

*Hoof*Print

The Small Ruminant Magazine



TALKING POINTS
COVID-19

THE ECONOMICS OF
GOAT FARMING

CONTAGIOUS
ABSCESSSES
IN MY SMALL
RUMINANT HERD?





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Hoof Print Magazine

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of our partner organizations.

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Hoof Print

The Small Ruminant Magazine



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BECOME A BOARD MEMBER

HELP FROM THE INSIDE OUT.

The mission of the Kentucky Goat Producers Association and the Kentucky Sheep and Wool Producers Association is to help improve the state's small ruminant industry. And the mission must be completed from the inside out. We need your help! We are looking for dedicated producers who are willing to serve as board members to our association.

P.S. September 25th is the deadline!

What do board members do for the industry?

- Enhance our marketing channels within the state
- Mentor and guide new producers
- Keep our local ag leaders up to date on the goat and sheep industries

How much time does it require?

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- All board members attend the annual membership meeting during the KY Annual Producer Conference. This year's conference is October 24, 2020 at the Hardin County Extension Office 111 Opportunity Way, Elizabethtown, KY 42701.

Am I qualified?

- Do you want our industry to be better?
- Do you have good ideas and experience that needs to be shared?
- Are you interested in growing your network within the industry?

Then the answer is an overwhelming YES you are qualified!

OK sign me up!

We are so excited you want to be a part of our organization! It is so easy to get started. Just go to <https://www.kysheepandgoat.org/board-member>, complete the form, and an association representative will contact you with more details. It's really that easy!

Deadline to submit is

September 25th!!!

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GOAT PRODUCERS
ASSOCIATION



JOIN or RENEW TODAY!

KGPA Membership Application

Your \$30 membership includes:

- 4 issues of the *HoofPrint* Magazine plus the newly designed 2020 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](https://www.kysheepandgoat.org/KGPA.html)
- **And much, much more!**

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State: _____ Zip: _____

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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.

Mail form or Visit www.kysheepandgoat.org to join today!

Letter from the President

PRESIDENT'S COVID 19 MESSAGE

What a different world we are living in, right now, or are we? About the only thing that has changed for me on the farm is I get to wear a face mask to town! My animals aren't aware that anything is amiss, but oh how times have changed. I think it is awesome that more people are cooking at home, but hoarding grocery items that I know are going to waste because folks don't really know how to cook is beyond me. I have made bread from a sourdough starter for many years, as most of ya'll know, and I have to send my daughter to the grocery store in the early hours of the morning to see if she can possibly find some bread flour! Ok, I get it, you want to get back to nature, well leave some for everybody else, please!



Beth Johnson, DVM

Speaking of getting back to nature, sustainable agriculture is here to stay! What better way for a family to have milk and meat and all of the products that our goats can provide at their fingertips! Dairy goats can provide a gallon of milk per day which can not only be drank, but can also make cheeses and ice cream too. Our meat goats can provide excellent sources of protein in the meat they produce (as long as you can find a processor that isn't booked into next year, lol). Check out some great recipes on the Kentucky Sheep and Goat Development Office website.

www.kysheepandgoat.org/on-your-plate

Also, have you noticed how beautiful your pastures are that the goats are roaming on? Not many weeds, no wild rose bushes, and thistles are a thing of the past on our pastures. What better way to have nature's own "bush hogs" out doing a job no one enjoys except the goats.

On a more serious note, I hope that you and your family have remained safe and healthy through these troubled months and pray that a vaccine is available soon so we can reunite with those we love and cherish our friendships. I am not sure, but I am getting tired of "Zoom" meetings and conference calls, but love all the education from the numerous webinars that are available to watch. Check out the webinars at <https://www.kysheepandgoat.org/in-the-know> that Kelley Yates has made available for you the producer. She has gone above and beyond to help out our many goat and sheep producers out there in Kentucky and surrounding states.

Another excellent addition to the KY Sheep and Goat Development Office, is the market report videos that our new sheep and goat market grader, Jason Wachter, has made for the producers.

Check these out as well at

<https://www.kysheepandgoat.org/in-the-know!>

STAY SAFE!!!

KGPA President,
Beth Johnson, DVM



CALENDAR OF EVENTS

JULY

- 9 graded sale Bowling Green
- 13 graded sale Richmond
- 18 graded sale Springfield
- 21 graded sale West KY
- 21 Barren County Sheep and Goat, 6pm,
Barren County Extension Office
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- 28 graded sale Paris
- 30-31 Eid al-Adha

AUGUST

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- 20-30 Kentucky State Fair
- 24 graded sale Richmond
- 25 graded sale Paris
- 27 graded sale Bowling Green

SEPTEMBER

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- 10 Jessamine County Goat Producers, 6:30pm,
Ag Learning Center Jessamine County Fairgrounds 8
- 14 graded sale Richmond
- 15 graded sale West KY
- 15 Barren County Sheep and Goat, 6pm,
Barren County Extension Office
- 18-20 Rosh Hashanah
- 19 graded sale Springfield
- 22 graded sale Paris
- 24 graded sale Bowling Green
- 28 graded sale Richmond

OCTOBER

- 8 graded sale Bowling Green
- 8 Jessamine County Goat Producers, 6:30pm,
Ag Learning Center Jessamine County Fairgrounds 8
- 12 graded sale Richmond
- 15 KSU Goat Field Day, no registration required
- 17 graded sale Springfield
- 20 graded sale West KY
- 20 Barren County Sheep and Goat, 6pm,
Barren County Extension Office
- 22 graded sale Bowling Green
- 24 2020 KY Annual Producer Conference
- 26 graded sale Richmond
- 27 graded sale Paris
- 28-29 Mawlid al-Nabi

All dates are subject to change due to Covid-19.

Letter from the President

Can we get a reboot to 2020? Who could have imagined the changes to our lives since we last chatted! Hopefully, we have been through the worst and this will just be something we tell our grandkids. I am in the transportation business for my "real income," and a question I get from around the US and Canada from customers is, "How are you making out? How is this affecting you and your family?" My routine has not seen much change- I leave home to go to work, I leave work to go home, check on animals, feed if necessary, eat, sleep and start all over the next day. Truly there has been little effect on my daily grind except for the lack of quality toilet paper! One thing I recommend to everyone is practice safety from all aspects. Pretend every person you meet is contaminated and stay your distance. Wash your hands regularly and be careful.

Back to sheep! When to sell, when to buy, when to keep, where to sell, where to process? Those are questions I seem to get from breeders every day of the week. The market is so volatile that there is no right or wrong answer. What a unique time in our industry. I can tell you I know people who are selling direct to consumers and they are not being able to keep up with demand right now. I got my retail license just over a year ago. I have not promoted it or told many yet as I had not had the lambs to process. However, I have already had over a dozen reach out in the last 30 days for direct lambs that I never told! The process for obtaining a direct to consumer permit through the state of Tennessee is somewhat tricky and answers can be hard to find. It took me over a year of chasing and asking to finally get some answers, and I would be glad to share with anyone, just shoot me an email.

If you do sell lamb either as whole/halves or direct retail, if you have not reached out to your processors for available dates for the rest of the year hopefully you still have options. The shut down of several processors from beef and pork to a bankruptcy with Mountain Lake Lamb has put the public on the hunt for their own supply of meat. I know of several beef processors out to Feb/Mar of 2021 already! So, as soon as you have read to this point, stop! Call your processor now and see what you have available. Then come back and finish reading.

Additional unknowns brought to us during this unusual spring is the cancellations or rescheduling of most spring and summer shows, sales and even some county fairs. If you are unsure about the events you are interested in, please contact them for the most up to date information as it changes weekly. The events page in this issue will have some that we know of already, but by the time you get the magazine, they may have changed.



sheep producers association

www.tennesseesheep.org

If you have been approved for Tennessee Ag Enhancement cost sharing this year, be sure to stay focused on the following deadlines.

| | |
|--|----------------|
| Request to Decline Funding - Herd Health, Genetics, Row Crop Solutions, Livestock Solutions, Working Facility Structures, Poultry Grower, Producer Diversification | July 1, 2020 |
| Reimbursement Request - Herd Health, Genetics, Row Crop Solutions, Livestock Solutions, Working Facility Structures, Poultry Grower, Producer Diversification | August 1, 2020 |

We are so fortunate to have the TAEP program in place for our producers. I catch flack from producers all over the country when I brag about my new equipment every year. Take advantage and max out if possible. This is a great program to increase your management tools- hay barns, working systems, breeding stock, hay equipment, etc. The application for next round will be Oct 1, 2020, so if you missed out this year, or are new and have 50 sheep/goats, you will be able to sign up then.

Hopefully, we will be doing some updates to our website and Facebook page for information that comes up or changes so visit often.

Good luck and hope everyone can stay safe and healthy during this stressful time.

Robert Walker
President
Tennessee Sheep Producers

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- Brandon Tavalin, College Grove, TN – tavalintails@gmail.com

TN Junior Livestock Expo Update

The Sheep Expo is scheduled for August 7-8, 2020 at Hyder-Burks Pavilion at Tennessee Tech in Cookeville. The State Goat Show is scheduled for August 15, 2020 at the Wilson County Fairgrounds in Lebanon. Beef Expo is scheduled for August 28-29, 2020 at the Tennessee Livestock Center at MTSU in Murfreesboro. Every effort will be made to host these events during this time. It should be understood that there are many entities that could extend current restrictions or develop new policies that would make it necessary to cancel these events. These include, but are not limited to:

- University of Tennessee
- Tennessee Tech University (Sheep Expo)
- Middle Tennessee State University (Beef Expo)
- Wilson County Fairgrounds (State Goat Show)
- Governor's Office
- Centers for Disease Control and Prevention

Additionally, the Tennessee Department of Agriculture has released recommendations for livestock events during the current COVID-19 pandemic. Families are encouraged to read these recommendations as they could affect how the state youth shows are managed. These recommendations are provided below.

