

# Wild & Woolly



Maryland's Sheep & Goat Producer Newsletter

## End Of An Era In Western Maryland

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By Susan Schoenian

The Western Maryland Pasture-Based Meat Goat Performance Test was initiated at the University of Maryland's Western Maryland Research & Education in Keedysville (Washington County) in 2006. The purpose of the test was to evaluate the post-weaning performance



of meat goat bucklings consuming a pasture-based diet, with natural exposure to internal parasites, especially the barber pole worm. Identifying bucks that were resistant and resilient to internal parasites was the trademark of the test.

The test was conducted for eleven years. Almost 800 bucks were evaluated. While the test was open to any breed or cross of male goat, it gradually evolved into a "Kiko test." The Kiko is a performance-oriented breed from New Zealand. Over the span of the test, more than 100 producers from 20 states consigned bucks. Top-performing bucks were sold (as far away as California) or returned to farms for breeding. Test bucks have made a significant contribution to the US meat goat industry, especially the Kiko breed.

Over the years, many programs and activities were held in conjunction with the test. In 2009, the first test goats were harvested to collect carcass data. This led to four years of pen vs. pasture studies in which the health, performance, and carcass characteristics of goats fed in a pen were compared to those grazing alongside bucks in the test. Last year, a carcass contest was held.

For several years, a Western Maryland field day was held. It included a junior goat skillathon. Sales were held to sell top-performing bucks and does from consigners. In 2013, the sale was moved to Virginia. In 2014, the Bluegrass Performance Invitational in Frankfort, Kentucky, was established as a place to sell performance tested goats, including the top Maryland test bucks.

In 2013, the first Twilight Tour & Tasting was held. A professional chef prepared goat meat in different ways for the public to taste. The event included tours of the test site. Last year, the event was expanded to include lamb and dairy products.

# When Deworming Is Not Enough

By Dr. Niki Whitley  
Fort Valley State University

Animals that have a heavy parasite load are often compromised on several levels related to their overall health. If barber pole worm (*Haemonchus contortus*) is the primary gastro-intestinal parasite the animal is carrying, loss of blood makes the animal weaker. Other worms may cause diarrhea which can result in dehydration. The animal may lose its appetite, so it loses weight and becomes even weaker due to lack of nutrition.

Depending on the status of the animal, supportive therapy may be needed around the time of anthelmintic treatment (deworming). Animals that are a FAMACHA<sup>®</sup> 4 or 5, would likely benefit from removal from contaminated pastures to avoid reinfection and placement in a barn or other area for protection against additional environmental stress (weather, predator watch, competition for food).

Vitamin K results in blood clotting and could be a beneficial supplement to deworming in the case of barber pole worm infection. In addition, although it does not cure anything, kaolin pectin or even human products such as Pepto Bismol<sup>®</sup> may stop or slow diarrhea to help reduce dehydration.

If the animal is "down" or extremely weak, immediate attention is needed. Electrolytes can be given to improve hydration and perhaps provide some supplemental energy. Human products (i.e. Gatorade<sup>®</sup>, Powerade<sup>®</sup>, Pedilyte<sup>®</sup>) may be used if livestock products are not available. Nutritional drenching supplements for quick energy should be considered, especially if the animal is not eating.

Clean water along with high protein feed or forage that is very palatable (tasty) should be provided for easy access without much moving around if necessary. If the animal is not eating, drenching (or tubing) the animal may be necessary until eating continues. Powdered



protein supplements mixed in water with electrolytes can help keep the animal on track as well.

Research has not been conclusive in the use of mineral supplements such as iron in recovery from parasitism by the barber pole worm. However, anecdotal evidence from goat and sheep producers indicates that use of iron supplements such as injectable iron or oral iron, vitamin/mineral supplements (i.e. Red Cell<sup>®</sup>, Iron Power<sup>®</sup>, Perktone<sup>®</sup>) have greatly decreased recovery time from

anemia. Normally, a change in FAMACHA<sup>®</sup> score takes a couple of weeks, but producers providing the supplements have claimed changes in a few days with severely anemic animals.

