

Volume 22 Winter 2016

# *Hoof*Print

The Small Ruminant Magazine



THE ROOTS OF **"POOLING"**

**MARKETING  
VS. SELLING**

**GENETICALLY  
SPEAKING**

The Sheep's Role  
in History (Part 2)





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# Hoof Print Magazine

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Free with paid membership to one or more of our partner organizations.

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

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# Hoof Print

The Small Ruminant Magazine



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## KSWPA Highlights for 2015

The Kentucky Sheep and Wool Producers Association really gave members the "bang for their buck" in 2015! A growing number of members were able to take advantage of many benefits offered through the association. Below are a few of the things we accomplished with the help of many wonderful volunteers!

2015 total membership was 125 people! All these folks are represented by a very diverse board that consists of producers that grow and market fiber, direct market meats, raise purebred stock, raise and sell club lambs, conduct wool education across the state, conduct research on sheep production, facilitate graded sales, and raise commercial stock.

**KSWPA conducted several educational events for members including:**

- Small Ruminant Profit School
- Assist and sponsor the UK EweProfit Schools

**KSWPA promoted the production of sheep in KY, as well as sheep products to thousands of consumers:**

- KY Farm Fest in Crestwood, KY
- 2015 Commissioner In Ag Breakfast at the 2015 KY State Fair
- 2015 Incredible Food Show
- Tim Farmer Country Kitchen Cooking Show

**KSWPA supported our sheep youth in Kentucky:**

- Provided a monetary award to the KY Proud Champion and Reserve Champion Market Lambs at the 2015 KY State Fair
- Sponsor sheep judging at the State 4-H/FFA Livestock Judging Contest

**KSWPA supports the sheep industry in Kentucky by**

- serving on the KY Farm Bureau Sheep and Goat Commodity Group, which makes recommendations to legislatures that benefit producers
- providing KY Legislators with products from the sheep industry in the KY Farm Bureau Legislative Baskets
- Conducting the Make It With Wool Contest at the 2015 Annual Producer Conference, which encourages youth and adults to use wool to create clothing
- Provided Scrapie education to hundreds of producers
- Conducted the 6th annual Kentucky Sheep and Fiber Festival at Masterson Station Park Lexington, KY
- Provide leadership in the KY Livestock Care Council
- Have a regional director, Bob Leer, within the American Sheep Industry Association
- Have representatives on the American Sheep Industry Production, Education and Research Council



## 2015 Kentucky Make It With Wool

The 2015 Kentucky Make It With Wool Competition was held October 17 in Frankfort along with the 2015 Annual Producer Conference. All entries were made from 100% wool or a minimum of 60% wool. All contestants must select, construct and model the garment themselves. The purpose is to promote the beauty and versatility of wool fabrics and yarns, and to encourage personal creativity in sewing, knitting and crocheting with wool fabrics and yarns. The garments were judged on construction and modeling in the morning by a panel of three judges: Annie Brown, Marjorie Baker and Erin Holton who represented Kentucky at NMIWW seven times. Kristy from Kristy's Kreations felted wool prizes for the judges. Thank you.

The winners in each division received a garment bag with KY Make Wool design and all contestants received 2 ½ yards Pendleton Wool and sewing notions. Abigail Rank the Junior winner will represent Kentucky at the National Make It With Wool Competition to be held in Scottsdale, Arizona in January 2016. Marion Mulligan the adult winners garment and video will be judged in the Adult Division of the National Competition. Thanks to all that helped with contributing for the contestant's food and expenses at the National Competition.

The Pre-teen (12 and under) winner was Molly Eby from Bloomfield with a 100% cream cape. She also won the Kentucky State Fair 4-H best wool garment and received 2 ½ yards of Pendleton Wool donated by KYMIWW.

The Junior Division (13 to 16) winner was Abigail Rank from Winchester with a Green Wool Jacket. Gillian Mudd from Raywick is the alternate with a 1960 vintage coat and dress with wool she received from her grandmother. Other juniors were Emily Straus from Butler who used wool her sister won at prior competitions to make her blue dress. Amber Lucas from New Hope make a summer dress with her light weight pink plaid wool.

The Adult Division (over 24) winner was Marion Mulligan from Springfield with her navy 100% wool dress and navy and ecru hounds tooth jacket. Marion's outfit along with a video will compete in the National Adult competition. Other adults were Kathleen Wille from Versailles who made a tan and raspberry hounds tooth 100% wool coat. Emily Lee from Lawrenceburg made a pencil skirt and loose fitting wool wrap that she plans to wear as she rides her bike to work.

It is time to think about sewing to enter 2016 competition which will be October 8, 2016 in Burlington, Ky – entries due September 1, 2016 The categories are Preteens (12 and under) and they can enter one piece such as a skirt, pants, jumper or a dress. Juniors (13 to 16), Seniors (17 to 24), Adults (25 and older) their entries can be a dress, jumper, outerwear lined coat or jacket, two piece outfit or an ensemble. The Made for Others (any age) can be any wool garment and will be modeled by the person the garment is made for. The garment is to be made from 100% wool or wool blend (minimum 60% wool or specialty wool fiber including mohair, cashmere, alpaca, camel, llama and vicuna) for each fashion fabric or yarn uses. **Please send a 5x5 piece of wool to be tested before construction.** The top 4-H wool garment at the 2016 Kentucky State Fair will receive 2 ½ yards of Pendleton Wool. Remember the winner of the Junior and Senior will represent Kentucky in the National Competition held in Denver, Colorado in 2017 and the Adult garment will go on to be judged in the National Adult Competition. Entry forms will be available by contacting Dorothy Vale, State Director; 142 Carolyn Lane, Nicholasville, KY 40356, cell 859-420-3217, e-mail kymiww@aol.com. Entry forms will also be on kysheepandgoat.org web site in the spring.



### 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
- 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.

**TIME TO RENEW !**  
Visit [www.kysheepandgoat.org](http://www.kysheepandgoat.org)



## PRESIDENT'S LETTER

I haven't accepted the fact that fall has gone. I wish the grass was still growing and the sheep were still in a time of low maintenance. I wish it could just go on like this for a long time. Oh well.

This is my last letter as President of the Kentucky Sheep and Wool Producers, Inc. Those of you in Kentucky know our state agriculture-branding program is called KY Proud. So, before I go, I want to point out a few things here in KY in which we can all be proud. These accomplishments have been brought to you by a small but dedicated group of volunteers and professionals who have worked tirelessly to move our industry forward.

- Increased the KY sheep flock to 49,000 which is a 12,000 head increase in 7 years
- Started the Sheep and Goat Development Office in 2007
- Hired a part-time executive director, office manager, and a KSFF Director
- Publish Hoof Print Magazine 4 times per year
- Publish the KY Sheep & Goat Management Calendar
- Organize and host:
  - Kentucky Sheep and Fiber Festival each May in Lexington, KY
  - Small Ruminant Profit School offering a series of classes for new sheep and goat producers
  - Ewe Profit Schools at the University of KY Sheep Unit, 4 times/yr.
  - Annual Producer Conference for sheep & goat producers held in October
- Serve lamb at the KY State Fair opening breakfast, and all during the fair
- KY Proud Lamb Jam cooking contest held during the Incredible Food Show in Lexington
- Representation at all important state and national sheep meetings
- Started the Sheep and Goat Check-off Program, which awards grants for promotional events, gives loans to beginning sheep and goat producers, sponsors educational programs and events, and partially funds the Sheep & Goat Development Office each year.
- BTW, I hear the next big under taking will be on October 8, 2016 when KY hosts a three state summit conference on small ruminants!

Again, there is a lot in which we can be proud. I am thankful to have helped move our industry forward with such a fine group of dedicated people. I encourage you to get involved with your state sheep association!

Speaking of moving forward, I would like to welcome Scott VanSickle as the new President of the Kentucky Sheep and Wool Producers. Scott has served as one of the dedicated people mentioned above who has helped accomplish many of the things that make our state's industry great. Scott has proven to be a steady hand with lots of experience in the sheep business.

See you there!

*Jim*

Jim Mansfield, KSWPA President

## 2016 KSWPA Board of Directors

### President

Scott VanSickle, Auburn, KY  
scottvansickle@wheattech.com

### Treasurer

B.P. Davis, Mt. Sterling, KY  
davisclublamb@yahoo.com

### Vice President

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

### ASI Regional Director

Bob Leer, Paris, KY  
bobleer@bellsouth.net

### Past President/ASI Director

Jim Mansfield, Salvisa, KY  
jim@fourhillsfarm.com

### Make it with Wool Chair

Dorothy Vale, Nicholasville, KY  
kymiww@aol.com

### Secretary

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



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

## KENTUCKY CLUB LAMB ASSOCIATION

The annual awards and meeting of the Kentucky Club Lamb Association was held October 4th in Clark County. Everyone who attended enjoyed a potluck dinner before the awards presentation. New officers were elected; Julie Cantrell – President; Wanda Isaac – Vice President; Beth Coyle – Secretary; LeighAnn French – Treasurer; Youth Directors – Charity Browning and Tim Isaac; Membership – Dorothy Vale. The KCLA silent auction at the KY State Fair was a success – look for it next year the week of the market lamb show. Five people donated funds to purchase Belt Buckles for the division winners.

Awards for youth are given in five age groups- Novice (8 and under), Clover (9 to 11), Junior (12 to 13) Intermediate (14 to 16), and Senior (17 to 21). There is also a TOP TEN, which is based on overall points. Other awards were given for the **KENTUCKY BRED POINTS, LEADERSHIP & COMMUNITY SERVICE, SHOWMANSHIP POINTS AWARDS, and SHOWING MARKET LAMBS**. Each Division winner received a KCLA sheep blanket others receive a KCLA water bucket.

### NOVICE DIVISION (U<9)

- Ty Jones
- Kenleigh French
- Jayde Cantrell
- Linda Isaacs
- Clark Coyle
- Addison Arnold
- Addison Story
- Kassidy Perkins

### INTERMEDIATE (14-16)

- Kyleigh Withers
- Dale Mastin
- Austin Dunagan

Top Showman in each division received a KCLA Sheep Blanket. Overall Showmanship was TJ Yazell.

### SENIORS (17 to 21)

- Tobee Hagerman
- Lauren Dixon
- Christopher Hinkle
- Tabitha McKee
- Shanea Capps
- Lauren Malone

Novice – Linda Isaacs and Ty Jones  
Clover – Campbell Coyle  
Junior – Cameron Dunagan  
Intermediate – TJ Yazell  
Senior – Tobee Hagerman

### CLOVER DIVISION (9 to 11)

- Campbell Coyle
- Corbin Coyle
- Marcie Lynn Hazelrigg
- Audrey Dixon

### JUNIOR (12-13)

- Cameron Dunagan

### INTERMEDIATE (14-16)

- T J Yazell
- Mason Miracle
- Tim Isaacs
- Charity Browning
- Tori Vaughn
- Logan Kearns

The **Top Ten OVERALL** received KCLA embroidered sheep halter

- T J Yazell
- Mason Miracle
- Tobee Hagerman
- Cameron Dunagan
- Tim Isaacs
- Lauren Dixon
- Campbell Coyle
- Christophe Hinkle
- Tabitha McKee
- Corbin Coyle

For more information and membership information please contact Dorothy Vale at KCLA.Dorothy@aol.com. Membership is \$10 a year for Kentucky youth or adults. Youth must be member before they can accumulate points.

## KSWPA - UPCOMING EVENTS

### JANUARY

Date	Location / Details
12th	Central KY Sheep and Goat Association, Marion County Extension Office
16th	4th SRPS Class
19th	UK Lambing School C. Oran Little Research Farm Midway, KY
27-30	ASI Annual Convention Scottsdale, AZ

### FEBRUARY

6th	Kentucky Small Ruminant Grazing Conference Ashland, KY
-----	--

### MARCH

8th	Central KY Sheep and Goat Association, Marion County Extension Office
22-23rd	UK Shearing School C. Oran Little Research Farm Midway, KY

### APRIL

5th	Eweprofit School III C. Oran Little Research Farm Midway, KY
16th	KY Proud Elite Breeder Sale, Franklin County Fairgrounds, KY



## President's Letter

*Hello fellow goat producers!*

Winter is here and we hope that you and your herd are all warm and dry. The winter months are a perfect opportunity to make management decisions regarding your goat herd for the coming year. As you read this we are gearing up for the fourth Small Ruminant Profit School Class and the Small Ruminant Grazing Conference.