Below are eight of the recommendations that could have the most significant impact on how these three youth livestock shows are managed.

1. Reduce the size and duration of the show to minimize time spent on site. Consider limiting the number of participants overall and in individual classes.
2. No matter if the event is indoors or outside, CDC recommends wearing cloth face coverings in settings where it is difficult to maintain at least 6 feet of distance between people. Note that children under age two should NOT wear cloth face coverings because of the danger of suffocation.
3. Participants should not congregate. At least 6 feet of distance must be maintained between people, including in the prep

areas, at the gate, and while in the show ring. Additional show staff may be needed in these areas to provide reminders and guidance to participants.

4. Parking areas, campgrounds, tie areas, and stalls should be set up and managed so that at least 6 feet of distance can be maintained between family groups.
5. Spectators should be limited and if present, appropriate distancing maintained. It is advised to restrict access to bleachers or group seating areas. Consider providing a livestream of the competition online.
6. Children who are not competing should stay home. Children who do attend must be accompanied by an adult at all times. Ensure that children comply with applicable guidelines for appropriate distancing and use of face coverings.
7. Participants should leave the event venue as soon as they have finished showing.
8. Group meals should be prohibited.

More detailed information and covid-19 guidance for livestock competitions and events can be found online at

<https://animalscience.tennessee.edu/wp-content/uploads/sites/7/2020/05/Expo-Update-May2020.pdf>

CALENDAR OF EVENTS

JULY

24-25 Southern States Dorper Show & Sale
Cookeville, TN, Hyder-Burks Pavilion

AUGUST

7-8 Tennessee Junior Livestock Sheep Expo,
Cookeville, TN, Hyder-Burks Pavilion

All dates are subject to change due to Covid-19.



ANNUAL DUES: Adult: \$30.00 Junior \$10.00

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 |

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

JOIN ONLINE TODAY!

Pay dues and join online at
www.tennesseesheep.org/joinonline.htm

PRESIDENT'S LETTER

Lessons From the Flock: Shelter in Place

Out of curiosity I googled “flock takes shelter” today. I had to scroll past 6 results to find anything about sheep, and all but two of the first page results were filled with panic and chaos. The first half of this year has been a truly wild ride. Like most of you, I’ve had more time than usual to watch my flock. Lambs are learning from their mothers which plants to eat and where the microclimates located in the pasture. It seems we humans could learn a thing or two from sheep.

Animals instinctively know when to seek shelter; they eat more before a cold front, they bed down or turn their backs before a storm, and they don’t graze while it’s hot. They have nothing to fear because they are prepared to weather the storm. I saw the COVID-19 nightmare coming, but in no way could I have understood how hard it would be to shelter in place. Governor Beshear labeled the Kentucky version “Healthy at Home” but for shepherds I think shelter is a more familiar metaphor.

We talk a lot in our industry about how sheep don’t require fancy housing, how smart they are at finding “alternative” shelter like bluffs, brush, windbreaks, and depressions in the terrain. They hunker down and stay relatively comfortable. I know a shepherd in Southern Alberta, Canada whose Shetland sheep were missing for a week in eight feet of snow! One by one they dug their way out and shook off the weather, no worse for wear. Shelter in place can feel as restricting as a snowbank, but what it really means is safety in your most comfortable place, holding your ground until the storm – be it financial, health, or emotional – passes over you.

Folks, we know this storm is not yet over. If anything, we’re in the eye. We’ve seen other commodities ripped to shreds – dairy producers asked to dump milk, swine and beef packers closed, millions of chickens wasted because of staff shortages. We’ve seen the large sheep men out west struggle as the only commercial avenues they’ve ever used have

failed them. By contrast, Kentucky sheep producers experienced record high prices at our graded sales. We small producers are inherently less vulnerable because of the availability of small processors, our wool pool, and our familiarity with direct marketing. Whether you sell to the ethnic market or a family down the street, the relationships you have built with consumers are the keys to your success! And it’s a success you should feel great about – your customers are as thankful for you as you are for them.

Keep doing what you’re doing. Stay connected, take your vitamins, go outside and soak up the sun. Now is a great time to skirt fleeces and get them ready for the wool pool. If you have some to spare, offer to trade your lamb for a neighbor’s beef or pork. Let’s help the other commodities be as resilient as we are. Give thanks for green grass and fat lambs. We are truly blessed, and it is my prayer that we continue to be so.

Madeline Rosenberg,
KSWPA President

Madeline Rosenberg raises heritage breed wool sheep in Shelby County. She hosts a sheep related podcast, *Ovinology*, and serves on the Shelby Co. Horticultural and Agricultural Advisory Council. Madeline runs a successful fiber business, *Ballyhoo Fiber Emporium* and is a freelance author, speaker, and instructor. She loves God, her husband, and sheep and she is passionate about ensuring the future of KY agriculture through public education and service to her fellow producers.



**JOIN or
RENEW TODAY!**
Visit www.kysheepandgoat.org

KSWPA Membership Benefits

- Quarterly issues of HoofPrint Magazine plus the newly designed 2020 Sheep and Goat Management Calendar
- A unified voice for the sheep industry and representation on important state and national committees
- Assistance with new marketing opportunities such as The Kentucky Sheep and Fiber Festival and HoofTrader.com
- Receive a membership to the American Sheep Industry, our national lobbying, marketing and promotional support system.
- Support of various educational and youth activities

Name: _____ **Phone:** _____

E-Mail: _____

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

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

Kentucky Sheep and Goat Development Office

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

BECOME A BOARD MEMBER

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- 22 graded sale Paris
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OCTOBER

- 6 University of Kentucky Ewe Profit School II
- 8 graded sale Bowling Green
- 12 graded sale Richmond
- 17 graded sale Springfield
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Barren County Extension Office
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- 24 2020 KY Annual Producer Conference
- 26 graded sale Richmond
- 27 graded sale Paris
- 28-29 Mawlid al-Nabi

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madeline.ballyhoofarm@gmail.com
Vice President – Eileen O'Donohue, Washington Co. –
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valerdv@aol.com
Secretary – Sue Churchill, Woodford County –
thistlesend@gmail.com

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- Warren Adcock, Henry Co. –
wadcock6307@hotmail.com
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- Bill Decker (Past President, Ex officio), Shelby County –
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- Richard Popham, Meade County –
richard@circlepkatahdin.com
- Harry Frederick, Monroe County –
windingcreekfarmsKY@gmail.com

Flushing: Yes or No?

by Susan Schoenian

Sheep & Goat Specialist

University of Maryland Extension

Flushing is a term known to most sheep/goat producers. It is the practice of providing extra nutrition (feed; mostly energy) to the ewe/doe prior to and during the early part of the breeding season. Nutrition has long been linked to reproductive performance in animals.

Flushing increases weight gain and body condition of ewes/does, which may result in the birth of more offspring; i.e. more twins and triplets. Although results vary, prior research has shown that flushing can boost lambing percentages by 10 to 20 percent. Flushing should work similarly in goats, though there are fewer studies documenting its impact.

Flushing improves lambing/kidding percentages primarily by increasing the number of eggs (ova) that the female releases (ovulates) from her ovaries. Since there are few monozygote (identical) twins in sheep/goats, the number of eggs ovulated usually determines the maximum number of offspring that can be born. There is also evidence that flushing may improve conception rates and early embryo survival.

Responses to Flushing

Responses to flushing are variable. There are many factors which influence the response. In fact, flushing is not always cost-effective. Flushing is most effective in females that have not recovered sufficiently from their last lactation. Ewes/does with sub-optimal body condition scores (2 to 2.5) will respond more to flushing than those already in good body condition (3 or better). At the same time, overly thin females (1.5) may not respond to flushing unless the flushing period is started early enough. Well-conditioned females (3.5 or above) do not usually respond to flushing. They can be conditioned for flushing and breeding by increasing exercise and reducing feed intake until they are in an appropriate breeding condition.

Flushing ewes/does during the height of the breeding season, when they are naturally more fertile, may not be cost-effective. Flushing will be more advantageous during the early or late part of the breeding season. Mature females tend to respond more to



Reproductive efficiency is the primary factor determining profitability of a sheep/goat enterprise. Flushing may be a cost-effective means to improve the reproductive output on some small ruminant farms.

flushing than younger females. It is usually not necessary to flush ewe lambs or doelings as they should already be on a good plane of nutrition, gaining weight steadily from birth to their first breeding. The same principle should apply to yearlings that have not yet lambed/kidded.

Flushing should be more beneficial for ewes/does in accelerated breeding programs, as these females are expected to re-breed after a short recovery period. Having ewes/does in good body condition is essential for out-of-season breeding; flushing is recommended. Improved breeds (e.g. Boer) have higher nutritional requirements and may respond more to flushing than landrace breeds (e.g. Spanish). Flushing will not increase lambing/kidding rates above the genetic potential of the flock/herd. Prolific breeds usually respond less to flushing.

How to Flush

Flushing is usually accomplished by feeding a better-quality harvested forage, by moving ewes/does to a lush pasture, or by supplementing the forage diet with grain (usually corn, barley, oats, etc.). Grain feeding is the most common method of flushing. The amount of supplemental feed is dependent on the size of the female and the quantity and quality of the forage in the diet.