The ruminant gastro-intestinal tract makes the B vitamins for animal use; GI tract disturbances seen in parasitism (or antibiotic use) may reduce Vitamin B availability, so

supportive injections are often used. The B vitamins help with liver function and use of proteins and fat. Vitamins B12 and B9 (folate) are critical for red blood cell formation, so would be necessary for recovery from anemia. A concentrated form of B12 is available with a veterinarian prescription and might be warranted in extreme cases, but Vitamin B complexes are available over the counter.



Supportive therapy along with effective deworming drugs may help to reduce mor-

tality or decrease recovery time in sheep and goats. However, avoiding parasites completely would be even better. Go to [www.wormx.info](http://www.wormx.info) to learn more about controlling gastrointestinal parasites in goats and sheep.

Source: American Consortium for Small Ruminant Parasite Control ([wormx.info](http://wormx.info)). Reprinted with permission of author.

# Are Vultures Killing Your Livestock ?



By Peter Lawson Coffey  
University of Maryland Extension-Carroll County

There are two species of vultures here in Maryland, the turkey vulture and the black vulture. While the turkey vulture ranges across the entire US, Maryland is almost the northern extent of the black vulture's range. Both vulture species' are highly specialized for feeding on carrion (dead animals), including their characteristic bald head, which evolved so that the birds stick their heads into corpses without getting meat stuck in their feathers where it would rot and cause disease.

Vultures are easy to distinguish up-close by the color of their heads. Black vultures have black heads, while turkey vultures are a bright red. In flight, the turkey vulture's wings are darker only in the front, with the larger flight feathers being white. Black vultures wings are mostly black, with white only at the wingtips.

Vultures are attracted to pastures where birthing is occurring, and frequently will feed on afterbirth, droppings, and dead babies. Black vultures can also recognize and take advantage of sick or weak animals, including newborn calves, piglets, kids, or lambs, injuring and even killing them. If you've had problems with vultures in the past, or you're worried about vultures, the first step you should take is modifying your farm habitat to make it less attractive.

- Remove dead livestock and other food sources, and roosting trees
- Exclude them from calving, pigging, or lambing barns with screens or nets.
- Install rolling bars, electric tracks, or bird spikes on building perches. Spikes must be short, sharp, tightly spaced, and resistant to bending.
- Hang effigies (dead or fake vultures) in prominent high visibility areas.

(Continued on page 9)

## Delmarva Small Ruminant Conference - All Worms All Day

All Worms All Day is the theme of the Delmarva Small Ruminant Conference to be held Saturday, December 9, 2017, 9:15 a.m. to 3:30 p.m. at Delaware State University in Dover, Delaware.

The all-day conference will focus exclusively on gastrointestinal parasites, which are problematic on most small ruminant farms. The program will seek to educate stakeholders on the most up-to-date methods and recommendations for controlling parasites. It will include general and concurrent sessions and a separate program for youth (14 years old and older).

All speakers in the adult program are members of the American Consortium for Small Ruminant Parasite Control (ACSRPC). They include Dr. Kwame Matthews, Delaware State University; Dr. Nelson Escobar, University of Maryland Eastern Shore; Susan Schoenian, University of Maryland; Dr. Dahlia O'Brien, Virginia State University; and Dr. Niki Whitley, Fort Valley State University.

Youth instructors will be Susan Garey and Dan Severson from the University of Delaware and Ashley Travis from the University of Maryland. The youth program is designed to be hands-on and interactive.

Pre-registration is required by November 20. Registration fees are \$40 for adults and \$30 for youth (14-18). Fees include lunch, refreshments, and materials. You can register <https://www.desu.edu/events/2017/12/09/all-worms-all-day-delmarva-small-ruminant-conference> Alternatively, you can register via mail by sending your check (payable to Delaware State University) to Dr. Kwame Matthews, Delaware State University, 1900 N. Dupont Highway, Dover, DE 19901.

The Delmarva Small Ruminant Conference All Worms All Day is being sponsored by Cooperative Extension in Delaware, Maryland, and Virginia.