The Small Ruminant Grazing Conference is scheduled to be held at the Boyd County fairgrounds, 1760 Addington RD, Ashland, KY on Feb. 6th 2016. Sponsored by the University of Kentucky, Kentucky State University and the Kentucky Sheep and Goat Development Office, the conference provides an incredible opportunity to learn more about pasture management and the use of forage to reduce the cost of goat production. There is a small fee to cover the conference and includes lunch. As you ponder your production plans, consider attending the conference to aid in your decision making.

The Small Ruminant Profit School has been an excellent tool for new producers to learn how to raise goats and sheep efficiently, and at a profit. If you are a new producer, consider signing up for the next round of classes. Go to [www.kysheepandgoat.org](http://www.kysheepandgoat.org) to learn about the school. Registration for the next round of classes will be available mid 2016.

The Kentucky Goat Producers Association had a great annual conference in October at the Kentucky State University Research Farm. We elected four new board members:

Donna Puckett is a familiar name to most of us as is Kenny Fenwick. Both are meat goat producers and live in Nelson and Hart counties Kentucky. They have served on our board of directors in the past and we are pleased they have been reelected to serve the Kentucky goat producers. We also welcome two brand new board members, Amy Keach and Jackie Bremer. Amy Keach is a dairy goat producer from Baghdad Kentucky. She is very active in raising and showing dairy goats and raising meat goats. Jackie Bremer is a meat goat producer whose son is active in FFA and the market goat show world. He has also, with support from his family, created a goat milk soap business, "Joes Bars and Suds". Jackie lives in Danville Kentucky.

All of our Board of Directors contact information can be found on these pages. If you have any questions or need any help please don't hesitate to contact any of us, we are here to serve.

The newly seated Kentucky Goat Producers Association Board of Directors had their first face to face board meeting on November 21st. The first order of business was to elect the officers of the Board.

President- Denise Martin

Vice-President- Vincent Thompson

Correspondence Secretary- Jackie Bremer

Treasurer- Brent Ballinger

Membership Secretary- Sheila Duncan

Please welcome them to their new positions when you run into us at any of the great events planned for this year!

Thank you for your continued support and please contact us if you need any help or have any questions in your day to day goat production plans.

Sincerely,

Denise Martin, President, Kentucky Goat Producers Association

## 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@millcreek ranch.biz

### Membership Secretary

*Sheila Duncan*, Hardyville, KY  
svkennels@src.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



## TIME TO RENEW! KGPA Membership Application

### Your \$30 membership provides:

- 4 issues of the *HoofPrint* 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](http://kysheepandgoat.org/KGPA.html)
- **And much, much more!**

### Visit [www.kysheepandgoat.org](http://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 Highlights for 2015

The Kentucky Goat Producers Association had a great year in 2015! A growing number of members were able to take advantage of many benefits offered through the association. Below are a few of the things we accomplished with the help of many wonderful volunteers!

2015 total membership was 168 people, consisting of 146 general and 22 youth memberships!

**KGPA conducted several educational events for members including:**

- An AI Clinic
- Small Ruminant Profit School
- Direct Marketing at the KSU Third Thursday Event

**KGPA promoted the production of goats in KY, as well as goat products to thousands of consumers:**

- KY Farm Fest in Crestwood, KY
- 2015 Commissioner In Ag Breakfast at the 2015 KY State Fair
- 2015 Incredible Food Show
- Tim Farmer Country Kitchen Cooking Show

**KGPA supported our goat youth in Kentucky:**

- Provided an updated youth membership program to reward youth to participate in goat production
- Provided prizes and additional contests at the 4-H/FFA Youth Breeding Show in Lebanon, KY
- Helps conduct the KY Proud Elite Breeder Sale
- Collected donations through the Bucks For Kids campaign, which provides funds to the Sale of Champions at the KY State Fair
- Provided belt buckles to the KY Youth Dairy Goat Showman, KY Proud Grand and Reserve Champ Market Goat winners, and the KY Proud Grand and Reserve Champ Commercial Doe winners at the 2015 KY State Fair

**KGPA support the goat industry in Kentucky by**

- Serving on the KY Farm Bureau

Sheep and Goat Commodity Group, which makes recommendations to legislatures that benefit producers

- Providing KY Legislators with products from the goat industry in the KY Farm Bureau Legislative Baskets



## KGPA - UPCOMING EVENTS

Calendar of event items can be sent to [kyates@kysheepandgoat.org](mailto:kyates@kysheepandgoat.org) with date, location and time.  
Northern Kentucky Goat Producers Association Meeting – First Tuesday of every month  
6:00pm @ the Kenton County Extension Office - 10990 Marshall Road

### JANUARY

Date	Location / Details
12th	Central KY Sheep and Goat Association, Marion Co. Ext. Office
16th	4th SRPS Class
19th	Goats of Barren County and Surrounding Counties Meeting, Barren County Ext. Office 6:30pm, email <a href="mailto:dee.daniels71@gmail.com">dee.daniels71@gmail.com</a>
21st	Fort Harrod Association Meeting

### FEBRUARY

6th	Kentucky Small Ruminant Grazing Conference Ashland, KY
16th	Goats of Barren County and Surrounding Counties Meeting, Barren County Ext. Office 6:30pm, email <a href="mailto:dee.daniels71@gmail.com">dee.daniels71@gmail.com</a>

### MARCH

8th	Central KY Sheep and Goat Association, Marion Co. Ext. Office
15th	Goats of Barren County and Surrounding Counties Meeting, Barren County Ext. Office 6:30pm, email <a href="mailto:dee.daniels71@gmail.com">dee.daniels71@gmail.com</a>
17th	Fort Harrod Association Meeting

### APRIL

16th	KY Proud Elite Breeder Sale
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# TENNESSEE SHEEP PRODUCERS ASSOCIATION

## PRESIDENT'S LETTER

### Shepherds of Tennessee!

After a dry start, our late fall grass growing has been outstanding, and the animals are happy. I won't say I'm fully "caught up" but I'm heading out for opening day of deer season in the morning instead of working all day so that must be a good sign! Hope the rest of winter is the same for you also. I have three plugs in this letter for you, and then I will let you get back to your winter chores.

By the time you read this, our annual conference will be weeks away. Sign up if you haven't already! I continue to be more and more excited about the conference as the schedule of events starts to take shape, and I encourage you to bring your family and make a weekend of it at a nice hotel near the Murfreesboro/Nashville area. I always feel so energized for the sheep business when I return from the ASI national conference, and hope to provide the same experience for our membership at our own state meeting. I think there will be something worth learning for producers on all levels and look forward to getting together to celebrate our industry, swap sheep tales with each other, and of course, conduct our annual business meeting.

Please also take the time to consider any issues you would like to hear addressed at our annual meeting. Better yet, if you would like to see our organization provide a service or tackle an issue that we haven't yet, raise your

### 2015 TSPA Board of Directors

**Sam Kennedy, President &  
ASI Representative**  
Columbia, TN

**Ed Bowman, Vice President**  
Gray, TN

**Mark Powell, Secretary/Treasurer**  
Watertown, TN

### 2015 Board Members

**Allan Bruhin**  
Sevierville, TN

**Jessica Shanks,**  
Lenoir City, TN

**Chris Wilson**  
Jonesborough, TN

**Mark Shedden**  
Knoxville, TN

**Stevan Alsup**  
Lascassas, TN

**Scott Payne**  
Columbia, TN

**Dwight Loveday**  
Louisville, TN



hand and step up to volunteer! As always, we will be electing new members to the TSPA board. We welcome participation from ALL the various segments of the sheep world. If you know someone who wants to be involved and can respectfully do business with ALL types of shepherds, pass his or her name to the nominating committee.

Lastly, one of my favorite parts of the ASI conference is a group called the "Young Entrepreneurs." It is a group that is supposed to be for producers from age 25-40, but I mainly enjoy it for the excitement the group has for the sheep business and the outside the box ideas and people I've met through it (I think that's why I also see some of the industry's greats and veterans sneaking in to participate as well.) Last year, Michigan had the strongest representation. This year, I'd like to see Tennessee send a delegation.

ASI is offering scholarships to support more "YE" attendance and I encourage all ages to take advantage of the national conference. Additionally, I will be hosting a YE social at our own state conference on Friday night, conference weekend.

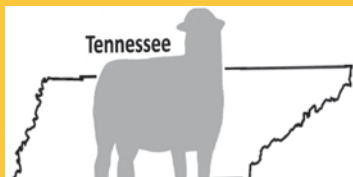
Finally, this week cull ewes are bringing a higher price per pound than cull cows as are most of the other correlating classes of sheep to cattle. Always take a moment to celebrate a victory in the sheep business. I'm sure there will be a little friendly competition and ribbing at our joint conference with Tennessee Cattleman's Association. If the above is still true in February, we may bring a few cattlemen over from the dark side. Eat lamb and wear wool!

See you at the meeting!

Sam Kennedy, President TSPA

## TSPA - UPCOMING EVENTS

Date	Details • Location • Website
February 5 - 6, 2016 April 22 - 23, 2016	<b>TSPA Annual Meeting</b> – Embassy Suites, Murfreesboro TN <a href="http://www.tennesseesheep.org">www.tennesseesheep.org</a> <b>2016 TN Sheep Shearing School</b> Featuring: <i>Doug Rathke</i> Middle TN State University - TN Livestock Center, Murfreesboro, TN Contact Mark Powell: 615-519-7796 or <a href="mailto:shepherdboy1@yahoo.com">shepherdboy1@yahoo.com</a>



If you are interested in a committee please select below:

- |   |                                |
|---|--------------------------------|
| <input type="checkbox"/> Wool                 | <input type="checkbox"/> Youth |
| <input type="checkbox"/> Jr. Expo             | <input type="checkbox"/> Sale  |
| <input type="checkbox"/> Production Education |                                |
| <input type="checkbox"/> Membership/Revenue   |                                |
| <input type="checkbox"/> Publicity            |                                |
| <input type="checkbox"/> Annual Meeting       |                                |

### JOIN TODAY!

### TSPA Membership Application

**Annual Dues:**      **Adult: \$30.00**      **Junior \$10.00**

Name: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

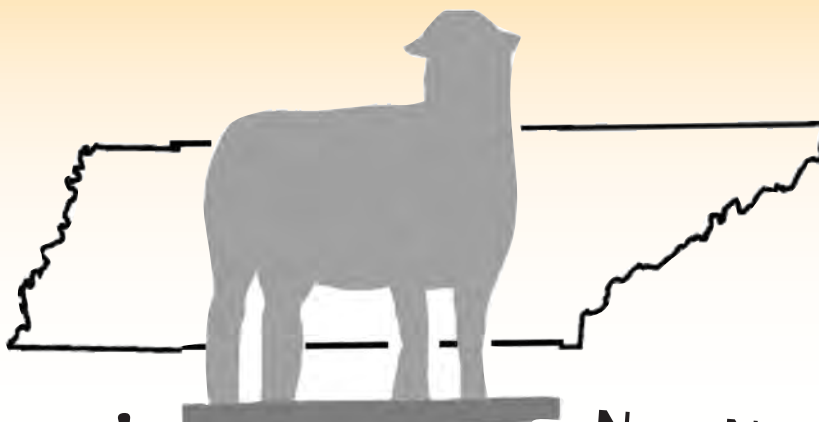
Phone: \_\_\_\_\_ E-Mail: \_\_\_\_\_

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



# NEW DATE!



**Bigger Venue!  
More Vendors!**

**New Networking  
Opportunities!**

## 2015-2016

# Tennessee Sheep Producers Annual Meeting

**February 5-6, 2016**

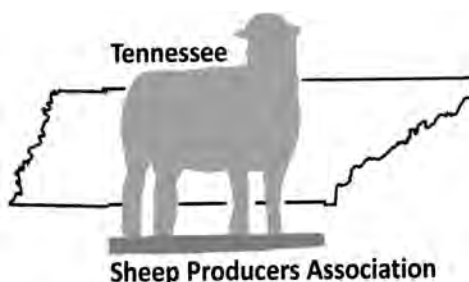
**Embassy Suites, Murfreesboro, TN**

**Details and Registration Coming Soon!**

**Visit**

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# MARKETING VS SELLING

by Amy Tavalin, Dr. Tom Huber,  
Madeline Norman, and Kelley Yates

**W**e all know the end goal in sheep and goat production is to make money. The way in which we do so looks different for each producer but, most producers will use the term “marketing” to cover all aspects of turning our livestock into a monetary end. However, when looking at many producers across the country, it becomes clear that some producers “sell” their livestock and some “market.” What’s the difference? Well, a lot actually but mainly, a producer who “sells,” is a price taker and one who “markets” is a price maker.