The most recently published Nutrient Requirements for Small Ruminants (National Research Council, 2007) do not give nutrient requirements for flushing. They simply recommend a 10% increase in energy intake (compared to maintenance requirements) during the breeding season. This is the amount of additional energy required to retain embryos in early pregnancy, not to flush.

The 1985 NRC requirements (for sheep) recommend a more than 50% increase (above

BODY CONDITION SCORING SHEEP AND GOATS

Sheep and goats are usually body condition scored using a scale of 1 to 5, with half scores. 1 is emaciated (very thin); 2 is lean (thin); 3 is average (nice shape); 4 is fleshy (fat); and 5 is obese (very fat). It is usually necessary to touch animals to determine their body condition score (BCS). Visual assessment of body condition can be misleading because fleece (or coat) and even pregnancy can hide the true status of an animal.

Body condition score is assessed by feeling for fat and muscle over the backbone, ribs, and loin. Bones are sharp and the loin is shallow in animals with low body condition scores (2 or less), whereas animals in good body condition (3 or above) should feel smoother (rounder) and have fuller loins. It is difficult to detect the bones in an obese animal (5).

Body condition scoring is different in goats (and some hair sheep breeds), as they deposit more fat in their abdomens and less over their skeletons. For this reason, it is normal for goats to carry less condition than sheep and hair sheep to have less external fat than conventional woolled breeds. There are numerous fact sheets and videos that can serve as guidelines for body condition scoring sheep/goats. Body condition scoring is an essential skill for sheep/goat producers.

maintenance) in energy intake for flushing. One half to 1 lb. of grain per head per day is usually sufficient for most ewes/does. Ewes in an accelerated lambing program may require an even bigger boost in energy intake (e.g. 200% of maintenance requirements), according to research conducted at Michigan State University.

Different feedstuffs can be used for flushing, so long as they provide the necessary energy boost and are cost-effective. In some areas of the US, whole cottonseed (not hulls) is fed as a high-energy supplement. It is also high in protein, though protein supplementation is not usually necessary unless the forage diet is deficient in protein. When using grain (starch) for flushing, it is important to add it to the diet gradually to give the rumen time to adjust. Never start out feeding a pound of grain per head per day.

Pasture can be used for flushing so long as the nutrients are there, and the stocking rate is low enough to allow sufficient intake. In fact, pasture is usually a more economical method of flushing and is recommended (over concentrate feeding) when animals are less likely to respond to flushing for the aforementioned reasons.

Specialty crops (e.g. brassicas) are sometimes planted for flushing. In the past, legume pastures were problematic for breeding due to their high estrogen content, but newer cultivars have been selected for lower estrogen and are considered safe for flushing and breeding. Endophyte-infected fescue pastures are not known to have an effect on fertility in sheep/goats, especially if ewes/does are mated in the spring or fall, but it might be wise to avoid (infected) fescue pastures for summer breeding.

Most of the literature suggests beginning flushing two to three weeks before the onset of breeding and continuing it for two to four weeks after. Earlier flushing may be advisable if animals are in poorer body condition. According to a Canadian fact sheet, it takes six weeks of grazing a good quality pasture to increase the body condition of a ewe by one condition score; 3 weeks for a half score. Body score changes will be more rapid with higher energy flushing diets.

Flushing should not be continued for too long into the breeding season, as the extra feed is costly and will not result in further improvements in reproduction. It may also cause some ewes/does to get overly fat. At the same time, there should not be a significant loss in body condition during the rest of the breeding season. The first two to three weeks after breeding are the most critical, as

this is when the embryos implant. Flushing is believed to improve the success rate of fertilized eggs attaching to the uterine wall.

After the first month of gestation, the plane of nutrition can return to maintenance levels until the last six weeks of gestation when fetal growth begins to place significant demands on the ewe/does. Nutrient requirements, especially energy, increase substantially in late pregnancy. Better quality forage and some grain is usually advocated.

Don't forget about the boys!

While we don't usually think about flushing rams and bucks, it is important that they be in peak condition at the time of breeding. Sperm production takes 7 to 8 weeks, so it's a good idea to begin supplementing males about 8 weeks before the onset of the breeding season. A 10 to 11% increase in energy intake is recommended by NRC. Intake of energy would need to be increased if the ram/buck was in sub-optimal body condition (below 2.5).

Aim for rams and bucks to have a body condition score of 3 to 3.5 at the time of breeding. Less condition (2.5) is usually acceptable for range rams. Be sure not to get males too fat (above 3.5) or they may lack the vigor necessary to breed females.

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Susan Schoenian is a Sheep and Goat Specialist at the University of Maryland's Western Maryland Research & Education Center. . She maintains several web sites, including the Maryland Small Ruminant Page, Sheep 101/201, and the web site of the American Consortium for Small Ruminant Parasite Control.

“The Economics of Goat Farming in a Changing Kentucky Landscape”

by Marcus Bernard, PhD and

Kenneth Andries, PhD

Over the past two decades goat production in Kentucky has been an all over the place venture. Prices up, prices down, production up and production down are common taglines when referring to the state's goat industry. It's been a bumpy ride for sure. The majority of producers raise goats for slaughter (meat market), breeding, fiber and land management (USDA-NIFA, 2007). The preference to raise and market goats is because of their ability to graze for longer periods, tolerance to weather, low housing costs, and lower cost of feeding than other livestock such as cattle (Benedict & Berdikul, 2016). Currently, Kentucky has five primary stockyards for goat producers: Bluegrass Stockyards in Richmond, KY, United Producers, Inc in Bowling Green, KY, Western Kentucky Auction Barn in Mayfield, KY, Paris Stockyards in Paris, KY, and Washington County Graded Sheep and Goat Sale in Springfield, KY (USDA-AMS, 2020).

Almost 20 years ago there were at least 70,000 goats and 2,500 producers across Kentucky with an average flock size of about 26 goats, (Skillman (2003). The Kentucky Farm Bureau (2015) reported in the mid-2000s that the top goat producing counties in Kentucky were Hart, Hardin, Warren, Christian, and Pulaski with an aggregate state inventory of approximately 65,000 goats. In the last USDA Agricultural Census (2017), the total number of farms (4,330) in Kentucky raising goats increased since the 2012 USDA Agricultural Census (3,797) while the total goat population decreased from just over 64,000 goats to just under 60,000 head. Although there is a decrease in overall production, the market remained strong whereby total sales increased over \$450,000 dollars and Warren, Crittenden, Barren, Shelby, and Hart counties were the highest producing counties (USDA-NASS, 2017). Economic research suggests large-sized goat farms are more likely to have lower costs and greater margin of return per head than small and medium sized farms (Benedict & Berdikul, 2016).

In a commercial meat goat herd, in Kentucky and the surrounding area, management should be on a forage basis.

This indicates grazing/browsing during the growing season (usually April to November) and feeding stored forages with some supplementation through the winter and early spring. Our forage production potential, under most management and soil fertility, is between 3 and 5 goats per acre. This should be the minimum point for consideration on management practices. The value of this land has to be considered along with the labor to manage. The value should be based on the pasture rental rates, as that is what you should be able to receive for it if you were not grazing it yourself. The 2018 land rental rates for pasture range from \$25 to \$55 per acre in Kentucky depending on the land productivity (Halich, et al. 2018). During the time of year that you will be feeding stored forage, a goat will consume 4 to 8 lbs. of hay per day and waste about another 1 to 2 lbs. Because of this you need to figure a minimum of 6 lbs. of hay per head per day. Feeding methods and quality impact this amount.

During lactation the doe will need additional supplementation to meet nutritional needs. This can generally be met by feeding 2 to 3 lbs. of supplemental feed for 60 to 85 days. You will need to reduce her supplement before weaning to help with dry off. Kids are generally going to be creep fed between 60 and 80 days as well depending on forage condition and quality. During both of these times, an 18% Crude Protein diet should be used and it should be balanced to meet the needs of the animal.

In a farm business, really any business, a primary goal should be sustainability as result of minimizing cost and maximizing profit. Janke (2000) frames farm sustainability through the lens of whole-farm planning for profitability and better long-term management. Sustainability and farm planning are critical when the USDA's Economics Research Service (2020) estimates the average Net Cash Farm Income (NCFI) for farms across the country is expected to decrease in 2020 by a minimum of 4.4 percent. A goat farm operation can measure sustainability and profitability in a number of ways: income above variable cost, income about fixed costs, profit per head, profit per month, profit per acre, profit from milk production (dairy goats), and return on

assets (Mendell, 2020). He went on to suggest that four major determinants that influence the profitability of a goat producer are feed cost, the percent kid crop, veterinary care, and market prices. For example, producers that learn how to make their own feed and maintenance their own animals can better manage feed and veterinary cost. In sum, utilizing strategic management and sustainable economic approaches can lower herd risks and increase profit potential.

Below is a sample enterprise budget for a 20 doe / 1 buck meat goat operation to estimate economic returns and consider ways a producer can implement strategic management of input costs to increase profit potential. In the budget we planned for a 187% kidding rate. About 55% of the kids would be sold an average of 45 lbs. and the other 45% would be heavier at an average of 65 lbs. at marketing shortly after weaning. We based the price for the kids and cull does off the Kentucky Market reports to get a good general average price of \$2.30/lb. for the heavier kids, \$2.74/lb. for the lighter kids.

Table 1 shows the annual cost of this enterprise based on estimated information in extension publications and contact with market reports for feed and other cost. Table 2 shows the revenue expected to be generated based on the estimated prices and expected average weights and number of animals. Table 3 is the expected returns for the enterprise. The budget is based on the UK and KYSU Meat Goat Enterprise Budget.

