminate any that do not meet specifications for structural soundness. You also eliminate the single-born ram lamb (#6415). Finally, eliminate any rams that have very low EBVs for growth traits, which, as noted earlier, are your primary concern. Now, you have reduced your bidding group to the two rams that have the greatest likelihood of improving your flock's growth performance: Rams #6338 and #6316. Now, be realistic in the price you may need to pay, as others will also want the higher performing rams.

Ram selection is much less of a gamble in Situation C. Not only do you have predictions of each ram's future offspring performance, you also have a measure of confidence associated with each prediction.

Table 2. Estimated Breeding Values (EBVs) and Accuracies (ACC) for Five Hampshire Rams Available for Purchase at a Consignment Sale*.

Lamb ID	BWT		WWT		PWWT		MWWT	
	ACC	EBV (kg)	*ACC*	EBV (kg)	*ACC*	EBV (kg)	*ACC*	EBV (kg)
6316	*59*	0.21	*55*	3.5	*69*	4.2	*44*	0.0
6335	*59*	0.11	*55*	2.6	*68*	3.3	*43*	0.4
6336	*59*	0.08	*55*	0.3	*68*	0.5	*43*	0.6
6338	*59*	0.20	*58*	3.9	*67*	5.6	*47*	-1.0
6415	*59*	0.37	*57*	2.7	*67*	1.2	*48*	-0.3

* BWT = Birth Weight EBV; it predicts difference in offspring weight at birth (to a point, smaller is better).
WWT = Weaning Weight EBV; it predicts differences in offspring live weight at 60 days of age (bigger is better).
PWWT = Post Weaning Weight EBV; it predicts offspring differences for post weaning weight at 120 days (bigger is better).
MWWT = Maternal Weaning Weight EBV; it predicts differences in offspring from daughters based upon the maternal ability of the daughters and is expressed as kilograms of live weight at weaning (bigger is better).

Each trait EBV for a particular animal has as accuracy value (ACC) that is an expression of whether the EBV is representative of the animal's true breeding value. Accuracy values are on a scale of 0 to 100; the higher the accuracy, the more confident we are in the EBV.

Commercial sheep producers should not overanalyze accuracy values when making breeding decisions. Selecting rams that have high predicted genetic merit is more important that selecting rams with high accuracies.

What's an EBV worth?

When selecting a ram, your focus is how he will increase profitability of your sheep enterprise. For the five ram lambs above (Situations A, B, and C), the genetic traits that can increase profitability are the growth traits of weaning weight (WWT) and post weaning weight (PWWT). These are expressed in kilograms of live weight at weaning and post weaning at 120 days of age.

For example, Ram #6338 has the highest PWWT EBV at 5.6 kg. His offspring are expected to receive roughly one-half of his genes. Therefore, we would expect his lambs to be 2.8 kg (6.2 lb) heavier than average at this weight. If this ram sires 100 lambs, that equates to an additional 620 pounds of lamb. If each lamb brings $200/cwt (this value will fluctuate throughout the year and from year to year), that is an additional $1,240 just based on the genetics of the ram used.

Contrast this with Ram #6415. He has the lowest EBV for PWWT, only 1.2 kg. We would expect each of his lambs to be only 0.6 kg (1.3 lb) heavier than average at this weight. If this ram sires 100 lambs, that is an additional 130 pounds of lamb. If each lamb brings $200/cwt, that is only an additional $260.

On the average, lambs sired by Ram #6338 are expected to weigh 4.9 lb (6.2 lb -1.3 lb) more at 120 days of age than lambs sired by Ram #6415. This translates to a difference of $980 in favor of Ram #6338. Clearly, you could afford to bid more for him.

For more information on EBVs, EPDs, and NSIP, see *Genetically Speaking, HoofPrint, Volume 6, Winter 2012.*

What is the right ram for your flock?

The right ram for your flock may not be the most popular, or at the top of the sale order. But, through strategizing properly, a ram that will will fit the needs of your flock can be successfully identified and purchased. Performance data that allow you to assess key performance indicators, such as pounds of lamb weaned per ewe exposed, lamb growth performance, and returns on a per ewe basis are necessary for buying the right ram.