(Continued on page 11)

## Research Overview

### Essential oils instead of antibiotics?

Essential oils are oily, plant extracts. They have multiple uses. Could they offer a much-needed alternative to antibiotics? Researchers at Kansas State University think so. They found that essential oils (limonene and thymol) helped combat a harmful bacterium (*Fusobacterium necrophorum*) in cattle stomachs. Results of their study were published in the *Journals of Animal and Dairy Science*.

### Dung Beetles and Worms

Could the humble dung beetle help win the war against parasites? Twenty years ago, a trial showed that even small numbers of dung beetles could reduce worm populations in cattle, horses, and sheep. In a horse dung trial, dung beetles were shown to reduce the survival of non-parasitic (immature) stages of gut worms. Funding is being sought for more research trials.

### Validating FAMACHA© for Camelids

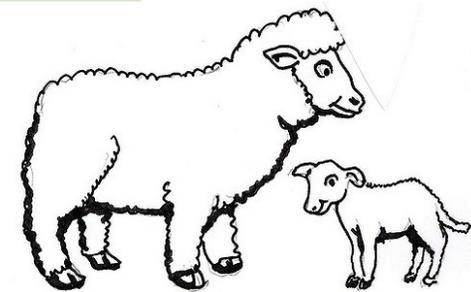
Camelids experience similar problems with *Haemonchus contortus* and multiple drug resistance as small rumi-

nants. Does the FAMACHA© system work with camelids? University of Georgia researchers conducted a validation study of the FAMACHA© system on 21 llama and alpaca farms. They concluded that the FAMACHA© system is a useful tool for detecting clinical anemia in camelids and that treatment decisions based on FAMACHA© score should mirror those established for small ruminants.

### TST in Cattle

In Scotland, researchers implemented Targeted Selective Treatment (TST) on three dairy cattle farms. Weaned dairy calves (n=104) were weighed monthly and dewormed only if they failed to achieve a pre-determined threshold gain. During the study, no calves were dewormed more than once, all were dewormed in July or August, and five were not treated. Neither FEC or plasma pepsinogen were significantly associated with live weight gain. Researchers determined that acceptable growth rates can be achieved with modest levels of treatment and corresponding less exposure of worms to anthelmintics. TST works in sheep goats, as well as cattle.

## Tool Kits For New Sheep Producers



Tool kits for new sheep producers are available from the American Sheep Industry Association (ASI) office. The tool kits include a Sheep Production Handbook CD-ROM and a flash drive with the following topics: mentoring guidelines, American Sheep Industry Association information, education, health, management practice tips, wool, NLFA leadership school, sheep fast facts, and wool fast facts.

To request a tool kit, please contact Angela at [angela@sheepusa.org](mailto:angela@sheepusa.org).

## A “FREE” Text Book On Goats

Goat Science and Production is the first text in several decades to present comprehensive, state of the art information on goat science and production practices from an international perspective. Including information on meat, dairy, and fiber goats, chapters are organized logically to facilitate fundamental understanding of goat anatomy and physiology as well as practical production applications.

The book's author is Dr. Sandra Solaiman, Professor Emeritus and Adjunct Faculty from Tuskegee University. The full text (446 pages) is available online for FREE as a PDF file. A hard copy of the book may be purchased from Amazon and other outlets.

<http://anatomiyplastinacion.wikispaces.com/file/view/Goat+and+science...pdf>



# Selecting Female Replacements

By Susan Schoenian

Though it varies, it is customary to replace approximately 20 percent of the flock or herd each year. Some ewes or does die. Some need to be culled due to age, physical impairment, or poor performance. Sometimes, females just need to be removed to make room for younger females. You can't make genetic progress if you don't keep turning the flock over.



You can purchase female replacements, but for various reasons, it is better to select replacements from your own herd. While it is usually necessary to bring in new males, closing the herd will go a long way towards ensuring herd health by preventing the introduction of diseases and/or more resistant parasites. By selecting your own female replacements, you are able to emphasize the traits that are most important to you.

Deciding which female offspring to keep as replacements is one of the most important decisions a sheep or goat producer has to make. It is these decisions that will affect the future productivity of the flock. If the replacements aren't genetically superior to the animals they are replacing, genetic progress will be thwarted or reversed.