As can be seen from this budget analysis, a small profit is possible. However, the profit margin is low under these conditions. Feeding cost are very variable between herds at this time and this makes the small margin very critical in the overall analysis. Any increase in cost will need to result in significant income change to result in a benefit to the producer. The kid weights are averages and are possible, but price does vary based on weight at the sales. This can also impact the possibility of a profit for a meat goat herd.

With careful management it is possible for someone to be profitable in meat goats on a small scale, however the margin is very small. There are different production systems, and marketing options available, the ones examined here are the most common in the

Table 1. Sample Budget for 20 Head Meat Goat Flock.

| Item | \$ per unit | Units | Per Doe | Per Herd |
|-------------------------|-------------|------------|----------|------------|
| Variable Cost | | | | |
| Pasture | \$30 | 0.33 acres | \$9.90 | \$198 |
| Hay | \$75 | 0.25 tons | \$18.75 | \$375 |
| Feed | \$0.29 | 108 lbs. | \$31.32 | \$626 |
| Mineral Mix | \$0.40 | 20 lbs. | \$8.00 | \$160 |
| Vet and Med | \$10 | Per head | \$10 | \$200 |
| Breeding/buck | \$10 | Per head | \$10 | \$200 |
| Bedding | \$3 | Per head | \$3 | \$600 |
| Marketing/haul | \$9 | Per head | \$15.06 | \$301 |
| Maintenance | \$6 | Per head | \$6 | \$120 |
| Misc. Supplies | \$5 | Per head | \$5 | \$100 |
| Interest | 6% | \$115.03 | \$6.90 | \$138 |
| Total Variable Cost | | | \$121.93 | \$2,438.57 |
| Fixed Cost | | | | |
| Depreciation | | | \$2.17 | \$4,339 |
| Tax & Insurance | | | \$10.00 | \$200 |
| Operator/family/labor | \$8 | 10 hours | \$80 | \$1,600 |
| Total Fixed Cost | | | \$95 | \$1,900 |
| Total Cost of Operation | | | \$216.93 | \$4,338.57 |

Table 2. Revenue from 20 doe herd.

| Type of animal | # | Avg. WT | Market price | Per Doe | Per Herd |
|----------------|----|----------|--------------|----------|------------|
| Heavy Kids | 14 | 65 lbs. | \$2.30/lb. | \$104.65 | \$2,093 |
| Light Kids | 17 | 45 lbs. | \$2.75/lb. | \$103.08 | \$2,062 |
| Cull does | 3 | 110 lbs. | \$1.60 | \$24.64 | \$496 |
| Total revenue | | | | \$232.37 | \$4,647.48 |

Table 3. Returns over cost from 20 head goat herd.

| | Per Doe | Per Herd |
|----------------------------|----------|------------|
| Returns over Variable Cost | \$110.45 | \$2,438.57 |
| Net expected returns | \$15.45 | \$308.90 |

state. We encourage everyone to use this as a basic template. If you are able, put your own information in the budget template based on your records. You need good records to know what is actually being used and the cost. Also, do not forget the cost for pasture and hay produced on the farm as these do have a cost to you so, be realistic. Labor, even family labor, needs to be included to be honest in the value of that labor. If you can work for pay doing the work, you need to include it here.

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Dr. Andries is the Associate Dean of the College of Agriculture, Communities, and the Environment and an Associate Professor of Animal Science at Kentucky State University. He has worked with the meat goat industry for 15 years in Kentucky and has developed programs related to herd performance, health, and grazing management for small ruminants. He has been a member of the board of directors of the American Goat Federation and the National Sheep Improvement Program. He has written several extension and research publications related to goat production and management.

Marcus Bernard is an Associate Professor of Agricultural Economics and Rural Sociology at Kentucky State University and an Interdisciplinary Research Leaders Fellow with the Robert Wood Johnson's Culture of Health initiative where he focuses food security through the lens of agrarian traditional knowledge, land-based cooperative economics, and communal land holdings. Prior to this appointment, he served as the Director of the Rural Training and Research Center for the Federation of Southern Cooperatives/ Land Assistance Fund in Eps, Alabama.

Talking Points

COVID-19's effects on the meat supply

by: Dr. Gregg Rentfrow, Ph.D.;

University of Kentucky

Dr. Jonathan Campbell, Ph.D.;

Pennsylvania State University

Dr. Lyda Garcia, Ph.D.;

The Ohio State University

Can I get COVID-19 by eating contaminated food or meat or is it safe to eat food/meats if it has been handled by a worker with COVID-19?

According to the Food and Drug Administration (FDA) and the United States Department of Agriculture (USDA) there is no evidence that COVID-19 can be contracted through food. Currently, there is no evidence of the disease being transmitted through food or meat. COVID-19 is respiratory illness contracted via personal contact. Traditional food safety measures and thorough cooking should always be followed.

Can I get sick by handling food and/or meat packages if COVID-19 has contaminated the surface?

According to the FDA and USDA there is no evidence of COVID-19 being transmitted through food/meat packages. In addition, according to the FDA, you do not have to wash your food containers to prevent COVID-19 infection. Never try to wash meat in the sink or spray/dip food products into chemicals commonly used for household cleaning. You should wash your hands or use hand sanitizer with at least 60% alcohol content as soon as you can after handling packages or leaving a retail establishment to be safe. Be sure to disinfect food preparation areas according to chemical manufacture recommendations.

Can COVID-19 be transmitted through imported food or packaging from COVID-19 positive countries?

According to the FDA and USDA there is no evidence of COVID-19 being transmitted through imported foods, meats, or packaging.

I'm hearing about meat plants being closed due to workers contracting COVID-19. Will this cause meat shortages?

The meat industry is devoted to maintaining the supply chain. Although some plants have temporarily closed and others have slowed production, the meat industry began to prepare for interruptions in the supply chain once the coronavirus began to spread globally. Currently, the industry does not foresee any interruptions in the supply chain. Those meat processing plants that have closed are deep cleaning, beyond normal cleaning and sanitizing, as well as they are working the state and local health department to reopen as soon as it is safe. Consumers should not panic buy or stockpile meats, but maintain traditional buying patterns.

What is the meat industry doing to maintain the supply chain?

Overall total meat sales have declined, but retail sales have and continue to increase. The temporary closure of restaurants and other food service establishments have caused overall total meat sales to decline. Restaurant and food service meats are being transferred to meet the needs of retail grocery stores. In addition, the USDA-Food Safety and Inspection Service is working with the industry to help ensure that the supply chain remains intact and safe. Moreover, the meat industry as a whole, is working very hard to maintain the meat supply. Consumers can help the meat industry to maintain consistent supplies by avoiding panic buying or stockpiling.

What are meat plants doing to help their workers remain healthy during the pandemic?

Social distancing has become the new buzz word. Part of the reason for some meat plants reducing production is that they are trying to institute and enforce social distancing. Most plants are staggering shifts, break, and lunch times along with installing

tents to allow workers to social distance. Furthermore, they are taking temperatures and overall health assessments of each worker at the beginning of each shift, and workers are required to wear masks, gloves, and eye protection. Plastic dividers are also being installed when social distancing is not possible. Workers that do become ill are still receiving pay while they recover.

What is the USDA – Food Safety and Inspection Service (FSIS) doing to maintain the meat supply and staying healthy?

Mandatory meat inspection is the law. The USDA-FSIS is working with the meats industry to make sure meat inspectors are present at all inspected processing facilities. If an inspector becomes ill, a replacement or relief inspector is sent to fulfil the duties; even inspectors that have been promoted from day-to-day line inspection are returning to meet the needs. In addition, the FSIS is working with state and local health departments to reopen closed plants to make sure all workers are safe.

Overall thoughts

The meats industry, the USDA, and farmers are trying to maintain the supply chain. Understandably, the media is reporting on the meat plant closures and slowed production. Please understand everyone is trying to make sure safe, healthy food is available to consumers. Meat plants that have closed are testing employees for COVID-19, performing deep cleanings in the plant, instituting safety measures including Personal Protective Equipment (PPE), and promoting social distancing, as well as working with state and local health departments to reopen as soon as possible. Consumers can help by avoiding panic buying and stockpiling. By working together, we can make sure there is plenty for everyone.



Southern States Dorper SHOW & SALE



2020



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Expecting 200 Head • Catalogs at www.Dorper.org
Sale will be broadcast for real-time bidding on DV Auction.
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For Further Information, Contact:
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Coronavirus Food Assistance Program

USDA Secretary Sonny Perdue announced the Coronavirus Food Assistance program on April 17, 2020. Funds for the program were provided in the Coronavirus Aid, Relief, and Economic Security Act, the Families First Coronavirus Response Act, and other USDA existing authorities. This \$19 billion immediate relief program includes direct support to agricultural producers as well as the Farmers to Families Food Box Program. According to Peter Orwick, Executive Director of the American Sheep Industry, USDA received requests for over \$40 billion in lost revenue across several commodity groups, but were only able to provide \$19 billion in funding relief.

CFAP is providing financial assistance to producers of agricultural commodities who have suffered a five-percent-or-greater price decline or who had losses due to market supply chain disruptions due to COVID-19 and face additional significant market costs. Therefore, Kentucky sheep producers can receive funds for animals 2 years or younger and their 2019 wool crop.

Eligible farmers will receive one CFAP payment, drawn from two possible funding sources. The first source of funding is \$9.5 billion in appropriated funding provided in the CARES Act and compensates farmers for losses due to price declines that occurred between mid-January 2020, and mid-April 2020. The second funding source uses the Commodity Credit Corporation Charter Act to compensate producers for \$6.5 billion in losses due to on-going market disruptions.