So, happy ram hunting. And, don't forget the old adage,

Good sheep ain't cheap.
Cheap sheep ain't good.

Dr. Debra K. Aaron, PhD, *professor in the UK Dept. of Animal Sciences, teaches animal science and genetics. Her research interests are in sheep breeding and genetics.*

NEWS TO EWES

Can I Breed My Ewes to Lamb at a Year of Age?

By Donald G. Ely
University of Kentucky

Introduction

The **traditional** lambing season in Kentucky and surrounding states has been January/February. This was a time when most producers had a tobacco barn for lambing. Ewes were wool breeds or crossbreds that lambed from 95%+ conception rates in an August/September breeding season. Youngest ewes at breeding were 17 to 19 months and these made up about 15% of the total flock. Marketing 1.5+ lambs per ewe was commonplace. Lambs weighed 100 to 120 pounds each when marketed at 4 to 6 months of age in May and June. Lamb prices were traditionally higher in May and June than any other time of the year.

In recent years, more and more producers have begun to raise hair-type ewes that lamb in the spring (April). Many lambs are marketed for harvest (slaughter) "off grass" at 50 to 60 pounds during the summer and fall. This production system is in contrast to the **traditional** system where any lambs marketed in the summer or fall were considered to be mismanaged because they should have been marketed at 100 to 120 pounds during the previous May and June.

As more producers are raising hair-type sheep, the concept of breeding ewe lambs has become more prominent. The main reason for this greater interest is the fact that hair-type ewe lambs born in April can theoretically be bred in late November and early December to lamb the next April at 12 months of age. Although lambing first at this age has several production advantages, these ewe lambs will require specific and intense management before the advantages become reality. It is the purpose of this paper to provide some research evidence for breeding ewe lambs, describe factors needed to successfully mate ewe lambs, and enumerate some recommendations for managing ewe lambs to lamb at 12 months of age.

Breeding Ewe Lambs is Not a New Concept!

The first scientific work in the U.S. that compared breeding ewe lambs with yearlings was published by North Dakota State University in 1936. Two hundred and forty-four Hampshire x Rambouillet ewes were purchased as lambs, divided into two groups, and evaluated over six years. One group was mated as lambs and the other as yearlings. Of the ewes mated as lambs, 85% produced lambs at approximately 14 months of age. Over six seasons (years), the group bred as lambs weaned 0.69 more lambs and 31 more pounds of lamb per ewe exposed than those bred as yearlings. There was no difference in wool production. Ewes mated first as yearlings reached their mature weight at approximately 21 months of age. Those first mated as lambs reached the same mature weight, but at 31 months. Through the fifth season, approximately 75% of the original ewes were still in both flocks. However, after the sixth season, ewes bred as lambs started to leave the flock faster than those bred as year-

lings. When the ewes were 7.5 years old, 57% of the yearling-breds remained, but only 46% of the lamb-bred group remained in the flock. This early study showed that well-grown ewe lambs bred at 9 months of age could produce more pounds of lamb per lifetime than ewes mated first as yearlings. However, the culling rate was higher for those bred first as lambs, especially as they reached advanced ages.

South Dakota State University conducted a similar study in 1942 and concluded, under farm flock conditions, that Hampshire ewes bred first to lamb at 12 to 14 months of age showed an advantage over yearling-bred ewes in lifetime lamb production. However, not all segments of the sheep industry adopted the practice of breeding ewe lambs, even after these two studies. For example, Dr. W. G. Kammlade, author of a 1947 textbook entitled Sheep Science, stated that practically all purebred producers oppose the practice. He further stated "Range sheep producers do not follow the practice; perhaps not because they are opposed to it, but because the conditions under which they operate make it unadvisable. On the other hand, some farm-sheep raisers have followed the practice for years and think it is profitable."