## Price Takers

Being a price taker means that you sell your animals for a price that is determined by the buyer, most commonly through a stockyard setting. For most producers, selling livestock through a graded sale in a stockyard is a very affordable and easy means of generating income. Benefits include:

- 1) The producer goes home with a check without doing a lot of pre-planning or negotiating to get the animals sold. Granted, the producer would have planned several months in advance when he/she would have wanted to sell in the marketplace, but the buyer was already at the sale, the facilities to sell the animal were already in place, and the check for the animals is ready as soon as the sale is over.

- 2) The price for the livestock is guided by demand, thus the price has been very favorable over the past 3 years. Prices generally follow an overall trend so, producers can plan on times when the market price is higher in order to sell their livestock.
- 3) Prices for different sizes of animals is readily available through online reports provided by USDA. There is no guessing as to the current trend in market prices.

## Price Makers

Being a price maker means you determine the price for your product instead of the buyer. Price making occurs when there is an additional value that can be associated with a product. The additional value (or value-added) is most often determined by the producer because



he/she is the only one that knows the inputs required to achieve the additional value. A value added product can be a variety of things from a purebred animal, a service the animal performs or an end product like milk, meat or fiber.

Creating a value added product is hard work. No longer are you simply selling an animal like the example above of the price taker. As a price maker, you must identify the market in which to sell your product. Hence, your efforts are marketing.

There is no better way to explain marketing than to hear from producers who live it out each day. Below are examples of marketing efforts from producers who market purebred livestock, meat products and fiber.

## Marketing Purebred Goats and Sheep

Breeders of purebred livestock have made a significant investment in establishing and maintaining quality flocks and herds. Seedstock breeders must strive to have only superior individuals, understand the true value of animals to price them correctly, keep products before the public and maintain certain public contacts. Whether active on a national, state or local level, effective advertising is a must. Advertising may be in the form of national, state and local shows, breed magazines, websites, email campaigns, social media and active involvement in state and local livestock associations.

The development of a logo and an advertising theme is time and money well spent. Most perspective buyers tend to imagine that the quality of a seller's livestock is similar to the quality of the seller's advertising efforts therefore, livestock producers that go the extra mile in creating an effective advertising campaign often reap the rewards.

Generally speaking, there are three different avenues for connecting with potential buyers- consignment sales, on-line sales and on-farm sales.

**Consignment sales** are popular even though they require marketing expenses such as sale consignment fees and travel expenses. An advantage for these sales is that a large number of prospective buyers are present. Before consigning, breeders should realize that prices received are often related to an animal's potential performance or capability of producing such animals. It is wise to only consign your best animals to

seedstock auction sales because you don't want to negatively affect the overall image of your seedstock operation.

**On-line sales** are becoming increasingly popular. Since only pictures of sale animals are available, the reputation of the breeder becomes very important for a successful sale. Buyers need to use some caution, as pictures do not reveal soundness and confirmation may be distorted due to a good fitting job. Hence, on-line auctions featuring video clips are becoming increasingly popular as a video clip gives the buyers a chance to see the animal's movement.

Lastly, **on-farm sales** can be very rewarding and often the most profitable of the three sales avenues. Good and genuine customer service will sell a lot of livestock. Presentation of sale animals in a clean area separate from other animals is important. Pride in maintaining a neat and clean farm will translate into the same attitude of animal care. Prospective buyers can be shown sires, dams and related animals to determine if sale animals are representative of the breeder's program. Marketing animals that are genetically clean from problems, are healthy and have the potential to be prolific will lead to very important and satisfying marketing results like repeat buyers. The difference between a livestock operation that makes money and one that doesn't is often the volume of repeat customers. Other "good customer service" considerations when selling from the farm is to deliver purchased animals and conduct a follow up call.

People enjoy doing business with

people they like. All three avenues require a seller that has people skills and who communicates the virtues of his product in a realistic and genuine manner.

## Marketing Meat Products

Tavalin Tails Farm raises registered and commercial Katahdin sheep. They are a young farm, started in 2011 with just 13 ewes, and today they have 290 ewes. Amy and Brandon Tavalin both have agriculture backgrounds. Brandon is a farm manager of a certified organic farm in Rutherford County, and they live on Amy's family farm in Williamson County. Since Amy's family farm is already busting at the seams, they lease 150 acres around them for the livestock production. Amy and Brandon have incorporated what they know to be successful in vegetable production to their lamb sales, and that is direct marketing.

With the recent resurgence of locally  
*Marketing continues on pg. 12*







grown, consumers want to know who grows their food and how it is grown, and for this reason Amy and Brandon have been successful at direct marketing their lamb. Using their retail meat permit, they sell their lamb at their local farmers market, and they also direct market to the customer and sell whole and half lamb on the hoof. Their biggest direct marketing outlet is to a local butcher shop. Amy and Brandon sell directly to Porter Rd Butcher in Nashville, who then sells to several restaurants in the middle TN area. Porter Rd Butcher is a unique butcher shop that also has its own meat processing plant, so their lamb goes from the farm directly to Porter Rd Butcher to be sold in their butcher shop and to restaurants.

Direct marketing takes time and investment but the Tavalins have found that they are more successful at increasing their business than if they chose another route. They initially developed a logo for their farm (see above) and then started generating marketing materials. A well designed logo implies a degree of professionalism and competence that could help steer potential customers toward choosing one business over another. Since their product would be in well known stores and restaurants, they knew that their logo needed to be simple and able to convey information about their farm. They worked with a designer who was familiar with farmers and who helped them make a comprehensible and unique logo. They also took advantage of free marketing outlets such as the TN Department of Agriculture's Pick TN Products. Social media, another free marketing tool, has also had a large impact on their business. They have to make a conscious effort to post daily on one of their social media channels: Instagram, Twitter and Facebook. With the number of social media channels increasing, Amy chose to focus on just those three, and do them well, rather than try to

be involved in all media outlets. Instagram, an online mobile photo-sharing network, enables Amy to take pictures and videos and share them with followers who want a "look" at the farm. Instagram has the most consumer interaction, while Twitter, a social media site for sharing what is happening on the farm, has the most followers for the Tavalins. Of the three social media outlets Facebook is where Brandon has been most successful at selling their registered seedstock.

The Tavalin's have two goals for 2016: first, to start selling their seedstock online by updating their current website and second, to start a second direct marketing outlet with their lamb through a meat CSA. They have spent the last two years building up their registered Angus beef and heritage pork herds to add to their lamb sells and plan to sell their meat CSA at farmers markets and other drop off locations around Nashville.

Amy and Brandon have learned in their brief time of lamb production the importance of marketing, and not just selling. They have taken risks with advertisements in magazines that cater to their customers for their meat sales, and they have had to find similar outlets for their seedstock sales. They've also learned that a lot of marketing is simply relationship building, and knowing who your customer base is will help you determine in what publications to run an advertisement. The Tavalins recognize that they need more than one outlet for their farm and to not "put all their eggs in one basket." With this in mind, they continue to advertise directly to consumers and are continuously looking for ways to direct market, either through restaurants, farmers markets or in their future plans of a meat CSA.

### Marketing Fiber Products

As with the animals from which it

originates, fiber can be sold either outright (to a wool pool, broker, or processor) or niche marketed. Selling outright results in lower costs and instant gain to the producer, but the gain is also smaller than it would be through direct marketing. For instance, at current USDA market prices raw wool auctions for less than \$0.75/lb. to \$1.00/lb; that same wool marketed directly to fiber artists will fetch nearly four times the price.

Avenues for fiber products include: online sales, fiber festivals and craft shows, local yarn shops, and on-farm sales. Of these, the farm sales are the least lucrative, as customers rarely want to travel to your location to buy fiber. Fiber may need to be processed in order to make it more attractive to buyers; while handspinners and other fiber artists may look for raw fiber, most want it washed, skirting, and processed into roving or yarn. As both producer and salesperson, you will be responsible for the cost of processing, and these costs must be passed on to the end consumer.

**Online sales:** Fiber can be marketed via independent "maker" sites such as Craftsby.com, Etsy.com, Ravelry.com, or Ebay. Many fiber producers also market their products on their business websites or Facebook pages. Social media such as Instagram and Facebook can be of use in driving business to the website. Costs include website development and hosting, advertising, and selling fees. My website and Etsy are my selling platforms for the "off season" between fiber festivals. Having an online presence also lends legitimacy to your small fiber business, as it gives you a formal "store" that can be accessed 24/7. When you sell on the internet, your market expands from your community to the entire world.

**Fiber festivals and craft shows:** Events are often the best place to sell raw fleeces and less processed fiber, since fiber artists are looking for raw product they can finish themselves. Although you can find a festival, show, or venue somewhere every month of the year, you'll want to do a lot of research before committing the time away from your farm (and life) and the travel expenses you may incur. Get a list of events in your area and contact vendors from the previous year. Ask what they liked and didn't like about the show, what they thought could have been done better, and if they've attended that event multiple times, ask what trends they've noticed



over the years. Every event has different requirements and booth fees. Be wary of booking shows that are geographically close; you will almost certainly encounter the same customers. Practice setting your booth up before you go, and have marketing materials such as brochures, samples, and business cards at the ready. Know where you excel and what sets you apart from similar vendors. Customers are looking to have a personal experience with a unique product. You can do very simple tasks to “add value” to your fiber: personalized wrapping, labels with the animal’s face on it, a free gift with purchase, etc. You will need a state tax ID to have a booth; don’t forget to include sales tax in your prices (and to submit the taxes afterward)!

**Local Yarn Shops:** Every yarn shop is different. Some sell roving, while others only want finished yarns; some will buy your fiber outright while many will sell your products on consignment. Kits are very popular - find a designer to create a pattern for your yarn, felting fiber, or roving. Take samples to the shop and ask if you can meet with the owner or buyer. Again, have marketing materials at the ready. Above all, make sure the agreement works for you! If you are uncomfortable with a price point or stipulation, offer an alternative suggestion or simply walk away. It’s easy to take things personally in this business, but remember that it *is* a business, and it’s up to you to succeed. Local yarn shops are great places to network. Many have classes and knit nights - you may be able to

host a trunk show or teach at one of these events! Fiber is a tactile product so the more hands-on people get, the greater the chance you will make a sale!

I use a combination of these platforms, coupled with educational events outside the fiber community and a podcast for fiber producers and artists. The bulk of my income is made during the festival season, with local yarn shops and online sales providing lesser (but steady) income during the “off” months. I know which animals in my flock are popular and what each of their fleeces is best for, so I can budget for paying the fiber processing mill. I plan show attendance in advance so I can budget my booth fees and I don’t (currently) travel to shows that require a hotel. I always have fiber samples and business cards with me - almost everyone knows someone who knits or crochets, and I’ve gotten opportunities with yarn shops by dropping in while travelling. My website ([ballyhoofiberemporium.com](http://ballyhoofiberemporium.com)) hosts both my podcast and my retail shop, and I use Instagram ([ballyhoo.fiber.emporium](https://www.instagram.com/ballyhoo.fiber.emporium)) and Facebook (Ballyhoo Farm and Ballyhoo Fiber Emporium) as additional (free) marketing tools.

Marketing is more work, but the payoff is greater. The relationships that develop and opportunities to connect people with the animals and fiber I love so much are reward in themselves. Customers definitely appreciate the care, knowledge, and ethical practices that go into small flock fiber production. No one knows your

animals better than you - shouldn’t you be the liaison between farm and consumer?