Beginning May 26, USDA's Farm Service Agency started accepting applications. The application form and a payment calculator for producers are available online at www.farmers.gov/CFAP.

CFAP Eligibility

To be eligible for payments, a person or legal entity must have an average adjusted gross income of less than \$900,000 for tax years 2016, 2017, and 2018. However, if 75 percent of their adjusted gross income comes from farming, ranching, or forestry, the AGI limit of \$900,000 does not apply.

CFAP Payment Limitations and Structure

CFAP payments are subject to a per person and legal entity payment limitation of \$250,000. This limitation applies to the total amount of CFAP payments made with respect to all eligible commodities.

To ensure the availability of funding throughout the application period, producers will receive 80 percent of their maximum total payment upon approval of the application. The remaining portion of the payment, not to exceed the payment limit, will be paid at a later date as funds remain available.

How to Apply

USDA began taking applications for CFAP on May 26. Deadline to apply is August 28, however you are encouraged to apply as soon as possible. All applications are handled through your local Farm Service Agency. You can find contact information for your local office at www.farmers.gov/CFAP.

In addition to the application form, at www.farmer.gov/CFAP, you will find downloadable links to other FSA forms that will need to be completed. It is advisable to complete these forms prior to calling for an appointment.

Wool

Producers will be paid based on inventory subject to price risk held as of January 15, 2020. A single payment will be made based on 50 percent of a producer's 2019 total production or the 2019

inventory as of January 15, 2020, whichever is smaller, multiplied by the commodity's applicable payment rate.

Producers must provide the following information for CFAP:

- **CARES Act Payment Rate** -Total 2019 production for the commodity that suffered a five percent-or-greater price decline, and
- **CCC Payment Rate** -Total 2019 production that was not sold as of January 15, 2020.

The following table lists wool payment rates for CFAP.

| Commodity | Unit of Measure | CARES Act Payment Rate | CCC Payment Rate |
|---------------------------------|-----------------|------------------------|------------------|
| Wool (graded, clean basis) | pound | \$0.71 | \$0.78 |
| Wool (non-graded, greasy basis) | pound | \$0.36 | \$0.39 |

Livestock

CFAP assistance is available to livestock producers who have an ownership interest in eligible livestock that have suffered a five percent-or-greater price decline as a result of the COVID-19 pandemic and face additional significant costs in marketing their inventories due to unexpected surplus and disrupted markets.

Livestock eligible for CFAP include cattle, hogs, and sheep.

Sheep - Lambs and yearlings (less than 2 years of age)

Producers must provide the following information for CFAP:

- **CARES Act Part 1 Payment Rate** -Total sales of eligible livestock, by species and class, between January 15, 2020, to April 15, 2020, of owned inventory as of January 15, 2020, including any offsprings from that inventory; and
- **CCC Payment Rate** -highest inventory of eligible livestock, by species and class, between April 16, 2020, and May 14, 2020.

The following table lists eligible livestock and payment rates for CFAP

| Livestock | Eligible Livestock | Unit of Measure | CARES Act Part 1 Payment Rate | CCC Part 2 Payment Rate |
|---------------------|---------------------------------|-----------------|-------------------------------|-------------------------|
| Lambs and Yearlings | All Sheep Less than 2 Years Old | Head | \$33.00 | \$7.00 |

Additional CFAP Information

Visit farmers.gov/cfap for additional information on the Coronavirus Food Assistance Program, other eligible commodities, CFAP eligibility, payment limitations and structure, and how to apply. Also, feel free to contact Kelley Yates, Executive Director for the Kentucky Sheep and Goat Development Office, at 502-682-7780 or kyates@kysheepandgoat.org.



2020 KY Annual Producer Conference October 24, 2020

Check-In 8:30 am, Starts 9:00 am (EST)

Hardin County Extension Office
111 Opportunity Way, Elizabethtown, KY 42701

Price: \$25/person or \$40/couple, kids 12 and under free



PRESENTATIONS

Jason Wachter, KDA Small Ruminant Marketing Specialist
9:30am-10:00am – Current Market Trends

An Peischel, Assistant Professor and Small Ruminant Extension Specialist
10:00am-10:45am – Low Stress Livestock Handling
1:00-1:45pm – Reproduction
2:00-2:45pm – LGD Management

ANNUAL KSWPA & KGPA BOARD MEETINGS

Both KSWPA and KGPA will host their annual business meetings. 2020 meeting information will be posted online closer to the conference.

KEYNOTE SPEAKER:

An Peischel
Assistant Professor &
Small Ruminant
Extension Specialist,
College of Agriculture
Tennessee State
University

WORKSHOPS

- FAMACHA and Body Condition Score Training-
Dr. Beth Johnson, Kentucky State Veterinary Office
- SRPS Nutrition-
Dr. Don Ely, Professor University of Kentucky

REGISTER

www.kysheepandgoat.org/annual-producer-conference



NEWS TO EWES

What Do Ewes Need To Be Ready?

by Dr. Donald G. Ely

Body condition scoring is a system of classifying breeding ewes on the basis of differences in body fat. While it is subjective, with practice, it can be accurate enough to indicate the nutritional status of individual ewes as well as the entire flock. Thus, it allows the shepherd to identify, record, and adjust the feed intake of ewes determined to be thin, in average flesh, or fat. In the long run, this can save money for producers and/or prevent problems attributable to ewe condition.

Body condition scores (BCS) change throughout the year as ewes progress through each stage of production: Flushing/Breeding, Early Gestation, Late Gestation, Parturition, Early Lactation, and Late Lactation. Weight at a given stage of production is the best indicator whether ewes are too thin, too fat, or just right to do the job to the best of their abilities. However, mature weights vary among individuals and breeds, making it difficult to use weight to determine the correct BCS for a specific stage of production. Body condition



scoring describes the condition of ewes, is convenient, and is more accurate than a simple eye appraisal.

Condition scores for ewes range from 1 to 5. A score of 1.0 represents the thinnest animals and a score of 5.0 represents the fattest. Usually, 90% of the ewes in a flock fall within BCS of 2, 3, and 4. Half scores are often used to improve the evaluation process. Then, the range of scores expands to 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, and 5.0. The intermediate half scores are helpful when an animal's condition is not totally clear (3.0 vs 3.5). However, determining an exact BCS is probably not as important as

assigning a relative score. For example, a BCS of 3.0 vs 3.5 is not a big difference, but the relative difference between a 2.5 and a 4.0 is significant.

The BCS estimates the conditioning of muscling and fat development. Scoring is based on handling the animal for extent of muscling and fat deposition over and around the vertebrae in the loin region (**Figures 1, 2, 3**). In addition to the central spinal column, loin vertebrae have a vertical bone protrusion on each side (transverse process). Both of these protrusions are palpated and used to assess an individual BCS. Examples of handling the spinal column, the loin vertebrae, and ribs of ewes can be seen in **Figures 1, 2, 3 and Photographs 1, 2, 3**.

When handling ewes to assign a BCS, make sure each ewe is standing on a level surface and in a relaxed manner. Using your fingers (held together) and thumb, determine the sharpness of the spine behind the last rib and in front of the hip bone (**Figure 1 and Photograph 1**). Determine the sharpness of the transverse processes at the same time (**Figure 2 and Photograph 2**). In addition, it may be helpful to determine the extent of fat

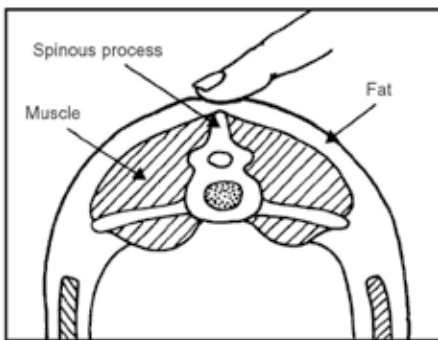


Figure 1

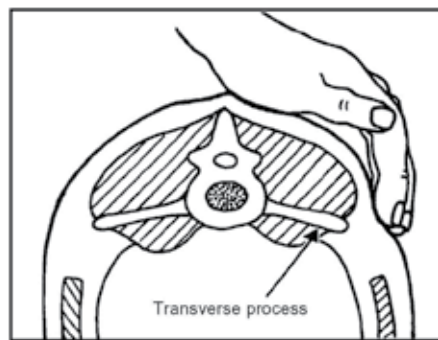


Figure 2

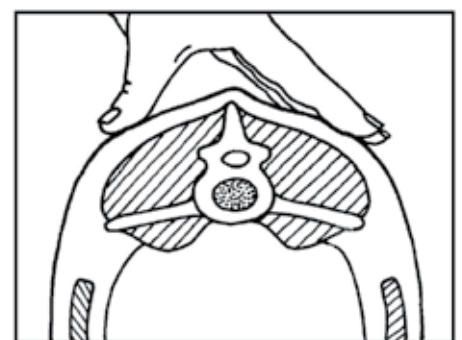


Figure 3



Photograph 1



Photograph 2



Photograph 3

Table 1. Condition Scoring Ewes

| Point of Evaluation | Score | | | | |
|-----------------------------|------------------|--------------------------------|--------------------|-------------------------|----------------------|
| | 1 | 2 | 3 | 4 | 5 |
| Spine | Prominent, sharp | Prominent, smooth | Smooth, rounded | Detected only as a line | Not detectable |
| Fat cover | None | Thin | Moderate | Thick | Dense |
| Transverse processes | Prominent, sharp | Prominent, rounded | Smooth, rounded | Not detected | Not detected |
| Foreribs | Prominent | Prominent with slight covering | Smooth indentation | Slight detection | Smooth, not detected |