Hohenboken, in 1977, suggested the experience gained by ewes raising lambs at one year of age make them better mothers at the two-year-old lambings than ewes lambing first at two years of age. In his study, both groups gave birth to the same number of lambs per ewe exposed, but those that had been bred as ewe lambs weaned 12 more lambs and 840 more pounds of lamb per 100 ewes exposed than those exposed first as yearlings. This difference was attributed to the previous maternal experience of the ewes bred as lambs versus the lack of previous maternal experience of ewes bred first as yearlings. Other research has shown that ewe lambs with the ability to lamb at 12 to 14 months will produce more pounds of lamb per lifetime than those lambing first at two years of age.

Factors Affecting Successful Breeding of Ewe Lambs

Season. Ewes are short-day breeders, which means their mating activity **increases** as the day length **decreases** from the **longest** (June 21) to the **shortest** (December 22) days of the year (i.e., the normal breeding season for ewes is fall). Typically, ewe lambs begin cycling later than mature ewes, so their mating season is shorter in length. Consequently, there are fewer opportunities for ewe lambs to become pregnant. Put another way, in order for ewe lambs to have "acceptable conception rates" and lamb at 12 months, they need to reach puberty (begin cycling) early in the fall of the year.

Age. The age at first behavorial estrus (puberty) generally varies from 5 to 17 months of age. Age at puberty varies among breeds and is affected by the time of birth and level of nutrition. Lambs born early in a lambing season will cycle earlier than those born later in the season. This is due to the fact that they are normally heavier in body weight and are older at the beginning of the breeding season. To lamb at 12 months, ewe lambs must begin to cycle by 7 months of age. In order for age and season to be in concert, ewe lambs need to be born in April, exposed to rams in late November and early December, and lamb the next April. Higher levels of pre- and post-weaning nutrition lowers the age of first estrus. Also, single lambs cycle at younger ages than twins or triplets, primarily because they are heavier at any given age.

Weight. Numerous research studies have reported that ewes of a breed or crossbred at a given time during the breeding season must pass a specific threshold of body weight before they are physiologically capable of exhibiting estrus. Other research has shown that ewes begin cycling once they reach a fixed percentage of their predicted adult weight. However, this percentage has varied by different genetic types and in different experiments from 33 to 80%. This leads to the conclusion that ewe lambs of most of the breeds in the U.S. reach puberty between 80 and 100 pounds.

Weight Change During Breeding. Nutritional flushing, i.e., having ewes on a rising level of feed intake and weight gain going into the breeding season, is known to increase fertility and twinning rate in mature ewes. Flushing has not, however, had much effect on the twinning rate in ewe lambs. This is because ewe lambs should be fed at a relatively high level of nutrition from weaning through breeding so they gain 0.5 pounds or more per day. Efforts to increase the gain even more during the nutritional flushing and through the breeding season will not increase the twinning rate. Apparently, most ewe lambs of most breeds are capable of carrying only a single lamb to parturition, regardless of whether they have a high frequency of twin ovulations.

Breed. Differences among breeds and breed crosses in age and weight at puberty have been documented. Fine wool breeds and composite breeds carrying high percentages of fine wool breeding (Rambouillet, Targhee, Corriedale, Columbia) are not the best candidates for lambing first at a year of age. Although some may conclude this is a disadvantage for these breeds, it actually becomes an advantage because these breeds are produced in arid climates where the feed supply on an annual basis limits maximum production. Breeding ewes to

News to Ewes continues on pg. 24

News to Ewes continued from pg. 23

lamb at 12 months could be a disaster in this environment because of low conception rates, lambing problems, extra labor needs, and slow growth rates of offspring.

Too small a proportion of long wool (e.g., Romney, Lincoln) ewe lambs conceive at 7 months to warrant trying to breed at this early age. The same is true for late maturing medium wool lambs (e.g., Hampshire, Suffolk). On the other hand, Finnsheep, Romanov, and hair breeds (e.g., Katahdin, St. Croix) and their crosses are high in both ewe lamb fertility and twinning rate. The advantage is carried through to a larger number of lambs weaned per ewe lambing and per ewe exposed. Crossbred ewe lambs cycle at younger ages and exceed purebred ewes in fertility, prolificacy, and total pounds of lamb weaned.