It is difficult to select genetically-superior females in the absence of records. You can't tell much about an animal's future productivity by simply looking at it. All producers should keep birthing records. Ideally, all lambs and kids should be weighed at birth and weaning. A post-weaning weight is also recommended.

Fecal egg count data can be used to identify lambs/kids that are more resistant to internal parasites, whereas FAMACHA© scores can identify more resilient animals. Ultrasound scans can be used to identify animals with superior loin muscling. There are various ways to collect

data on fiber and dairy production.

Before making any selection decisions, a few calculations need to be made. Weaning weights need to be corrected to a common age, usually 60, 90, or 120 days; otherwise, you will favor the animals born first. Weights need to be adjusted for type of birth and rearing and age of dam; otherwise, you will discriminate against multiple births and young mothers.

There are programs that can facilitate these calculations. Converting weights to ratios makes comparisons easier. Always remember to compare animals in the same contemporary or management group.

Similar calculations can be made for females. Litter weights should be corrected to a common age and be adjusted for sex of offspring and age of dam. After a few years of production, you can calculate lifetime ratios for all the females in the flock. You should select replacements from your most productive females and from the males that sire the top-performing offspring.

While performance records are important, it is also important what the animal looks like. In fact, the best selection programs combine records with visual appraisal. One without the other can practically guarantee failure of a breeding program.

Only females that are structurally correct and reproductively sound should be selected as replacements. Females need to have straight legs, with proper set to their hocks and pasterns. Jaw defects are inherited; females should have sound mouths. Females with supernumerary teats and teat defects should not be selected for replacement. Body capacity and substance of bone are also important predictors of productivity and longevity.

## More Information On Sheep & Goats Can Be Accessed

<http://www.sheepandgoat.com/>

<http://www.sheep101.info/>

<http://mdsheepgoat.blogspot.com>

<http://www.acsrpc.org> or [wormx.info](http://wormx.info)

<https://www.facebook.com/MDSsmall>

<https://www.youtube.com/c/MarylandExtensionSmallRuminantProgram>

<http://mdgoatquest.blogspot.com>

<http://issuu.com/mdsheepgoat>

# Castrate: Yes or No ?

By Susan Schoenian

Castration is when the testicles are removed or their function is inhibited. Testicles produce testosterone, the primary male hormone, and sperm, the male reproductive cell.

Ram lambs and buck kids grow faster and have better feed efficiency and carcass yield and composition than wethers. Some ethnic consumers prefer intact males. All methods of castration cause pain, making the procedure a welfare concern.

When ram lambs and buck kids are early-weaned and fed for rapid growth, they are often left intact. Castration is not necessary if male and female offspring can be fed or grazed separately or males are marketed before they begin to develop secondary sex characteristics.

The primary reason to castrate is to prevent unwanted pregnancies, especially in young females and/or by inferior males. Castration also removes unwanted male behavior and odor (in bucks). Fighting amongst intact males can result in injury or production loss. Castrated males are easier to manage. They can be housed or grazed with females.

Meat quality, pelt removal, and hygiene at slaughter are all superior with castrated males. Sometimes, ram lambs, especially older ones, are discounted in price. In recent years, wether goats have often sold at a premium to bucks.

If lambs and kids go to pasture with their dams, it is customary to castrate the males. If male and female offspring cannot be separated in a timely fashion, castration is advised. Sheep and goats used for prescriptive grazing or sold as pets should be castrated.

Banding is the most common method of castration. The other popular method, especially on larger sheep farms, is surgical (with a knife) castration. From a welfare standpoint, castration with bands is preferred to surgical castration, as the latter is more painful and at greater risk for infection and flies.

Lambs/kids should not be castrated (or docked) during their first 24 hours, as this may interfere with bonding. Otherwise, lambs/kids should be castrated as early as



possible, ideally within the first 7-10 days. Sometimes, management necessitates that lambs/kids be banded when they are older; 3-4 weeks of age is still acceptable.

If older lambs/kids are castrated, the burdizzo (clamp) may be a better option. Most countries are in agreement that castration be done before lambs/kids are three months old. Otherwise, castration should be considered a surgical event and be done by a veterinarian. There is anecdotal evidence that the Callicrate Bander ([www.callicratebanders.com](http://www.callicratebanders.com)), which uses tighter latex bands, can be used to humanely castrate older lambs and kids.