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**Amy Tavalin** is a marketing specialist at the TN Department of Agriculture. She and her husband, Brandon, live on Amy’s family certified organic vegetable farm, Delvin Farms, in Williamson County. Amy and Brandon started a livestock business in 2011, Tavalin Tails, where they raise Katahdin sheep, Angus beef cows and Berkshire pigs. They have a 2 yr old son they hope will one day show sheep. For updates on Tavalin Tails, follow them on Twitter (@tavalintails), Instagram (@tavalintailsfarm) or Facebook (tavalintailsfarm)

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**Dr. Tom Huber**, professor emeritus university Georgia college of veterinary medicine. He is a Hampshire breeder and former director and president of the American Hampshire sheep assn.

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**Kelley Yates**, is the Executive Director of the Kentucky Sheep and Goat Development Office and the editor for HoofPrint Magazine.

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**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](http://ballyhoofiberemporium.com) or through iTunes.



# The Roots of “Pooling”

*By Dr. Warren Gill & Mark Powell*

“Pooling” agricultural products produced by a number

of producers to facilitate marketing have an interesting history in Tennessee. In the post-Civil War years a buyer used to come to Goodlettsville, a small town 20 minutes north of Nashville in middle Tennessee, every year to purchase lambs. He was a popular gentleman who paid \$2.00 per head for lambs weighing



under 80 pounds and \$3.00 for those that weighed over 80 pounds. The weighing was done by the “eyeball” method because no one owned scales. There was never an issue using the eyeball method because the gentleman was generous with his weight estimates. However, one year the gentleman became ill and sent his son to do the buying. The son was not generous in his weights, which upset a number of farmers. The farmers decided that they would never allow themselves to be at the mercy of an individual buyer again. To avoid this problem they founded the Goodlettsville Lamb Club in 1877. The primary purpose of the club was to allow the farmers to “pool” their lambs into a single marketing unit and to collectively bargain for the best prices available.

Evidently the concept worked, and by 1891, they were marketing both lamb and wool by this method. They changed their name in that same year to, The Goodlettsville Lamb and Wool Club. This is the earliest known example of the “pooled marketing” concept which has come to be a common method for selling numerous commodities.

By 1918, the Nashville Stockyard had opened, which provided an excellent market for the lambs. However, this left the pool concept as the best way to market the wool. This led to the initiation of a state-wide wool pooling effort, with numerous locations, beginning in 1918.

The state-wide effort was coordinated by representation from the University of Tennessee, the State Department of Agriculture and the Tennessee Sheep Producers Association. By 1990, this was the oldest wool pool in the United States.

Many Tennessee sheep and wool producers marketed their products through the Goodlettsville Lamb and Pool Club and learned the value of using a cooperative to market their products. When the Goodlettsville group decided they could no longer manage the cooperative pool, the Wilson County Farm Bureau in Lebanon, TN assumed responsibility for the pool. University of Tennessee Extension specialists Paul Hite, Fred Powell, Jim Neel and Warren Gill were instrumental in maintaining the pool. In the early 1970's the Wilson County Farm Bureau asked the Tennessee Sheep Producers Association to assume responsibility for the pool. TSPA has continued to manage the wool pool with the help of a host of volunteers.

The Tennessee Wool Pool continues today with the same volunteer spirit as the early pools. Wool buyers are generally contacted in May and asked to bid on the upcoming wool pool. The buyers send in their bids by a certain date and the pool goes to the highest bidder. In June, producers bring their wool to one of two wool pools conveniently located in Columbia at the Maury



Farmers Co-op or in Maryville at the Ag Central Farmers Co-op. Each producer's wool is graded and weighed as it arrives and an invoice is generated for the producers wool with the weights and grades recorded. Since the price of the wool is determined in the prior month, the producer already knows the price he will receive before he arrives at the pool. After the wool is graded and weighed, volunteers take the wool and bale it in 400 pound wool packs using a hydraulic wool press owned by the TSPA. The wool packs are stored in the Co-op warehouse until the buyer sends a truck for pickup. This year the pool gathered 12,600 pounds of wool from sheep producers in Tennessee, Georgia, Alabama, and Kentucky. Producers received \$0.98/pound for their wool from black faced and white faced ewes. Over the past ten years, producers have received as much as \$1.25 per pound for their wool through the Tennessee Wool Pool. Much of the success and high price received for the wool is due to the wool being graded and baled into uniform wool packs weighing 300-350 pounds.

**Dr. Warren Gill** worked for the University of Kentucky and University of Tennessee Extension Services as a cattle and sheep nutritionist for 25 years before going to Middle Tennessee State University to serve as Director of the School of Agribusiness and Agriscience. Dr. Gill stepped down as director in August 2015 to teach and conduct research.

**Mark Powell**, is the Administrator of the Tennessee Agriculture Enhancement Program. Mark lives with his wife, Jenni, and 3 little girls, Sarah (8), Anna (11), and Grace (12) on a 180 acre sheep farm in Watertown, TN. He received his Bachelors degree in Animal Science from the University of Tennessee-Knoxville and a Masters in Reproductive Management from the University of Missouri-Columbia. He got a Bible Masters from Pensacola Christian College in Pensacola Florida.

### 2015 Tennessee Wool Pool

Attributes that separate Tennessee wool from other state's wool pools:

- Eliminating kemp (hair) from the wool clip. Hair or kemp is not accepted in the TN Wool Pool.
- Keeping dark wool separate from white wool
- Baling of the wool into uniformly packed wool packs
- Storing and transporting wool in approved wool sacks and not putting wool in poly mesh feed sacks

The wool pool is strictly a volunteer effort. When you bring your wool, stay until your wool is baled and then offer an hour of your time to help with the baling of other wool. It is not mandatory to stay and help, but we encourage producers who can to stay and help bale some of the wool.

#### 2015 Wool Pool Prices

White Face.....	\$0.98
Black Face.....	\$0.98
Burly .....	\$0.83
Short (White*) .....	\$0.78
Black .....	\$0.19

*\*The Short/Lamb Wool Grade is short staple wool that is white. Lamb wool shorn from black face lambs needs to be bagged separate as it has a dark color and will receive the black wool grade and price.*

### 2016 Wool Pool Pick-up Sites are TBA

*Producers from other states in the Southeast are encouraged to sell their wool in the TN Wool Pool.*

### A Wool Buyer's Perspective on Wool Pools

1. What is the current trend in wool prices, even specifically in the TN & KY areas? Staple Medium wool prices have been steady the past few years bringing in the \$0.70 to \$1.00 range for 28-32u (28 to 32 microns) types. These prices fluctuate depending on yield, grade and world markets trends such as world financial markets, consumer demand, supply, etc.
2. What are the benefits of wool pools for the commercial sheep producer? First, the convenience of not having to travel hundreds of miles to a warehouse or other buying location. Second, the grouping of similar wool allows for better pricing and makes a larger weight offer which normally attracts a better price (as long as the wool is bagged properly or classed correctly at the pool).
3. What are the major things that producers need to keep in mind when considering a wool pool? The producer needs to bag their wool properly before bringing it to the pool, and correctly identify their wool to the pool coordinator, so it gets included in the correct wool grade lines when it arrives.
4. Is a wool pool good for any sheep producer regardless of wool type, volume of wool and/or the location of the producer? All those factors depend on if the wool the producer has fits the norm of the wool in the pool. If the producer has a different type of wool like straight merino and the wool in the pool is all medium Blackface, then their wool probably wouldn't fit the pool. The producer needs to ask the pool coordinator questions to make sure their wool fits or has other grade lines for finer or coarser wool.
5. What are the major things producers need to do to get the best prices from a wool pool? Make sure they have the wool separated at the time of shearing into: fleece, lamb wool, bellies, tags, black, etc categories. If they put it all into one big pile it could lower the price of the pool.
6. What are you looking for when you grade wool? Grade, Length, %vm (vm=vegetable matter), Style & color, uniformity of grade, length, style, & color.
7. What additional things can producers do to get the most out of their wool? First, producers need to be knowledgeable about their wool and the market. Stay informed of the markets and what prices are around them for similar types of wool. Second, producers need to know their options for selling their wool. There are wool warehouses or trading companies, and cooperatives that have shearers or buyers all over the country that also bid on wool. Consider the prices offered from all the options and factor in the travel and expense of getting the wool to the selling location in order to determine the best price.

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# HEALTH & MANAGEMENT

## THE BASICS OF DISBUDDING KIDS

by Beth Johnson, DVM

**H**ave you ever noticed that some goats, especially dairy breeds, don't have horns? As a dairy goat producer, I have answered many questions over the years regarding the horns of our animals. As a veterinarian, I would much rather disbud young farm animals than have to dehorn them as more mature livestock. Disbudding is the act of removing the horn bud through the use of cautery either by heat or caustic paste in young livestock before they are 2 weeks of age. This article will discuss the principles of how this is done including proper technique to do it humanely.

Why do we remove the horns from livestock? After all isn't this one of their defenses to predators. Yes it is, but they also use their horns on herd mates or their handlers. Horns can also cause an animal to become entrapped in fences which may cause dehydration from not being found, strangulation or easy prey for their predators. In a dairy situation, it is extremely important to remove the horns to prevent injury to the mammary gland which is very susceptible to trauma.

There has been much discussion in recent years to minimize the pain associated with common farm management practices. Local anesthesia can be administered. An injection of 1-2 cc of lidocaine will deaden the horn bud which significantly reduces the pain associated with disbudding. If a producer would like to administer pain medicine after the procedure, a NSAID called meloxicam has been used for pain alleviation and is available through your veterinarian.

### Disbudding Process

The hair must first be clipped away from the horn buds. This is performed to reduce the amount of heat it takes to perform the procedure but also to allow excellent visualization of the horn bud. Disbudding should be done when the kids are 4-7 days of age. Feel for the presence of the horn bud, males tend to develop horn buds faster than females. Animals that are older than 14 days of age may have horn regrowth after disbudding in the form of scurs.

After clipping be sure the dehorning

iron is hot enough. A piece of wood is a good choice to use as a test to see if the iron is hot enough. After just a couple of seconds of applying the iron to the piece of wood, a nice burnt ring should be present. If not, you should evaluate your equipment. A dehorning iron that does not get hot enough is dangerous to use and may cause

thermal brain damage to the young animal. I have always used a dehorner iron made by Stone manufacturing, see figure 1. Go to this site if looking for this dehorning iron. <http://stonemfg.net/our-brands/stone-brand-products/dehorners.html>

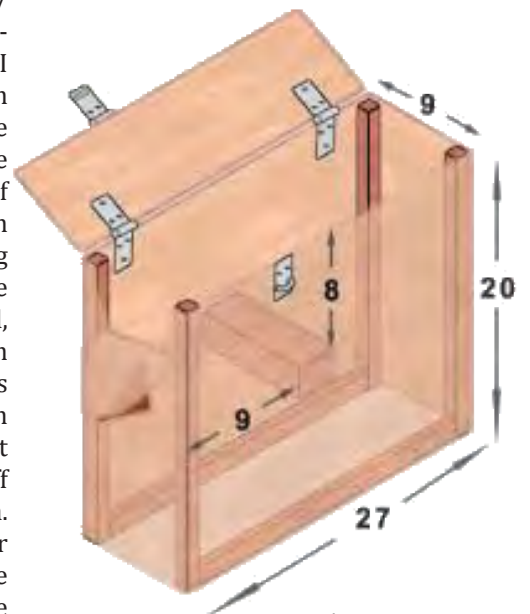
The next step is to find a good holder. If you do not have an individual that feels comfortable with being able to hold the animal while being disbudded, you may want to use a disbudding box. Figure 2 shows a box that can be made and if you need instructions look at <http://www.betterhensandgardens.com/goat-disbudding-box-plans/> for directions. I prefer a human holder since you can monitor the kid while performing the procedure. I am right-handed therefore I place the kids head on the right knee of the holder keeps the ears back from the head, I hold the nose of the kid and apply firm pressure with the dehorning iron which is placed over the horn bud of the kid. With a rotating firm pressure applied, I count to 3-5 seconds and then lift the iron off the head and visualize the treated area. If you do not see a good copper color or white area around the horn bud, then the iron should be reapplied. Never apply the iron for longer than 5 seconds and if you have to apply it more often than three



**Picture of properly disbudded kid with horn bud still in place. Horn bud can be removed easily by "popping" it off with the dehorning iron.**



**Figure 1:  
Stone Dual Dehorner**



**Figure 2:  
Disbudding box**

times your iron is not getting hot enough. After you have achieved the appropriate color remove the horn bud from the skull by using a sweeping motion with the dehorning iron or a knife. The disbudded horn bud should then be recauterized if it is bleeding. Proceed to the next horn bud.