Selection of Ewes to Lamb at 12 Months

Accepting the fact that any one or a combination of factors just discussed may keep some ewe lambs from conceiving at 7 months of age, selection of those with the best chance of lambing at 12 months (yearlings) becomes critical. **Select lambs born early** in the year and early in the lambing season. Research has shown these ewes, like their mothers, tend to breed and lamb earlier than those born later. If ewe lambs are at least **7 months old in the fall of the year** (normal breeding season), age should not be a significant selection factor. These lambs are old enough to cycle (5 to 17 months range), should weigh enough (80 to 100 pounds), and the season for breeding (fall) is correct. **Select the top two-thirds of the twins** in the flock for average daily gain. This means the producer who owns the ewes should provide a set of records. Although twinning is lowly heritable (10%), continual selection for twinning, over years, will result in more lambs produced per ewe per year and ultimately more pounds of lamb produced per ewe per lifetime. It should be remembered that, on average, single lambs will weigh more than individual twins at birth, at weaning, and at other times until mature weights are reached at 2 to 3 years of age. Even though **singles tend to exhibit first estrus before twins**, to successfully breed ewe lambs at 7 months, they must first reach this age in the correct season (fall). That is, if they are at least 6 months old in the fall, age is not a factor that will affect puberty. They should also be heavy enough for breeding (two-thirds of projected mature weight). This weight is usually **80 to 100 pounds** depending on breed. Ewe lambs weighing less may cycle and become pregnant but are more prone to have lambing and milking problems than heavier lambs.

When selecting ewes to lamb at 12 months, always remember **October is the optimum month** to breed January/February born lambs. **Late November and early December is the optimum time** to breed April born lambs. These months are in the correct season for breeding ewes, the lambs will be old enough to cycle, and they should weigh enough to successfully conceive if they are breeds or crossbreeds that have the potential to lamb at 12 months of age.

Advantages of Breeding Ewe Lambs

Advantages of breeding ewe lambs are gained after the **Factors Affecting Successful Mating of Ewe Lambs** are considered. When comparing ewes that lamb as yearlings with those that lamb as two-year-olds, some growth retardation of ewe lambs can be expected. Equal mature weights will be reached, but it may take ewe lambs longer to get there. Wool growth (production) does not appear to be affected by lambing at a year of age. A significant advantage of lambing at 12 months is that poor performers can be culled prior to breeding again as yearlings. This can result in a significant savings in maintenance feed cost. Income from ewe lambs comes sooner than from two-year-olds. First lamb income from yearling lambers can come as early as 14 to 17 months from the time they were born whereas two-year-old lambers will not produce any lamb income until they are 26 to 29 months old. Another real advantage of breeding ewe lambs at 7 months is those lambs that did not conceive can be sold as lambs (before they are 12 months old) and still bring lamb, not mutton, prices. Extensive research has shown the main advantage of breeding ewes to lamb first at 12 months is the production of 80 to 130 more pounds of marketable lamb per ewe per lifetime than for ewes that lamb first at two years of age.

Management Recommendations

Ewe lambs require more daily attention – from pre-breeding through breeding, gestation, lambing, and lactation than ewes bred first as yearlings. Internal parasite control must be more strict than for older ewes. Therefore, they should be maintained separate from yearling and older ewes through breeding, gestation, lambing, and lactation. Even so, producers should be prepared for lower conception rates, smaller birth weights, and lower lambing rates than obtained with more mature ewes.

The first thing producers should do is to plan the breeding season so they can be sure their breed of ewe lambs will be cycling. Mating ewe lambs prior to October 1 is not recommended. November and early December will produce best results. **This means ewe lambs should not be allowed to mate until they are at least 7 months old and weigh 80 to 100 pounds at the start of the breeding season.**

Nutritional management should be so ewe lambs gain 0.5 or more pounds per day from weaning through the breeding season. If they are on pasture, this means each lamb will need to be supplemented with 1.0 to 1.5 pounds of shelled corn or a grain mix from weaning through breeding. This level of supplementation may be slightly reduced during early gestation (depending on the ewes' body condition), but increased in late gestation. Pregnant ewe lambs require about 25% more feed than mature ewes of similar weight because they have nutritional needs not only for production, but for their own continued body growth, too.