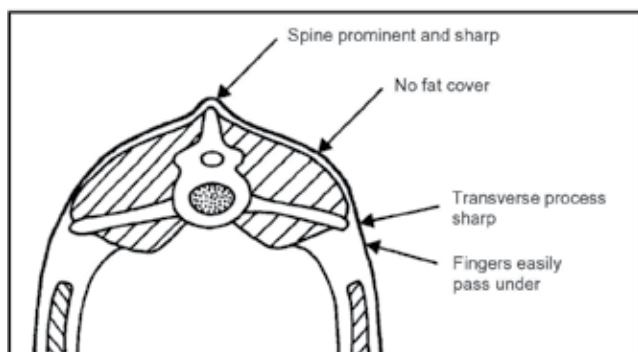


Figure 4 – Condition 1

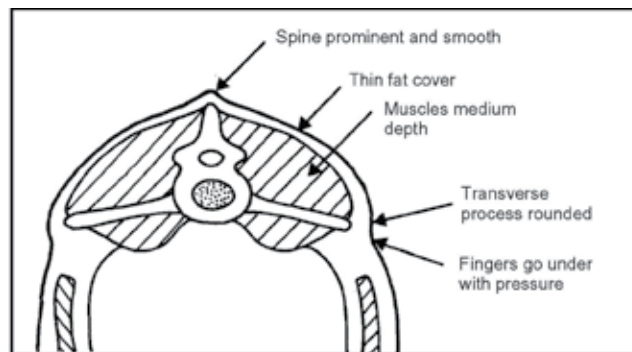


Figure 5 – Condition 2

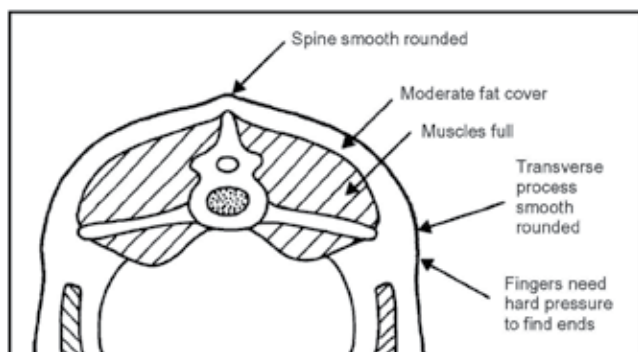


Figure 6 – Condition 3

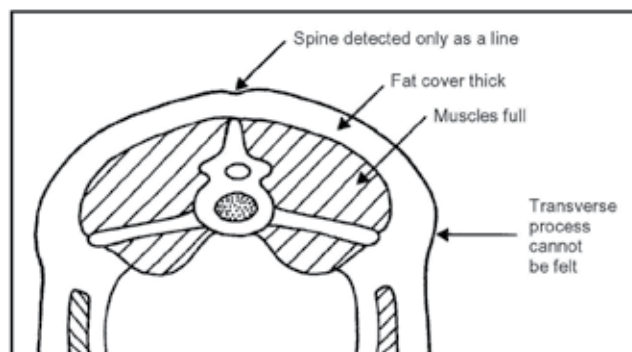


Figure 7 – Condition 4

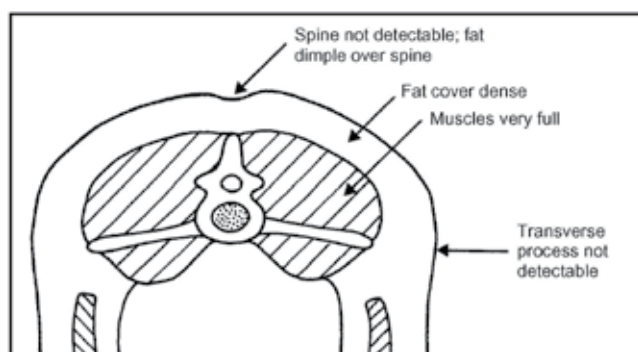
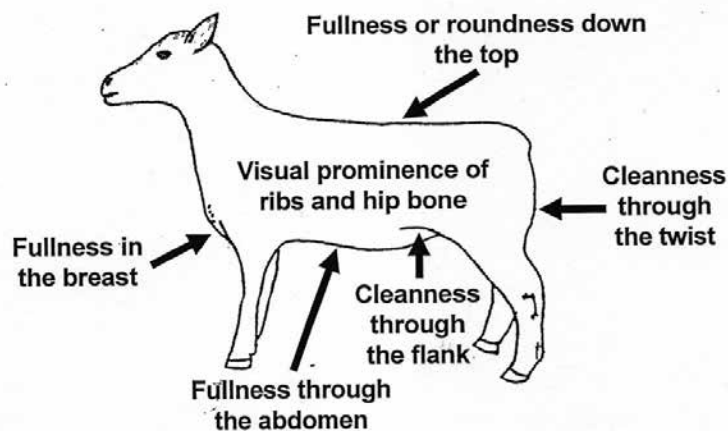


Figure 8 – Condition 5

covering over the foreribs because, in many instances, the handler may find sharpness over the spine (condition score 2.0), but will find fat over the ribs (condition score 3.0) (**Figure 3 and Photograph 3**). Then, one must arrive at some average for an overall BCS. After all points have been evaluated, assign an overall score according to **Table 1**. Diagrams of the five whole numbers are described in **Figures 4 – 8**. (*J. Thompson and H. Meyer: 1994. Body condition scoring of sheep. EC1433, Oregon State University, Corvallis*).

Ewes continues on pg. 14

Figure 9. Points of Visual Evaluation for Ewe Body Condition.



With increased experience, the BCS might be assessed visually. Certainly this method is less time consuming and minimizes physical labor. But, as wool cover and to some extent hair cover increases, the accuracy and precision of visual appraisal becomes more difficult. **Figure 9** shows the points of visual evaluation. Some of these differ from those of the “hands-on” method because they can be appraised with the naked eye. If visual appraisal is to be used, make sure the end results of both methods are the same. **Photograph 4** shows BCS 3.5 for the ewe on the left vs. 2.0 for the ewe on the right. **Figure 10** shows how BCS fluctuates during stages of production during a 12-month period (one lamb crop per year). The periods during the year when BCS is most important are: Flushing/Breeding, Late Gestation, Early Lactation, and Maintenance. On average, a difference of 1.0 BCS is equivalent to 13% of the live weight of a ewe with a 3.0 BCS. Thus, a ewe with a maintenance weight of 150 pounds needs to gain 20 pounds to increase her BCS from 2.5 to 3.5.

Fat ewes (BCS 4 and 5) may not cycle during breeding. If they do cycle, ovulation rates may be low. Excessively thin ewes (BCS 1.0 to 1.5) may have similar problems. To gain a benefit from nutritional flushing, and ultimately lambing rate, ewes must have less than a 3.0 BCS at flushing. If ewes have a BCS of 3, 4, or 5 as early as 6 weeks before flushing, reduce their feed intake so they will be 2.0 to 2.5 at the beginning of flushing. On the other hand, if they are 1.0 to 1.5, increase intake for 6 weeks prior to flushing,



Photograph 4 showing a BCS of 3.5 for the ewe on the left vs. 2.0 for the ewe on the right.

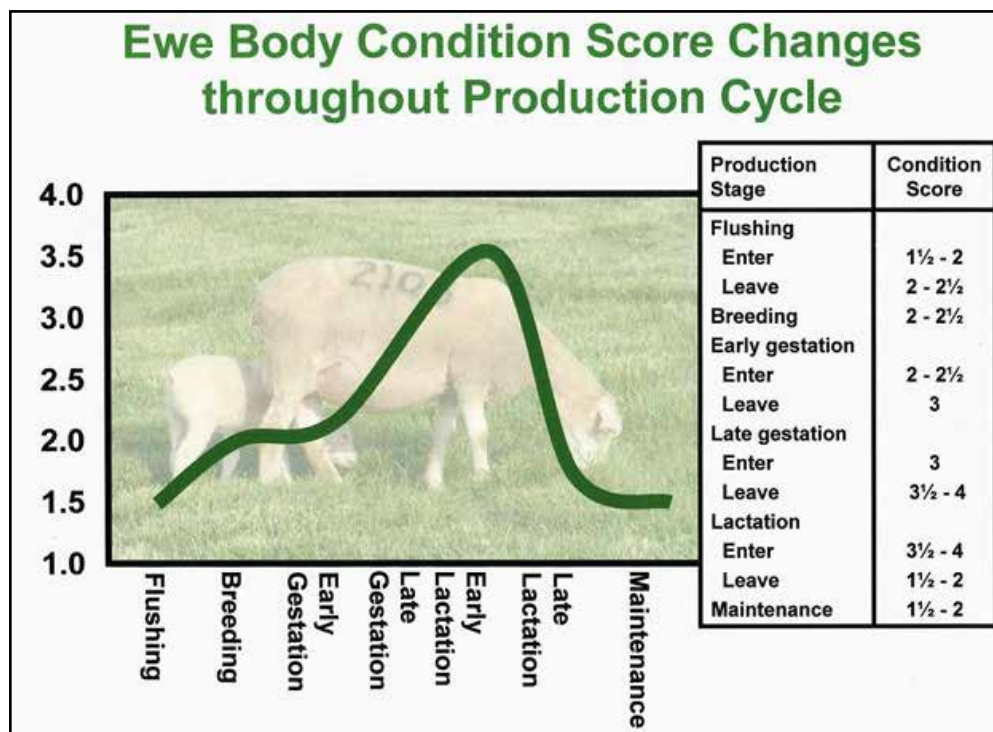


Figure 10.

throughout the flushing period, and for 3 weeks into the breeding season. Optimum BCS during flushing/breeding is 2.0 to 2.5. Body condition score should gradually increase from flushing/breeding, through early gestation (first 110 days) to 3.0 at the beginning of late gestation (last 4 to 6 weeks). A feeding program should be developed that will promote enough gain so ewes will have a 3.5 to 4.0 BCS at lambing. Typically,

ewes lose weight during lactation even though they are fed large amounts of high-quality diets. Average BCS of ewes at the end of early lactation (60 days postpartum) can be as low as 1.5 to 2.0. After weaning, nonpregnant and nonlactating ewes can gain significant condition from pasture alone. It is during this period that shepherds must manage pastures so ewes do not become too fat, remembering they should enter the next

flushing/breeding season with BCS between 2.0 and 2.5. Proposed stocking rates to maintain a BCS of 2.0 to 2.5 for dry, open ewes at maintenance are presented in Table 2.