After disbudding, I spray Aluspray (Neogen product) on their heads to help with preventing infection and speed up healing.

### Disbudding with Caustic Paste

The initial steps are the same as with the dehorning iron. Lidocaine and/or Meloxicam can also be administered to aid with pain associated with the paste. After the hair is clipped off and the horn bud identified, apply the paste in a circular motion to the horn bud. A ring of Vaseline can be applied around the pasted area to prevent the paste from leaving the horn bud area. If the kid is nursing a doe, keep the kid separated from its dam for at least an hour after applying the paste. Figure 3. is a picture on one of the caustic pastes



Figure 3:  
Disbudding caustic paste

available for sale for disbudding kids/calves.

If the dam of the kid did not receive a booster Clostridial perfringens Type CD & Tetanus vaccination 30 days prior to kidding, the kid should receive a tetanus antitoxin, 150iu, IM.

A word of warning that the first few times you disbud your kids it will seem that this is extremely difficult but as with everything, practice makes perfect. If you do not feel comfortable doing this, please have your kids disbudded by someone who is knowledgeable about disbudding.

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**Dr. Beth Johnson** is a Staff Veterinarian in the Kentucky Department of Agriculture and has 40 years of experience raising and treating small ruminants. Her family farm is in Parksville, KY where she raises Gelbvieh cattle and Boer goats.



**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.**

- **Special Project Proposal-** The Kentucky Sheep and Goat Council will use check-off dollars to fund special sheep and goat related projects from Kentucky residents designed to meet at least one of the following two objectives. 1. Increasing the supply of sheep and goats in Kentucky. 2. Increasing the consumption of Kentucky raised sheep and goat products. Proposals will be accepted twice per year, on December 31st and on June 30th and applicants will be notified of their funding status within three months of the application deadline.
- Examples of projects are the promotion of goat or lamb at public events or educating potential producers on the benefits of raising sheep and goats.

To learn more details about the Kentucky Sheep and Goat Check-off Program visit [www.kysheepandgoat.org/Check\\_Off.html](http://www.kysheepandgoat.org/Check_Off.html)



## The Sheep's Role in History (Part 2)

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

In Part 1 of “The Sheep’s Role in History” (HoofPrint, Volume 21, Fall 2015) you read the story of Robert Bakewell, the “Father of Animal Breeding.” It was his revolutionary visions that led to important progress in the selective breeding of livestock and fortified the sheep’s role in genetic history. In Part 2, we fast-forward to the 20<sup>th</sup> century and beyond. It is now a world where genetic engineering, biotechnology and genomics are the tools for genetic improvement of livestock. It is also where we tell Dolly’s story.

### Genetic Engineering in Livestock: A Long History

By all accounts, sheep and goats were the first livestock species to be domesticated. This occurred approximately 11,000 years ago and represents the first human manipulation of genes, which, once again, put the sheep at the forefront of genetic history. This first “genetic engineering” was accomplished not in test tubes or petri dishes but through artificial selection and traditional animal breeding techniques. Such techniques included inbreeding and crossbreeding. In addition, diverse strains of animals were sometimes crossed to produce greater genetic diversity. Consider the equine family. Over the past 3,000 years, mares have been bred with jacks to produce mules and stallions have been bred with jennies to produce hinnies for use as work animals. This technique continues to be used today and represents an early form of genetic engineering.

The modern era of genetic engineering, with manipulation of genes and DNA in test tubes and petri dishes, began in 1953 when American biochemist James Watson and British biophysicist Francis Crick presented their double-helix model of DNA (Figure 1). This was followed by Swiss microbiologist Werner Arber’s discovery

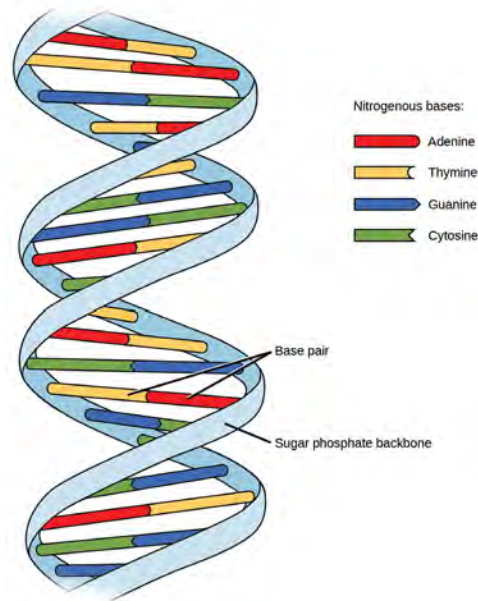


Figure 1. Double Helix DNA ([http://commons.wikimedia.org/wiki/File:229\\_Nucleotides-01.jpg](http://commons.wikimedia.org/wiki/File:229_Nucleotides-01.jpg)).

of special enzymes, called restriction enzymes, in bacteria. These enzymes can cut DNA strands of any organism at precise points. In 1973, American geneticist Stanley Cohen and American biochemist Herbert Boyer removed a specific gene from one bacterium and inserted it into another using restriction enzymes. This event marked the beginning of biotechnology. Then in 1977, genes from other organisms were transferred to bacteria, an achievement that eventually led to the first transfer of a human gene.

Animal biotechnology today is based on the science of genetic engineering. Under the umbrella for genetic engineering exist other technologies, such as transgenics and cloning. This brings us to Dolly’s story.

### Hello Dolly

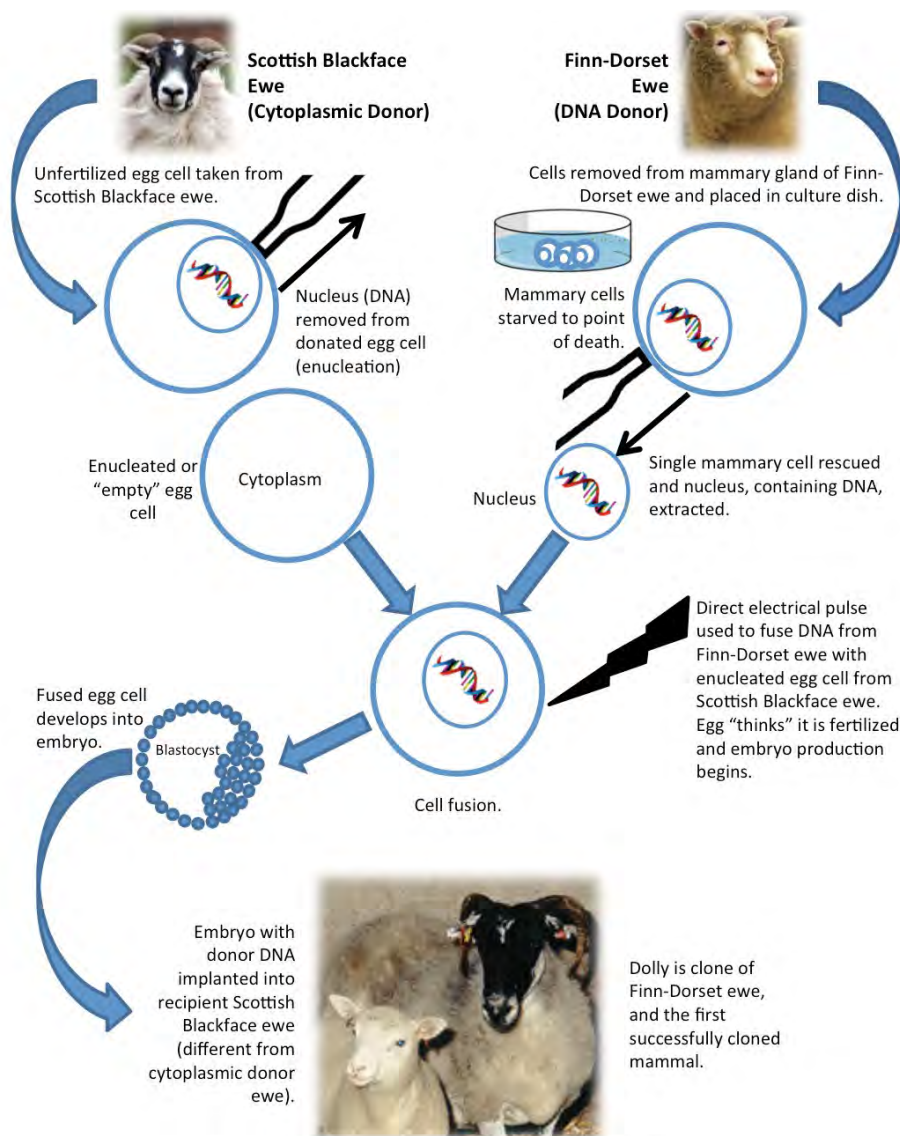
**Her Birth.** Dolly, a Finn-Dorset ewe, was born on July 5, 1996, at the Roslin Institute in Edinburgh, Scotland. She made genetic history because she was the world’s first mammal to be successfully cloned from an adult somatic (body) cell. This is one of the most significant scientific breakthroughs ever because her birth and subsequent survival proved that adult cells could program themselves into a new being. Today, Dolly is a scientific icon, a



Hello Dolly (AP Photo/Paul Clements)

household name. Much of her story comes from accounts reported by The Roslin Institute (<http://www.roslin.ed.ac.uk/public-interest/dolly-the-sheep/>).

Dolly started her life in a test tube. The technique Keith Campbell, Ian Wilmut and their Roslin Institute colleagues used to create her is called nuclear transfer. It involves transferring the nucleus from a diploid cell (which contains the full complement of an individual’s chromosomes) to an unfertilized egg from which the maternal nucleus has been removed. Figure 2 shows how it worked in Dolly’s case. An adult Scottish Blackface ewe (the cytoplasmic donor) provided an unfertilized egg cell, an ovum. Scientists removed the nucleus of this egg leaving only the cytoplasm. Cytoplasm is the thick solution that fills the egg and is enclosed by the cell membrane. It is mainly composed of water, salts and proteins. Concurrently, an adult mammary cell was taken from the udder of a 6-yr-old Finn-Dorset ewe (the DNA donor). Then, all the cellular machinery was stripped away, leaving only the cell nucleus, which contained DNA and all the genetic material needed to create life. Next, these scientists injected the nucleus into the “empty” egg cell. The two cells were fused using a jolt of electricity. The fused (or hybrid) cell began to divide and develop into a blastocyst (the early stage of an embryo). Once normal development was confirmed at 6 days, the embryo, that was to become Dolly, was implanted into a surrogate (recipient) ewe. The surrogate was another Scottish Blackface ewe. When the resulting clone was born, after a normal, full-term pregnancy, she was



After 148 days, Dolly is born on July 5, 1996.

**Figure 2. How Dolly the Sheep was Cloned.** Photo Credits: Top Left ([www.scottish-blackface.co.uk/](http://www.scottish-blackface.co.uk/)); Top Right ([www.abc.net.au/news/2013-05-16/](http://www.abc.net.au/news/2013-05-16/)); Bottom left ([www.coldmeadow.com/dolly/ddstory/story.html](http://www.coldmeadow.com/dolly/ddstory/story.html))

named Dolly, in honor of the singer Dolly Parton, because it was a mammary cell that was cloned.

Dolly was an immediate superstar. The press flocked to Roslin Institute and the University of Edinburgh after her birth was announced. Although most of the Roslin staff thought Dolly's initial stardom would be brief and quickly fade, this was not the case. The press from all over the world continued to visit Dolly for the rest of her life, with their interest peaking any time there was a concern over her health.