Choose a mating system that is compatible with land, feed, equipment resources, management skills, and goals for raising sheep. Systematic crossbreeding should increase lamb production when breeding ewe lambs. For producers whose goal is efficient and economical conversion of forage and harvested feeds into lamb for the slaughter market, crossbreeding often will be the mating system of choice. However, a knowledge of genetics and a flock size of at least 100 ewes will be required for a systematic crossbreeding system to be economical.

The choice of breeds or breed crosses should be made for their adaptability to physical and management conditions, then for their ability to produce lamb and wool in the total management program (as ewe lambs and mature ewes). Once these choices have been made, then determine if breeding ewes to lamb at 12 months will be an economical venture. To aid this economic venture, mate ewe lambs to rams of breeds of smaller mature size and/or rams with relatively small heads and shoulders. Either or both of these breeding management techniques will reduce the incidence of difficult births for these ewe lambs. Many research studies around the world have

shown that ewe lambs have a shorter length of standing heat and they are less likely to seek out and court a ram than are mature ewes. The chances of them being detected in estrus and mated successfully will be increased by (1) mating them separately from mature ewes, (2) using more rams per 100 ewes than would be necessary with mature ewes, (3) using experienced rams, but not using rams so large there might be a danger of injuring the ewes during mating, and (4) maintaining ewes and ram in a pen, lot, or small pasture during the breeding season. Even if these recommendations are followed, expect a larger percentage of open ewes after the breeding season than for mature ewes. Therefore, exposing 30 to 40% more ewe lambs than are actually needed could prevent the expense of carrying open ewe lambs until the next breeding season as yearlings. As mentioned above, the opens can be marketed when still young enough to command lamb, not mutton, prices.

In many flocks, ewe lambs normally begin lambing about the time mature ewes are finishing. This allows for earlier recognition and more attention to lambing difficulties and more time for ewe/lamb pairs to "mother-up" in lambing jugs. It also allows ewe lambs to go deeper into the breeding season before exposure to rams. In contrast, if ewe lambs can be bred early in the breeding season, they will lamb earlier and before many of the mature ewes. This is the time when shepherds are the freshest and can give their undivided attention, without distractions, to these young ewes.

Post-lambing, yearling ewes with lambs should be managed separately from mature ewes. This way, adequate nutrition can be provided and continual observation of both ewes and lambs is more intense. Yearling ewes will not produce as much milk as mature ewes so a creep availability for lambs is a necessity. If these ewes and lambs are on pasture in the spring and summer, supplementation with 1.0 to 1.5 pounds of shelled corn or a grain mix per head per day will be necessary to maintain milk production, prevent excessive weight loss, and help reduce internal parasite infestation. Lambs born to these ewe lambs should be weaned at six to eight weeks of age. This will allow the ewe sufficient time to recover from the strain of lactation and for growth prior to the next breeding season.

Summary

Can I Breed My Ewes to Lamb at a Year of Age? The answer is "yes" in most situations. The success of "yes" situations requires a fall breeding season for lambs that are at least 7 months old and weigh 80 to 100 pounds (two-thirds of their projected mature weights). Early maturing (Finnsheep and Romanov) and hair (Katahdin and St. Croix) breeds fit this model best. These ewes should produce 80 to 130 pounds more lamb per lifetime than breeding them to lamb first at two years of age. To attain this increased productivity, ewe lambs will have to be managed separately from mature ewes because they require greater attention through pre-breeding, breeding, gestation, lambing, and lactation. They also have to be fed to produce concurrent body growth, wool/hair growth, fetal growth, and maximum milk production.

Yes, ewes can be bred to lamb first at a year of age. However, success will depend on the incorporation of genetic principles, animal breeding systems, reproductive capabilities, nutritional management, and health maintenance into an integrated management program.