CONCLUSION:

Condition scoring is a valuable management tool that should be performed regularly before Flushing/Breeding, Late Gestation, Early Lactation, and Maintenance phases of the annual production year of ewes. Condition scoring allows shepherds to improve flock management, reduce feed costs, and limit health/performance problems resulting from improper nutrition. Flock management is improved because ewes can be grouped into different feeding programs based on their needs. Ultimately, the annual feeding program becomes more economically efficient.

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

Table 2. Proposed Stocking Rates for Dry, Open Ewes at Maintenance^{a, b}

| Month | Grass ^c | |
|-----------|--------------------|----------|
| | OG/F | BG |
| April | 6 to 15 | 2 to 4 |
| May | 16 to 30 | 4 to 10 |
| June | 20 to 25 | 13 to 20 |
| July | 13 to 16 | 13 to 16 |
| August | 0 to 8 | 0 to 3 |
| September | 8 to 15 | 3 to 6 |
| October | 16 to 20 | 5 to 8 |
| November | 3 to 6 | 0 to 2 |

^a Dry, open ewes at maintenance; number of ewes per acre.

^b Assuming a mature ewe weight of 150 lb and a daily dry matter consumption of 2.0% of body weight (3.0 lb dry matter intake per head per day).

^c OG = orchardgrass; F = fescue; BG = bluegrass

SHOULD I BE CONCERNED ABOUT CONTAGIOUS ABSCESSES IN MY SMALL RUMINANT HERD?

by Beth Johnson, DVM

Corynebacterium pseudotuberculosis infection, also known as Caseous Lymphadenitis (CL) is a bacterial disease which infects sheep and goats. The bacteria prefers to set up shop in the lymph nodes of sheep and goats, resulting in a walled off abscess of caseous material within the lymph node. As we all know, lymph nodes are present throughout the body; therefore, this bacteria can infect both external and internal lymph nodes resulting in unthriftiness, loss of milk and meat production, premature culling and is responsible for many sudden deaths. When the abscesses are present within internal lymph nodes, the kidney, liver, gastrointestinal tract, lungs and even brain tissue may be affected. Animals become infected by exposure to infectious exudate from a draining abscess or contact with an inanimate object, i.e. feed troughs, in the environment which have been contaminated by the exudate from a draining abscess.



Caseous lymphadenitis in the parotid lymph node.

The Kentucky Sheep and Goat Check-Off Program began in 2010 and 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.

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- **\$50,000 in New Farmer Recruitment loans** have been given to 25 new/beginning producers in Kentucky since 2012
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KY Sheep & Goat Check-Off Sponsors the Try Something Different Tonight marketing campaign

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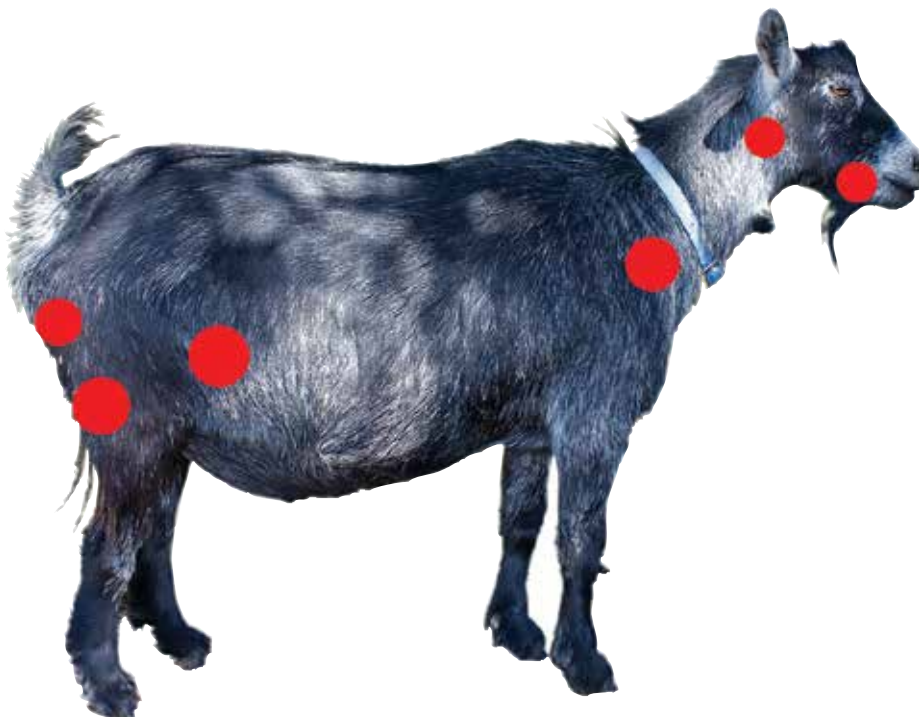


To learn more about the Kentucky Sheep and Goat Check-off Program visit

www.kysheepandgoat.org/Check_Off.html

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Abscess locations in goats



Treatment:

When a sheep or goat develops an external abscess, it should be isolated from the herd as soon as possible and monitored for the abscess to “ripen”. The abscess will continue to grow and develop until it becomes mature enough to lance and flush. When the hair or wool starts to fall out over the abscess, the abscess will usually rupture on its own within a few days. Unfortunately, the producer does not notice many abscesses, especially under the ear, until they see the drainage. It is better to lance the abscess and flush out with a disinfectant and apply a disinfectant spray over the wound which will speed up recovery. Abscesses should be lanced in an area that can be thoroughly cleaned and disinfected and all exudate gathered and properly disposed of in a safe and biosecure method. The recovering sheep or goat should be placed in a quarantine pen until the abscess is completely healed to reduce the risk of exposure to the rest of the herd.

Control:

Once a herd is infected with CL, the producer should attempt to control the risk of infection through the use of quarantining infected animals and lancing or surgically removing the abscesses. Vaccination of the susceptible animals and culling diseased animals should also be a form of reducing the incidence of disease within the herd.

Vaccination:

There is a vaccine approved for use in sheep, Case-bac®, and a conditionally licensed vaccine for goats, *Corynebacteria pseudotuberculosis* bacterin®. One should not use the sheep approved vaccine in goats. Administration of the vaccines should follow manufacturer’s directions. I have recommended vaccinating kids and lambs at 2 months of age followed by a booster in 2-4 weeks. Booster CL vaccinations should be given every 6-12 months to maintain protection against this bacterial infection. The vaccine should be administered to both young and adult sheep and goats. One must remember that once an animal is vaccinated it will probably test positive on serological testing for CL. Therefore vaccination for CL is not recommended in herds selling replacement animals to individuals requesting a negative serological test. As with all vaccinations, protection is not 100% effective, so the producer must combine good biosecurity, treatment and vaccination to control this disease.

Testing:

To confirm the presence of *Corynebacteria pseudotuberculosis*, CL, in a herd, it is highly recommended that all exudate from external abscesses be submitted for bacteriological culture to confirm that it is *C. pseudotuberculosis*. There is also a serological test to detect

antibodies to an endotoxin produced by the bacteria. Interpretation of a positive serological test **does not** confirm infection. What it **does** confirm is that the sheep or goat has been exposed to the bacteria. Serological testing is more useful to confirm the presence of caseous lymphadenitis in a herd rather than an individual animal.

Biosecurity:

As with all infectious diseases, such as foot rot, infectious keratoconjunctivitis (aka Pinkeye), abscesses and even parasitic infections, a producer should quarantine all new animal additions for a period of thirty (30) days. During this time, a fecal exam and/or serological testing can be performed on the new sheep or goat to test for internal parasites and other infectious disease and response to treatment if necessary. If a serological test for CL is performed and the initial test is negative a second test should be performed in 30 days to confirm negative status.

“Is it important to control this disease within a herd?” If you are selling replacement animals, your main emphasis should be to provide the purchaser with an animal that you are proud to say came from your herd/flock. If that sheep or goat develops an abscess either internally or externally and contaminates the new owner’s herd, or becomes infected internally and dies prematurely, do you think it is important? I addressed this issue with a client years ago that had purchased a mature buck for quite a bit of change and the buck developed an abscess in its brain tissue and had to be euthanized. Prior to having this happen, they had told me several times that CL was just a disease you had to live with and was not a huge concern!

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.

Not all Methods of Castration by Ligation are Equal

A properly tensioned band is critical

by Rachel Dodd – St. Francis, Kan.