**Her Life.** The goal was to manage Dolly as a normal sheep. To that end,

she was allowed to reproduce like any other ewe. She was bred to a small Welsh Mountain ram over three mating seasons and successfully produced six lambs. A single ewe lamb, named Bonny, was born in the spring of 1998. Twins followed the next year and triplets the year after that.

Dolly started suffering from ill health in 2002, when she was diagnosed with a form of arthritis. Then a year later, she developed a progressive lung disease and a decision was made to have her put down. The causes of her health issues were never discovered and, although never proven, there is still widespread speculation that

she died prematurely as the result of being a clone.

**Her Legacy.** Dolly has been called "the world's most famous sheep." In hindsight, Dolly the clone was just a sheep. She was not produced with the intention of widespread cloning of livestock for conventional production. She was actually created as part of research into producing medicines in the milk of farm animals. Nonetheless, her birth completely changed the field of genetics and science as a whole. Although she died prematurely, her life left a lasting legacy. First, she existed. The creation of a viable clone of a complex mammal was unexpected. In fact, her birth was the end result of more than 250 attempts at cloning a sheep. Second, Dolly's birth overturned the assumption among scientists that the whole process of differentiation was irreversible. We all start life as a single cell, the fertilized egg. The cell divides and multiplies and by the time we are born, there are maybe 200 different cell types, each containing the same DNA, the same 30,000 or so genes, but each differentiated into a specific role. A cell might become a nerve cell, a muscle cell or a mammary cell, for example. Until Dolly, scientists thought this was a one-way process.

Dolly showed that it was possible to take an adult differentiated cell, that is a mature body cell that has reached the end of its developmental stages, and essentially turn its clock back, to reactivate all its genes and make the cell behave as though it was a fertilized egg. In Dolly's case, a mammary cell reverted back to its embryonic state. Since Dolly, there have been many more cloned animals and the technology continues to improve.

What is the long-term significance of Dolly? That's difficult to say. Practical implications of cloning livestock are limited because of costs, governmental regulations and consumer fears. Dolly's longer lasting legacy will likely be in our understanding of development and genetics. Our understanding now is that the cells in our bodies are a lot more plastic and changeable than previously thought. The technology used to create Dolly may offer hope for the process of therapeutic

*Genetically Speaking continues on pg. 20*

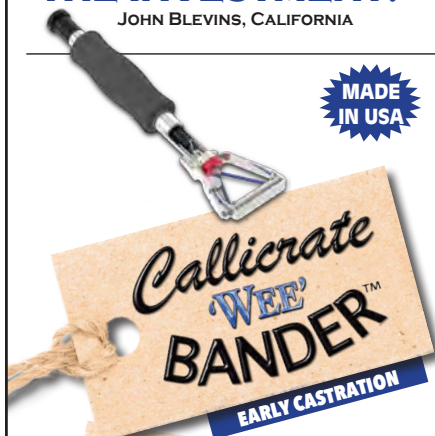


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*Genetically Speaking continued from pg. 19*

cloning, where new healthy cells can be created from differentiated cells that have been wound back to their embryonic state. If a “blank” cell has the potential to grow into any other cell, it could be used to mend aging, diseased and damaged tissues and organs.

## Pulling the Wool off the Sheep Genome

An animal's complete set of DNA is called its genome and virtually every cell in its body contains a copy. Genomics, then, is the term coined by scientists that describes the large-scale sequencing and analysis of DNA. You might ask, “What is the difference between genetics and genomics?” The key distinguishing feature between the two is that genetics investigates the activity and composition of a single cell and genomics includes all genes and their associations in order to recognize their collective influence on the development and growth of an animal. Genomics is a rapidly expanding field in animal agriculture, and sheep have played a role in that development. Through genomics, scientists aim to determine complete DNA sequences and perform genetic mapping to help understand the relationships between genes and important traits, such as growth, carcass composition and disease or parasite resistance.

As noted earlier, the sheep was one of the first animals to be domesticated. It is, however, one of the last to have its complete DNA sequenced. Goats, cattle, pigs and horses all beat the sheep in having their genomes read. Finally, in 2014 the sheep joined their ranks when its complete genetic code was published in the June 6 Science magazine (Volume 244, Number 6188, Pages 1168-1173). This was the culmination of eight years of work by an international team of scientists. Sheep lagged behind the other species, not because of their uniqueness, but because there was less international industry support to help fund the project. Eventually, Australian scientists formed a group with scientists from New Zealand, the United States, Europe, and China, called the International Sheep Genomics Consortium, to read the genome of two Texel rams.

Mapping the sheep's genetic code has revealed mysteries associated with wool and forage digestion. By comparing the sheep genome with cattle, goat and pig genomes, this group of scientists were able to identify



**The Ram that Pulled the Wool Off the Sheep Genome (<http://phys.org/news/2014-06-sheep-genome-goats.html>)**

several genes that are associated with wool production. They also discovered genes that are important in the evolution of the rumen, a chamber in the sheep's stomach that breaks down cellulose-rich plants like grass into protein. Finally, an understanding the complete genetic code has the potential to further development of DNA testing and to speed-up the process of selection, which will help producers improve their flocks.

## What Does the Future Hold?

A better understanding of the genetic makeup of sheep will lead to improvements in efficiency of production of meat, wool and milk. In addition, it will contribute to healthier sheep through better management of diseases and parasite infections. Use of genomic information already allows direct assessment of genetic merit of potential breeding animals for simply inherited genetic defects and for using genes with large effects on prolificacy and disease resistance. Use of genomic information to aid genetic improvement in quantitative traits, such as growth, feed efficiency and carcass composition, is progressing more slowly, but it is progressing. Continued progress will depend on organized efforts by research and industry to record performance, calculate estimates of genetic merit and determine genome profiles on large numbers of sheep.

**We have come a long way since Robert Bakewell's time but there is still much to learn!**

**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.






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# NEWS TO EWES



## What Is This Stuff We Call Energy?

By Dr. Donald G. Ely  
Department of Animal and Food  
Sciences, University of Kentucky

### Introduction

All the processes that take place in the animal body, as food is ingested and metabolized, involve energy changes. The word “energy” is from the Greek word *ergon* meaning work. The word was introduced by Thomas Young in 1807 and he defined it as “the ability to do work”. Of the many forms of energy, heat, kinetic, radiant, and chemical energy are the most important in nutrition. Heat energy will be emphasized in this article.

### Heat Energy

Although all forms of energy can be converted into heat energy, the heat energy represented by the constituents of the diet and that involved in all body processes provides the most convenient basis for describing nutritional energetics. The body is not a heat engine. Life processes are not operated by temperature differences. Therefore, the heat produced in these processes is an end product, not a motive power for them. It is useful only to help keep the body warm, but its production in the body is taken into account when

measuring the efficiency of body processes.

The basic unit of heat energy is the calorie (cal), defined as the amount of heat required to raise 1 gram (g) of water 1° C (1.8° F). This unit is too small for convenient use in nutrition. Thus, the *large Calorie*, the amount of heat required to raise 1 kilogram (1 kg = 1,000 g) of water 1° C (1.8° F), came into use and is written with a capital C and abbreviated Cal to distinguish from cal. Today, the term Calorie has been replaced by kilocalorie (kcal), which has the same value. Where larger values are involved, the megacalorie (megacal or Mcal), representing 1,000 kcal, is used. The

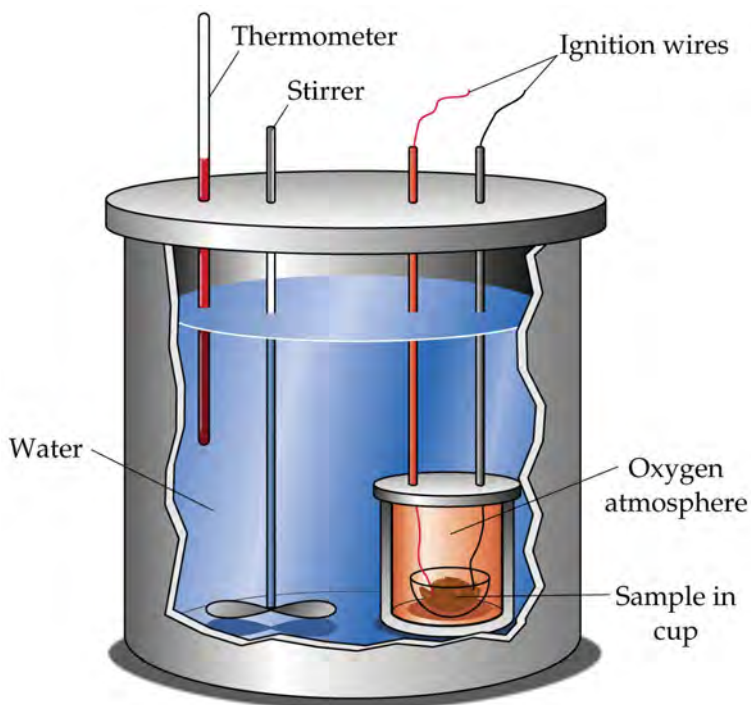


Figure 1. Bomb Calorimeter

Source: [http://wps.prenhall.com/wps/media/objects/602/616516/Media\\_Assets/Chapter08/Text\\_Images/FG08\\_09.JPG](http://wps.prenhall.com/wps/media/objects/602/616516/Media_Assets/Chapter08/Text_Images/FG08_09.JPG)

Mcal is routinely used in ruminant and nonruminant nutrition.

It has been more than 100 years since animal nutritionists discovered that



feedstuffs CAN have the same amount of energy, but differ in their ability to produce growth, milk, wool, and work. Although nutritionists back then didn't have our modern computerized tools, they were able to measure the total energy of a feedstuff or diet with a piece of equipment called the *bomb calorimeter* (Figure 1). These scientists immersed a steel cylinder in a container of water. Then, they weighed a small feedstuff or diet sample, placed it at the bottom of the cylinder and burned it with an electronic ignition. All the sample's organic matter would burn completely in seconds, leaving a small pile of ash. The resulting heat caused a slight increase in the temperature of the surrounding water, allowing the scientists to convert the rise in temperature to calories. This was the **Gross Energy** of the sample. From this, we have progressed from a feedstuff or diet having one energy value until today when the same feedstuff or diet has four energy values (Gross, Digestible, Metabolizable, and Net).

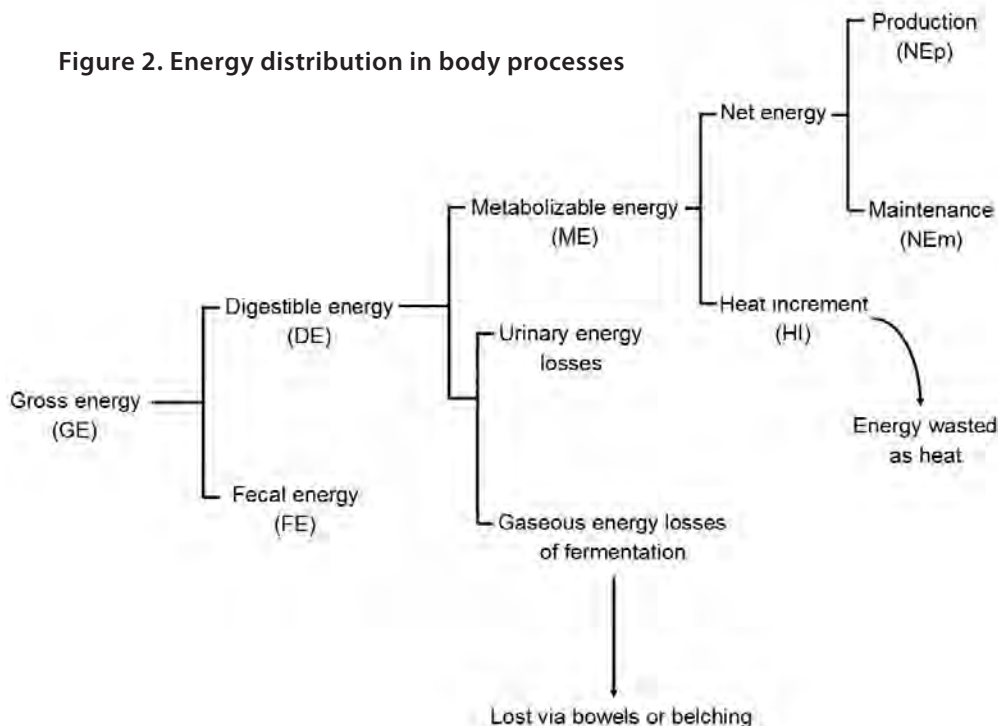
## Gross Energy

A measure of the energy contained in a feedstuff, from the bomb calorimeter and before it is consumed, is called **Gross Energy (GE)**. This is the total number of calories in the feedstuff. This is the number that is given to every feedstuff fed to livestock. But, the GE value is not very useful because it tells us nothing about the biological availability of the calories contained within. When samples are burned in a bomb calorimeter, all carbohydrates (sugar, starch, cellulose) give the same GE value (4 Calories/gram). All proteins give 5 Calories/gram and fats give 9 Calories/gram. Thus, GE does not differentiate among the *nutritional* values of sugar, cardboard boxes, or tree limbs.