Dr. Donald G. Ely, *professor in the Department of Animal and Food Sciences at the University of Kentucky*

The Last Move

by Shon Wylie

Last Move Farm, LLC began as a Thoroughbred racing stable and breeding/breaking/layup operation. That was in the 1980s and 90s. Late in the 90s, it also became home to the Kentucky Chapter of ReRun, Inc., a national Thoroughbred adoption program that we co-founded, while still housing our personal racehorses and those of clients.

By 2007, as the economy was undergoing a change for the worse, something inside me was changing too. My health was not good, and I began to wonder if whatever was being pumped into and onto my factory-farmed food could be a contributing factor. It was also not lost on me that given the faltering economic climate, it might be a good idea to cultivate a little more self-sufficiency. Thus began a new farming adventure for us—one that would forever change our outlook on food and the animals that provide it.

In the spring of 2008, we acquired Polka Dot, a rather cantankerous Alpine dairy doe. Polka was currently in milk, which automatically made her 'the one' for me.

"She's kind of a one-person goat," explained the woman from whom she was purchased. There was no more elaboration on the subject, as if in the goat world the meaning of that statement was abundantly clear.

The next morning, as I began to put into practice the theory of milking I had gleaned from the mountain of books I had read on the subject, Polka made "one person goat" crystal clear. Also not left to the imagination was exactly what she thought of the fumbling hands of a novice milk maid.

"We should call you Stone Hands!" joked my husband Jerry, watching as Polka kicked aside the milk pail for the umpteenth time.

But that was then, and this is now. Last Move Farm is currently home to a herd of 10 dairy does, 10 beef cows and calves, 28 ewes and the resulting spring lambs as well as 50 hens (give or take a few). Other critters necessary to our operation include two llamas and a Maremma dog, all guardians and staunch defenders of the sheep and goats.

Let me pause right here to state very clearly that we are not your typical farmers. In fact, our sheep mentor, Kathy Meyer, once made a slightly tongue-in-cheek comment as I recounted my attempts at helping our heifer who was struggling to bring her firstborn into the world. Kathy pointed out that what I had done could have been quite dangerous, but then ended her reprimand with "But, it's not like you have 'real' cows." I *may* have detected an eye roll as well.

True, some of the unconventional ways things get done around here were born of necessity. It is a small operation, and we don't have the luxury (yet) of highly trained dogs to propel our sheep from Point A to Point B. Instead, we rely on that great motivator—food—to do the trick. In addition, early on we devised a plan to make sure we were well-stocked with affable animals. We bottle-raise a continual stream to insure

Jerry and Shon Wylie, living and loving life on the farm.

trusting, friendly critters (bovine, ovine and caprine) that will come running in anticipation of an ear scratching!

Now, eight years after the first actual farm animal set hoof on our property, the next phase of Last Move Farm, LLC is set to launch. The Bed & Breakfast at Last Move Farm will offer visitors the chance to experience the gorgeous central Kentucky countryside up close and personal. Guests who want to get away from it all to a slower pace are welcome to kick back and relax or, take a walk and explore our 50 acre farm. From this convenient location, visitors to the Bluegrass can access some of the top equine venues in the country. The Kentucky Horse Park, Keeneland, world-renown horse farms of all breeds and disciplines, the Clay Wildlife Reserve are close by—even Churchill Downs is less than two hours away. In addition to horses, the Bourbon Trail, Red River Gorge and the artists of Berea are all within easy driving distance.

Those traveling with equine or canine companions of their own will be happy to know that we can accommodate their four-legged friends as well in our large stalls, paddocks and AKC kennels.

We have always enjoyed meeting people and making new friends, especially with people who share our interests and who love animals as much as we do. For us, it is all about being as self-sufficient as we can while providing the most humane treatment of the animals we raise. That's what we want to share with others.

For those who are interested in gaining a bit of self-sufficiency for themselves, we welcome guests who would like to experience a day (or more) on a small working farm.

"Isn't it interesting," my husband once queried me, "that so many people we talk to have the notion that farm life is so laid back and idyllic?"

"Yes," I mused. "Interesting, and not entirely accurate."