Proper tension is essential in ligating a body part. Studies of high-tension banding have demonstrated that the complete negation of blood flow triggers a natural analgesic effect that reduces pain, while minimizing swelling and related complications. This effect is called compression analgesic.

Compression analgesic was the term used by researchers in New Zealand when developing a humane and drug-free method of velvet antler removal. Without a band placed below the antler pedicle, the level of pain when removing the antler was excruciating (full body movement); with a properly tensioned Callicrate VELVET

ANTLER Band, the level of pain was undetectable (no eye movement).

The Callicrate WEE Bander, as with the Callicrate SMART Bander and the Callicrate PRO Bander, also provides compression analgesic. It is the only castration tool for newborns that achieves a level of tension sufficient to shut off the blood supply, while providing immediate pain relief. Proper tension is achieved with every application.

Managing stress is especially important with calves, lambs, and kids in developing healthy immune systems essential to a healthy drug-free life. Another advantage of the WEE Bander - you do not have to worry about incomplete castration when a testicle slips back up above the band. Keeping both testicles below the band with the elastrator pliers and 'cheerio' rings is a challenge.

The elastrator ring is inexpensive but fails to provide sufficient tension for either proper ligation or pain relief. Other



castration products on the market are either bigger versions of the elastrator ring or depend on operator hand strength for tightening, failing to provide the proper tension.

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How to Identify and Monitor Internal Parasites in your Small Ruminant Herd

Dr. Jerusha (Jessie) Lay, Assistant Professor of Animal Health

What is the Difference Between a Fecal Floatation Test and a Fecal Egg Count Test?

A fecal floatation test is more sensitive and will allow you to identify more types of parasites. You can use it to determine if animals are infected with *Haemonchus*, *Ostertagia*, or other types of intestinal parasites. The fecal floatation test helps to detect the presence of worm eggs but does not indicate the exact amount in a fecal sample. On the other hand, a fecal egg count test, which is more complicated to perform, detects the number of worm eggs in 1 gram of feces.

What You Will Need to Carry Out a Fecal Floatation Test:

Compound microscope (at least 10x magnification; 40x allows better identification)

Microscope slides

Microscope cover slips

Fecal floatation solution

Fecal floatation containers (may be washed and reused)

Stirring stick (coffee stirring sticks work well)

Strainer (3-4 inch diameter kitchen tea strainer)

Disposable cups (3-4 oz. wax coated work well)

Fecal Floatation Directions

1. Place 1 to 2 balls of feces into disposable cup (3 to 4 if young lambs/kids).
2. Mix with about 10 mL of fecal solution.

3. Stir mixture, breaking up and dissolving fecal pellet.
4. Using tea strainer, pour mixture through strainer into a separate cup.
5. Pour fluid contents into a fecal container.
6. Add fecal solution until fluid level is just above the container rim.
7. Place microscope cover slip on top of the container and let sample sit for 10 to 15 minutes (very important).
8. Carefully remove the microscope cover slip and place it on a microscope slide.
9. Place microscope slide on stage of the microscope and focus.
10. Search slide for parasite eggs or oocytes in a methodical direction from top to bottom and side to side.



Using a Microscope

Using a microscope, like many other things, takes practice.

1. Put the microscope slide on the stage.
2. Move the dials that move side to side and up and down until the sample is directly over the light source.
3. Adjust the eye pieces (codicils) to your comfort. First, focus on the lowest magnification. To do this, look through the eye pieces and adjust the course focus until the image appears (image may be blurry). Use the fine focus for further adjustments until image is seen clearly.
4. Assess the sample by moving across, down, and in rows to examine the entire slide.

Note:

It is prohibited by the Kentucky Board of Veterinary Examiners to diagnose disease in animals if you are not a licensed veterinarian. While doing fecal tests on your own animals is allowed and encouraged to detect and treat intestinal parasites in your herd, you CANNOT perform this service for other farmers if you are not a licensed veterinarian. http://www.cfsph.iastate.edu/FastFacts/pdfs/contagious_ecthyma_F.pdf

Identification charts are helpful to keep as a reference. You may get one from your local veterinarian.



| Parasite | Approximate Length (µm) | Characteristics |
|---|-------------------------|--|
| Ostertagia (brown stomach worm) | 60-70 | Medium sized, standard strongyle egg; barrel shaped sideways; large number of blastomeres nearly fills egg |
| Haemonchus (barberpole worm) | 85 | Larger and rounder than Ostertagia egg; blastomeres more easily seen than in Ostertagia |
| Trichostrongylus (bankrupt worm) | 85 | Often shaped like a kidney bean; one side is more rounded than the other; there is usually a lot of clear space within the egg |
| Cooperia (small intestinal worm) | 75-95 | Medium-sized egg with parallel sides and numerous blastomeres that are hard to distinguish |
| Nematodirus (threadneck worm) | 200 | Large egg; looks like an American football with basketballs inside; two to eight large blastomeres are surrounded by a fluid-filled cavity |
| Oesophagostomum (nodular worm) | 95 | Medium-sized to large egg; about one and a half times the size of the Ostertagia egg; 16 to 32 blastomeres; are easier to see than those of Haemonchus |
| Bunostomum (hookworm) | 100 | Medium sized to large egg; four to eight blastomeres; sometimes the walls are thick and rectangular |
| Trichuris (whipworm) | 40-65 | Small egg with a thin shell containing an L1 larva that can be seen under low power |
| Strongyloides (threadworm) | 75 | Egg is shaped like an American football and has two protruding polar caps; the shell is double and thick |
| Coccidia | 10-47 | Coccidia appear small in size, pink in color; size and shapes vary depending on species |
| Dictyocaulus (lungworm) | 450 | Rectal sample of feces needed for positive identification; L1 larva found in feces; flattened head and tail end in blunt point |

Modified Wisconsin Sugar Fecal Worm Egg Flotation Method

1. Measure 3 grams of fecal material into a 3-5 oz. paper cup
2. Add sugar solution to fecal material
3. Stir solution and fecal material until material has even consistency
4. Pour mixture into tea strainer and collect in 3-5 oz. cup
5. Use a tongue depressor to press as much material through strainer as possible
6. Pour strained mixture into a conical graduated 15 ml centrifuge tube
7. Place tube into centrifuge at 100-1200 rpm for 5-7 mins
8. Lift cover slip directly upward and immediately place on microscope slide
9. Use microscope to scan entire cover slip for egg count

1. Fecal samples can be stored for long periods if refrigerated (not frozen).
2. Sugar solution is prepared by adding 1 lb. of sugar into 12 fluid oz. (355 ml) of hot water; stir until all sugar is dissolved.
3. Slides can usually be placed in the refrigerator for several days prior to reading.
4. Identify parasites present:
+/-10 eggs/sample +/(-1-50 eggs/sample) +/(-over 50 eggs/sample)
5. # of eggs found x 150 = # of eggs per pound feces
6. Materials needed:
a. Sugar solution plus dispensing bottle, gun, or syringe
b. Tea strainer
c. 3 oz and 5 oz. Dixie cups
d. Tongue depressors
e. Taper bottom test tubes
f. Test tube rack
g. Standard microscope slides
h. Centrifuge
i. Microscope



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ASI COMPLETES SECURE SHEEP & WOOL SUPPLY PLAN



by Kyle Partain - kyle@sheepusa.org

The American Sheep Industry Association has completed the development of the Secure Sheep and Wool Supply Plan for Business Continuity in a Foot and Mouth Disease Outbreak. ASI worked with the Center for Food Security and Public Health at the Iowa State University College of Veterinary Medicine to develop this plan.

The sheep industry is a diverse industry producing quality meat and wool products under a variety of management and environmental conditions. The Secure Sheep and Wool Supply Plan focuses on business continuity in the event of a FMD outbreak. FMD is the most highly contagious disease of livestock and affects domestic cloven-hoofed animals (cattle, swine, sheep and goats) and many wild animals (deer, bison, pronghorn antelope and feral swine). FMD is not a food

safety or public health concern.

Having the Secure Sheep and Wool Supply Plan in place prior to an FMD outbreak is critical for food security and animal health and well-being. The Secure Sheep and Wool Supply Plan will facilitate the safe movement of sheep and wool with no evidence of disease from farms in an FMD control area to harvest channels or to other farms. The Secure Sheep and Wool Supply Plan will enhance coordination and communication between all parties, speed up a successful FMD response, and support continuity of operations for sheep producers and associated industries.

"The industry is pleased to have completed this plan with the assistance of the Iowa State's Center for Food Security and Public Health and the volunteers that served on the stakeholder group," said ASI President Benny Cox of Texas. "ASI funded this project because it is important for our producers to have a plan to follow to ensure the economic viability of

the American sheep and wool industry during an FMD outbreak."

The poultry, beef, milk and pork industries have worked collaboratively with the U.S. Department of Agriculture, state animal health officials and academia to develop business continuity plans for their industries. The Secure Sheep and Wool Supply Plan is consistent with USDA's FMD response goals and other Secure Food Supply Plans to maintain business continuity for sheep and wool producers (whose animals are not infected with FMD) and processors and to provide a safe, continuous supply of lamb, mutton and wool for consumers.

More information on the current Secure Sheep and Wool Supply Plan visit <https://securesheepwool.org/>.

ASI is an equal opportunity employer. It is the national trade organization supported by 45 state sheep associations, benefiting the interests of more than 100,000 sheep producers.

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The 2020 KHSI Expo and Sale date has been changed to August 13-15 at Elizabethtown KY, if Kentucky regulations allow. The Sale will take place live if possible or online if necessary. The KHSI Annual Meeting will be August 14th and will be online and in person if possible. Stay tuned for updates as the event gets closer.





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