## Digestible Energy

In the late 1800s, livestock nutritionists found that they could burn a sample of feces in the calorimeter and when they did they found it contained some calories. So, they reasoned that any calories in the feces could have passed through the digestive tract without being absorbed. By subtracting the energy value of the feces from the energy consumed, they calculated the amount of energy that was absorbed (digested) from the digestive tract into the blood to be used for productive purposes. This was called **Digestible Energy (DE)**. Figure 2 shows how subtraction of fecal energy from GE equals DE. Although the early nutritionists were creative, modern-day nutritionists

Figure 2. Energy distribution in body processes



realize that consumed energy is not 100% digestible. These modern-day nutritionists have found that fecal energy may contain, in addition to undigested energy, sloughed cells from the digestive tract walls, bacteria, and enzymes that may have been involved in digestion of carbohydrates, proteins, and fats as they passed through the digestive tract.

Today, DE is still one of the most useful values in livestock nutrition. It often goes by different names like Digestive Organic Matter (DOM), Digestible Dry Matter (DDM), and Total Digestible Nutrients (TDN). Even though DE is the useful GE in a feedstuff, some of the calories of GE can be lost in more ways than in the feces. Two other routes are *gas* and *urine* (Figure 2).

## Metabolizable Energy

All livestock lose some feedstuff energy as gas. Sheep, cattle, and goats make a livelihood of it because of the fermentation that takes place in the rumen. The two major products of rumen fermentation are methane and carbon dioxide. These are lost from the animal via bowels or belching (Figure 2).

The second loss, urine, contains energy in the soluble compounds flushed out during urination. The main soluble compound is *urea*. Although these calories may have been cycled through the liver and kidneys enroute to the urine. Once they are captured in urea, they are not used for growth, wool, milk, or heat. Therefore, they

represent a loss to the animal.

Subtraction of the urine and gas losses from DE give us another term: **Metabolizable Energy (ME)**. More precisely, ME is the energy value of a

*News to Ewes continues on pg. 24*

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feedstuff after subtracting the energy lost in the feces, gas, and urine (Figure 2). ME is always smaller than DE which is always smaller than GE because each term reflects subtraction of more and more calories that are lost to the animal.

Net Energy

Livestock still can't use all the calories in ME. Because they are warm-blooded, they produce heat from feedstuffs to stay warm and this requires energy (*heat increment*; Figure 2). But, energy used for heat can't be used to create meat, milk, or wool. So, NE calories are those available for tissue production (i.e., the net amount of energy in a feedstuff) after all the caloric losses in feces, gas, urine, and heat are accounted for (Figure 2).

Over the past 30 years, NE has spawned a whole family of related terms based on the way it is used. Some NE calories are used for making milk, wool, and meat (NEp; Figure 2), while others are reserved for maintaining the basic functions of the body like breathing, walking, eating, etc. (NEm). These terms now allow nutritionists to allocate precise amounts of energy to different types of production.

Application

Dietary carbohydrates, excess protein, and fats contribute toward fulfilling the energy requirements of sheep. Carbohydrates are the major sources. Concentrates (grains) contain starch, a rich source of energy. Roughages (hay, grazed forages, silage) contain fiber (cellulose). They are not as rich in energy as concentrates, but the fiber contained within is used to provide energy via ruminal microbial fermentation processes.

Quantitatively, energy is the most important nutrient in the sheep's diet. Optimal energy intakes from grazed forages, hay, silage, and grains result in efficient reproduction, growth, lactation, and wool production. However, excessive energy consumption leads to decreased efficiency because of excessive fattening, which reduces growth rate, lowers milk production, increases reproductive failure, and decreases efficiency of wool growth.

Energy can also be the most common limiting nutrient in sheep production, especially for ewes. This situation usually arises from an inadequate intake of feed resulting from drought, snow cover, low dry matter intake of green pasture or silage,

Table 1. Energy Requirements for the Annual Production Phases of a 154-lb Ewe<sup>a</sup>

Production Phase	DE, Mcal/d <sup>b</sup>	ME, Mcal/d <sup>b</sup>
Maintenance	2.9	2.4
Flushing	4.7	3.8
Early Gestation	3.4	2.8
Late Gestation	5.4	4.4
Early Lactation <sup>c</sup>	8.0	6.6

<sup>a</sup> Sheep Production Handbook. 2002. Volume 7, page 716. American Sheep Industry Association, Inc.  
<sup>b</sup> DE, Mcal/d = Digestible Energy, Megacalories/day; ME, Mcal/d = Metabolizable Energy, Megacalories/day  
<sup>c</sup> First 60 days, nursing twins

Table 2. Digestible and Metabolizable Energy Composition of Alfalfa Hay, Orchardgrass Hay, and Shelled Corn

Feedstuff	DE, Mcal/lb DM <sup>a</sup>	ME, Mcal/lb DM <sup>a</sup>
Alfalfa Hay, Earlybloom	1.20	0.99
Orchardgrass hay, Midbloom	1.14	0.94
Shelled Corn	1.80	1.48

<sup>a</sup> DE, Mcal/lb DM = Digestible Energy, Megacalories/lb dry matter; ME, Mcal/lb DM = Metabolizable Energy, Megacalories/lb dry matter

Table 3. Example Daily Ration That Meets the Digestible and Metabolizable Energy Requirements of 154-lb Ewes in Late Gestation (Expecting Twins)

Late Gestation	Lb/hd/d	DE, Mcal/d <sup>a</sup>	ME, Mcal/d <sup>a</sup>
Orchardgrass Hay, Midbloom	3.7	3.8	3.1
Shelled Corn	1.0	1.6	1.3
Total	4.7	5.4	4.4
Requirement	4.7	5.4	4.4
Difference	0	0	0

<sup>a</sup> DE = Digestible Energy (Megacalories); ME = Metabolizable Energy (Megacalories) consumed per ewe per day from 3.7 lb orchardgrass hay and 1.0 lb shelled corn.

Table 4. Example Daily Ration That Meets the Digestible and Metabolizable Energy Requirements of 154-lb Ewes in First 8 Weeks of Lactation (Suckling Twins).

Lactation	Lb/hd/d	DE, Mcal/d <sup>a</sup>	ME, Mcal/d <sup>a</sup>
Alfalfa Hay, Earlybloom	5.0	5.5	4.5
Shelled Corn	1.6	2.5	2.1
Total	6.6	8.0	6.6
Requirement	6.9	8.0	6.6
Difference	- 0.3	0	0

<sup>a</sup> DE = Digestible Energy (Megacalories); ME = Metabolizable Energy (Megacalories) consumed per ewe per day from 5.0 lb alfalfa hay and 1.6 lb shelled corn.

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consumption of low-quality feedstuffs, or long-term access to unpalatable feedstuffs. Ewes carrying multiple fetuses in late gestation are likely candidates for an energy deficiency. Inadequate energy intake causes slow growth, weight loss, reproductive failure, decreased milk production, lowered resistance to diseases and parasites, and increased lamb and ewe mortality. Although energy requirements of ewes vary dramatically throughout the annual production cycle, energy intakes required during late gestation (LG) and lactation (L) are much higher than other stages of production. The most applicable forms of energy used to balance most sheep diets are DE and ME. Table 1 shows how these requirements vary during the year for ewes that weigh about 150 lb when open and nonlactating. The DE and ME composition of hays and shelled corn that are commonly fed during LG and L are shown in Table 2. Shelled corn contains more DE and ME, followed by alfalfa and orchardgrass hays. The composition of these feedstuffs and the nutrient requirements of ewes (Table 1) should give us some insight into which should be fed in LG and L. Requirements are highest in L followed by LG. Therefore, the feedstuffs

with the highest concentrations of DE and ME should be fed in greatest amounts in L. The next highest concentrations and amounts should be fed in LG.

A daily ration of 3.7 lb orchardgrass hay and 1.0 lb shelled corn (Table 3) will meet the DE and ME requirements of 154-lb ewes carrying twins in LG. The energy contained in their daily ration will maintain her daily functions (breathing, walking, eating, etc.), provide energy for wool and fetal growth, and provide energy for colostrum (milk) synthesis. Feeding a ration with more hay and/or corn will cause ewes to become too fat for optimum production. In contrast, feeding less hay and/or corn will cause ewes to become too thin for optimum production.

A comparison of the LG (Table 3) and L diets (Table 4) shows the DE and ME requirements are greater in L, more hay and more corn are required to meet the DE and ME requirements of L, and the hay fed in L must be higher quality than that of LG. Even though there is a slight deficiency in pounds fed per day in L (Table 4), this is not a concern because the DE and ME daily requirements can be met by feeding 5.0 lb alfalfa hay (early bloom) and 1.6 lb shelled corn.

### Summary

The Gross Energy of feedstuffs is a measure of the total energy contained within. Feedstuffs vary in their digestibility, so Digestible Energy is a more definitive measure of the “useable” energy. Still, some of the Digestible Energy may not be used completely for meat, milk, and wool production because some energy is lost to the animal via urine and gas. Metabolizable Energy is a more precise measure of the useful energy contained in the Gross Energy of feedstuffs. Sheep must consume a certain level of Digestible and Metabolizable energy each day if they are to maintain themselves (breathe, walk, eat), gain weight, produce milk, and/or produce wool. It is the shepherds’ responsibility to provide a combination of energy feed sources in the proportions that will allow their animals to perform to their optimum. Then, we will know “What This Stuff We Call Energy” really is. 🐏

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



# Results from the 2015 Maryland Buck Test

by Staff Writer

The year 2015 marked the 10-year anniversary of the Western Maryland Meat Goat Performance Test (Maryland Buck Test). The purpose of the test is to evaluate the post-weaning performance of male goats consuming a pasture-based diet with natural exposure to gastro-internal parasites. Since the initial test in 2006, 639 bucks from 89 herds in 18 states have competed in the Maryland Buck Test. The Maryland Buck Test is considered by most meat goat producers to be the premier buck test in the United States.

Each year, male goats, of any breed or breed cross, are tested at the test site facility in Western Maryland. While on test, the goats are evaluated for growth performance, parasite resistance (FEC) and parasite resilience (FAM), and carcass merit.

The test bucks are managed as a single group on forage pasture from late-June until early October. The bucks receive supplemental feed, not to exceed 1.5 percent of their body weight, throughout the testing period.

The goats are handled every 14 days to determine body weights, FAMACHA®, body condition, coat condition, dag and fecal consistency scores. Low stress livestock handling techniques are emphasized (generally, no handling by the horns). Goats with FAMACHA® scores of 1 or 2 are not dewormed, whereas goats with FAMACHA® scores of 4 or 5 are dewormed. Goats with FAMACHA® scores of 3 may or not be dewormed depending upon other factors.

Individual fecal samples are collected every 14 days. Pooled samples are collected every 28 days for larvae ID. Fecal analysis is done by Dr. Dahlia O'Brien's lab at Virginia State University.

Toward the end of the test period, the goats are scanned to determine rib eye area, loin depth, and rib fat. The ultrasound scanning is done by Jim Pritchard from West Virginia University. They are evaluated for structural correctness and reproductive soundness and given a frame score and USDA grade.