Some people who come to visit may discover that the work involved in day-to-day farm life is just not their cup of tea. We contend that is better determined prior to making that investment in livestock. Education is a big component of the plan for Last Move Farm, as we hope to help people avoid some of the lessons that we had to learn the hard way.

As a Kentucky Proud certified agribusiness, Last Move Farm will provide classes on a variety of topics including but not limited to milking (by hand and machine), wine making, cheese making, soap and lotion making and (when the opportunities present themselves) animal husbandry practices such as hoof trimming, worming, disbudding, tattooing, shearing and if visitors are in just the right place at the appointed time—birthing.

Even if folks are just looking to find a trusted source of all-natural, humanely-raised meat, goat milk body care products or useful household helpers and décor made from fleece and fiber, Last Move Farm can be their connection!

Shon Wylie *graduated from the University of Kentucky with a B.A. in journalism. She and her husband, Jerry, are both Thoroughbred trainers that now also raise sheep, dairy goats and cattle. With an eye toward natural and humane treatment of animals, their agri-tourism farm seeks to educate others in self-sufficiency.*

Last Move Farm

Owners: Jerry & Shon Wylie
Address: 1838 Lower Jackstown Rd., Carlisle, KY 40311
Phone: 859-707-0922 or 859-289-7555 call or text
Email: lastmovefarmky@hotmail.com
Website:
www.lastmovefarmky.com

MARKETPLACE

American Dorper Sheep Breeders Society, Inc.
573-696-2550 • www.dorper.org

Bluegrass Livestock Marketing Group
www.bgstockyards.com

Callicrate Bander 1-800-858-5974
www.CallicrateBanders.com

FarmTek Fodder Pro 1-800-201-3414
www.FodderSystems.com/ADHP

Fastrack 1-800-727-0716
www.showmeperformance.com

Febus Farms
859-734-9035

HoofTrader KY Sheep & Goat Development Office
www.kysheepandgoat.org • 502-682-7780

Kentucky Goat Producers Association
www.kysheepandgoat.org

Kentucky Sheep & Goat Check-Off
www.kysheepandgoat.org

Kentucky Sheep & Wool Producers Association www.kysheepandgoat.org

Ketcham's
www.ketchamssheepequipment.com

MountainView Machine
605-253-2018
www.mountainviewlivestock.com

National Livestock Producers Association
www.sheepandgoatfund.com
1-800-237-7193 ext. 10

Paris Stockyards
859-987-9945

TN Sheep Producers Association
www.tennesseesheep.org

Tennessee State Fair
www.tnstatefair.org

United Producers, Inc.
270-843-3224

University of Kentucky
www.uky.edu/AnimalSciences/sheep/sheep.html
www.uky.edu/AnimalSciences/goat/goat.html
www.ca.uky.edu

KY Sheep & Goat
CHECK-OFF

The Kentucky Sheep and Goat Check-Off Program collects $.50 for every $100 worth of sheep and goats sold in the Commonwealth. According to Kentucky law, Check-Off funds must be used for the purpose of promoting the increased use and sale of sheep and goats.

Major efforts of the Check-off program:

- The New Farmer Recruitment Program is a competitive loan program offered by the Kentucky Sheep and Goat Council and is designed to help grow Kentucky's sheep and goat industries. The loans are short term (1 to 2 year) loans of up to $2,000 with 0% interest, and only offered to graduates of the SRPS (Small Ruminant Profit School) program.
- Special Projects Grant- Provides funding for sheep and goat related special projects that either work to increase the supply of sheep and goats in Kentucky or increase the demand for Kentucky raised sheep and goats and their products.
- State-wide promotion and marketing of all sheep and goat products such as the Kentucky State Fair, Incredible Food Show, promotional materials for producers and so much more!

To learn more details about the Kentucky Sheep and Goat Check-off Program visit **www.kysheepandgoat.org/Check_Off.html**

Kentucky
SHEEP & GOAT
DEVELOPMENT OFFICE
P.O. Box 4709
Frankfort, KY 40604-4709

PRSRT STD
US Postage
PAID
Permit #1
Lexington, KY