For the 2015 test, 25 consignors from

Test ID	Consignor	Weight	FAMACHA®				Fecal egg counts	
		ADG	AVG	High	Tx	AVG	High	
539	Majancsik - KY	0.255	1.4	2	0	688	1575	
584	Weber - IL	0.248	1.4	2	0	646	2427	
551	Nelson - MD	0.241	1.7	3	0	746	1775	
543	Maynard - TN	0.202	1.7	2	0	735	2150	
501	Adams - IL	0.201	1.9	2	0	692	1150	
557	Peters - NC	0.170	1.9	2	0	217	475	
556	Peters - NC	0.141	2.3	3	0	642	1200	
505	Ballenger - KY	0.118	2.0	2	0	432	914	
550	Murphy - NJ	0.117	1.0	1	0	817	1800	
527	Dennison - KY	0.077	1.9	2	0	688	1625	
<b>AVERAGES</b>		<b>0.177</b>	<b>1.7</b>	<b>2.1</b>	<b>0</b>	<b>630</b>	<b>1509</b>	

12 different states entered 84 bucks. The top rated buck in the 2015 Maryland Buck Test is owned by Randy and Jodie Majancsik of Butler Kentucky. The top rated consigner for 2015 was David Peters of Newport, North Carolina as he placed two bucks in the Top 10 finishers.

Other participants that placed bucks in the Top 10 finishers were The Craig Adams Estate, Litchfield IL; John Weber, Greenville IL; Steve Maynard and Darla Dishman, Pall Mall TN; Waldo Nelson, Waldorf MD; Jarred Dennison, Waddy KY; P.J. Murphy, Pittstown NJ and Brent Ballinger, Bardstown KY.

All consignors with Top 10 bucks have had top-performers in previous tests, with the exception of Maynard/Dishman, who are first time consignors. All of the Top 10 bucks were Kiko or Kiko crossbred bucks.

Applications for the 2016 Maryland Buck Test will be available in March. Entry fee is \$125 per buck. Bucks born between January 1 and March 15 are eligible for testing. Participants can consign up to 5 bucks.

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# Kentucky – Tennessee Well Represented in Maryland Buck Test

By Staff Writer

**M**eat goat breeders in Kentucky and Tennessee consigned four of the Top Ten performing bucks in the 2015 Maryland Buck Test.

**Little Green Pastures Farm** owned by Randy and Jodie Majancsik of **Butler Kentucky** consigned the **Top Performing Buck in the 2015 Maryland Buck Test**. In addition, Little Green Pastures also consigned the Top Performing Buck in the 2014 Maryland Buck Test and were co-winners of the Top Consignment Award. It is very rare that a breeder can put together back-to-back wins of a major buck test. Little Green Pastures Farm accomplished this feat largely due to the significant abilities of their Herd Sire, AFS Bullet 5, a five-year-old Kiko buck.

**Darla Dishman and Steve Maynard of Pall Mall TN** own **Shellotte Farms**. This was the first appearance of Shellotte Farms bucks in the Maryland Buck Test and they came out of



the gates quickly by placing a buck in the Top Ten on their first attempt at competing in a buck test. In fact, the Shellotte Farms buck finished in the Top Ten in both Parasite Resistance and Daily Weight Gain. Their Kiko Herd Sire, SDM Rambo, sired the Shellotte Farms Top Ten Buck.

**Jarred and Deidra Dennison of Waddy KY** own **JD Ranch**. The accomplishment of consigning a Top Ten Buck is nothing new to JD Ranch.

They have participated in the Maryland Buck Test six times and on three of those occasions they have had bucks place in the Top Ten. This years Top Ten Buck was sired by their colorful Kiko Herd Sire, JDR Romeo. This is the second time Romeo has sired a Top Ten Buck.

**Mill Creek Ranch is owned by Brent Ballinger of Bardstown KY**. This is the second year of participation for Mill Creek Ranch in the Maryland Buck Test. In 2014 Mill Creek Ranch placed two bucks in the Top Ten and were co-winners of the Top Consignment Award. This year Mill Creek Ranch had one buck in the Top Ten and that buck was sired by their Kiko Herd Sire, Rock Solid. This is the second time Rock Solid has sired a Top Ten Buck.

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## Entropion in Goat Kids

by Beth Johnson, DVM

Just like newborn lambs, goat kids can suffer from entropion as well. Newborn kids and lambs do not tear, so if you see a newborn with tearing from an eye there is a problem with the eye and it is crucial that the kid/lamb be examined and treatment instituted as soon as possible to prevent future blindness. Use a 1-1½ inch straight hemostat to correct the entropions. Examine both lids on the newborn. Many times only one lid is affected. Place one edge of the hemostat parallel to the affected lid after it is rolled out in a normal position. Then with the other edge bring the hemostat together and pinch the skin up in the hemostat. Close the hemostat and leave it pinched for 10-15 seconds. This procedure can be repeated every 8-12 hours as needed to correct the entropion. If the cornea is damaged place an ophthalmic ointment within the eye prescribed by your veterinarian twice daily until the eye appears normal. If pinching does not correct the problem, corrective surgery may be needed. This should only be performed by a veterinarian. As stated, this is a genetic condition and the animal should not be kept as a replacement animal especially bucks!

**Beth Johnson-** Dr. Beth Johnson is a Staff Veterinarian in the Kentucky Department of Agriculture and has 40 years of experience raising and treating small ruminants. Her family farms in Parksville, KY where she raises Gelbvieh cattle and Boer goats.



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## Inverted Eye Lids in Sheep

Posted on February 26, 2013 by Ask-a-Vet Sheep  
by Dr. G.F. Kennedy

If lambs are found shortly after birth with watery eyes, are depressed and obviously in pain, then they likely have inverted hair rubbing the cornea. Not a fun thing if you are a baby lamb. If not corrected it can cause permanent damage to the eye and negatively affect the health of the lamb. There is an easy fix—wound clips. They are placed horizontally causing the eye lid to revert away from the cornea. Later on these clips will fall out and the lamb will be normal. Once repaired, in just a couple of hours the lamb will be up and jumping around the jug. It is a heritable condition and sheep with this condition shouldn't be used for breeding.

**Dr. G. F. Kennedy** is a practicing food animal veterinarian. A 1960 graduate of Iowa State University that has practiced in Pipestone Minn since that time. He still practices full time specializing in sheep and goats and servicing several large sow farms and their owners.

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# KY Lamb Jamb Cook-Off

On October 24, 2015, thousands of people were able to experience "homegrown" lamb thanks to the 2015 KY Lamb Jam Cook-off! The cook-off was a coordinated effort between the American Lamb Board, the KY Sheep and Wool Producers and the Sullivan University Culinary Department held at the KY Proud Incredible Food Show in Lexington, KY, Kentucky's premier food event.

The KY Lamb Jam Cookoff gave 16 students from the Sullivan University Culinary Department the opportunity to work in teams to prepare the tastiest and most appealing plate to a panel of judges. Over 100 students have participated in the contest since its beginning. Chefs Walls and Foster of Sullivan have been incredibly supportive and believe it is a wonderful experience for their students who are the future food service professionals that will use lamb in restaurants and commercial kitchens across our state.

Judges for this year's contest came from a variety of backgrounds.

**Chef Mark Jensen** owns the new restaurant Middle Fork Kitchen Bar in Lexington, KY. Chef Jensen's restaurant offers a comfortable but bold take on the traditional dining experience. Inspired by the dynamics of the season, the context of the district and the enthusiasm of his team, Jensen combines ingredients, cuisines and an appreciation for the craft for a fun and delicious result.

**Maddison Ethington** is a first year culinary student at Sullivan University who had no prior experience with lamb but wanted to learn more about the uses and value of using the product.

This year, two judges were chosen from the audience of the contest.

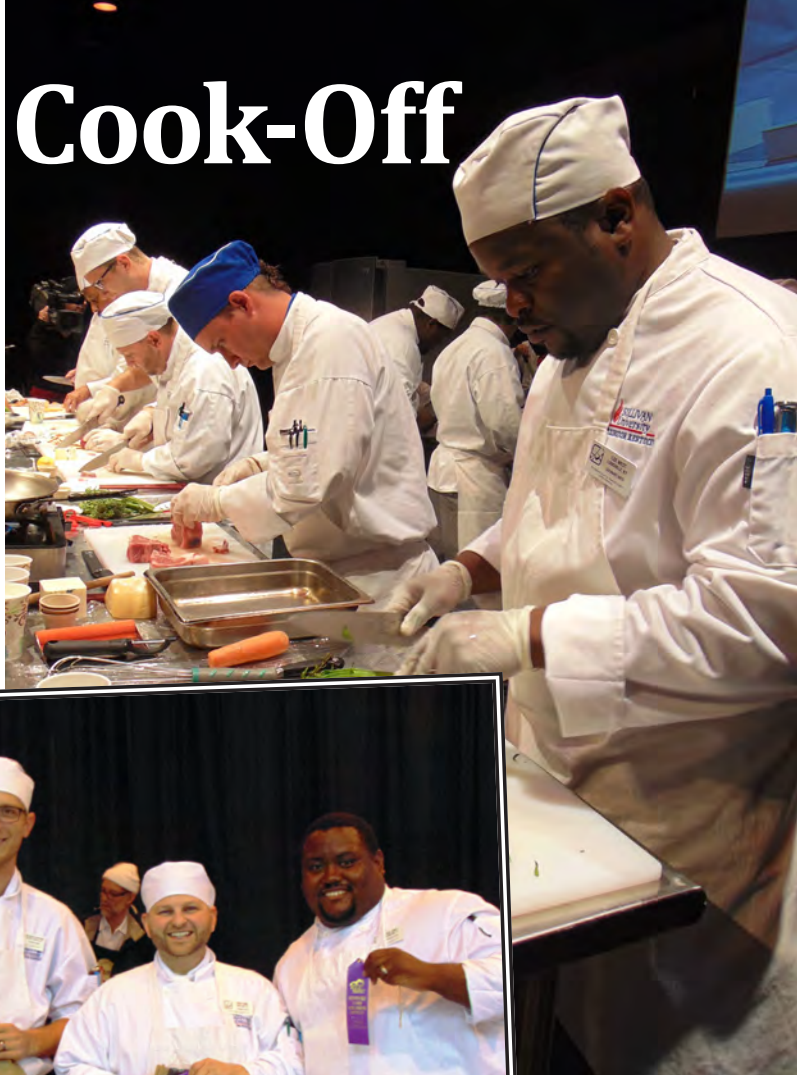
**Mike Lowe** who has a culinary degree and experience managing several kitchens throughout his career

**Julie Hook** is a Master Food Volunteer through the University of Kentucky and teaches food education to students in Western, KY. She has also worked for Spindletop in Lexington, KY.

During the contest, audience members participated in a trivia game about lamb meat. Participants received American Lamb Board market bags, spice rub, aprons, recipe books and hats!

After an hour of intense preparation. The winning team was announced: Brandon Grachek, Ricky Kirk, and Cecil Jones.

Visit [www.kysheepandgoat.org](http://www.kysheepandgoat.org) to find their delicious recipe!



Left to right are Brandon Grachek, Ricky Kirk, and Cecil Jones

## Incredible Food Show Sheep & Goats!

- ◆ Over 150 KY Proud businesses highlighted their signature products at The KY Proud Incredible Food Show. The Kentucky Sheep and Goat Development Office (KSGDO) was sure to be in the mix to educate consumers on the benefits of lamb and goat products.
- ◆ KSGDO handed out hundreds of recipe cards for both goat and lamb that included nutritional information, basic cooking methods and recipes. We also provided information on where to get local lamb and goat products.
- ◆ Joe Bremer of Joe's Bars and Suds hosted a booth where he explained the benefits of using goat milk soaps and lotions.
- ◆ Denise Martin of Martin Meadow Farms hosted a booth where she explained the nutritional benefits of goat meat and offered samples. Also, she conducted several hours of cooking demonstrations at the Quick Tips Booth, which was a huge draw for people at the show.
- ◆ Jim Mansfield of Four Hills Farm hosted a booth where he provided samples of lamb sausage and explained the benefits of purchasing local lamb. He was also a sponsor for the KY Lamb Jam Cookoff held at the Incredible Food Show.



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