Regardless of castration method, it is important that animals have protection against tetanus. An alternative to castration is to make ram lambs into cryptorchids (this practice has not been studied in goats). Instead of removing the testicles, the testicles are pushed back up inside the body cavity, and the empty scrotum is banded.

Short-scrotum males are generally infertile, since the testicles are at body temperature, not the 2-3 degrees cooler necessary for sperm production. However, they still have testosterone secretion which allows them to retain the growth and carcass characteristics of intact males. Behavior may be similar to ram lambs. The procedure to make a cryptorchid is less painful than castration.

The decision to castrate is an important one that affects profitability and animal welfare in all small ruminant enterprises.

**REGISTER  
Now**

Register NOW for the Delmarva Small Ruminant Conference – All Worms All Day  
The conference will be held on December 9, 2017 at Delaware State University  
Dover Delaware

To Register go to: <https://www.desu.edu/events/2017/12/09/all-worms-all-day-delmarva-small-ruminant-conference>

# Importance of Weighing Sheep and Goats

By Kevin Hill  
Quality Scales Unlimited

Gone are the days when goat and sheep producers just had to keep a track of the number of animals they had in their farm. Now, it is getting more and more important that they track their weight too. Why? Read on.

## Why You Must Weigh Livestock

The productivity of sheep and goat depends on their ages and sizes. Large sized animals produce more meat than smaller animals. You can determine the size of an animal using its weight but you can use other linear measurements too. Use age of an animal to evaluate its growth performance to decide which animal to buy, sell, mate or cull.

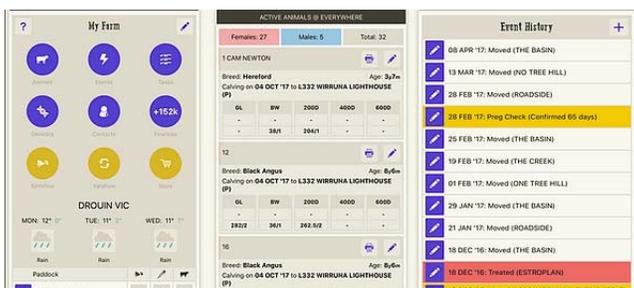
You can use well calibrated livestock scales to determine the bodyweight of your farm animals. The linear measurements of animals can estimate the weight apart from providing the body size. You can even estimate the age of sheep and goats through the change in dentition from birth to maturity.

The weight of the animals won't be constant throughout their lives and it will fluctuate due to the management system, pregnancy, lactation, gut fill, etc. The physical body characteristics will be less affected by these factors but you can do a growth comparison of various body parts at different stages of growth. Measuring the changing body conformations of animals can help you judge the quantitative characteristics of meat and develop the ideal selection criteria. If you can measure linear dimensions, you can use it as an indirect way to estimate weight.

(Continued on page 8)



## Enter Your Farm Data into LIVESTOCKED



Livestocked is an app for keeping livestock records. It enables you to manage data for different species and herds. It is available for Apple, Android, Windows, and the web. Because the data is stored in the cloud, you can synchronize data across devices.

James Cullis from Livestocked gave a presentation at the Bluegrass Performance Invitational (BPI) in September. The BPI sale is where the top-performing bucks from the Western Maryland Pasture-Based Meat Goat Performance Test have been sold.

Cullis encouraged producers to enter their herd data into Livestocked. Livestocked is free to download and use. To access more advanced features, there is a cost of \$49 per year. Cullis is working with the National Kiko Registry (NKR) to provide EBVs for the Kiko breed. His goal is to provide EBVs for other goat and sheep breeds.

EBV is the acronym for Estimated Breeding Value. An EBV is an animal's value as a parent; it's ability to transmit its genetics to the next generation. If herds (or flocks) have shared genetics, it is possible to calculate across-herd EBVs, allowing breed improvement.

The goal of livestock selection is to improve the accuracy of selection. Selecting an animal based on what it looks like is the most inaccurate form of selection. EBVs are more accurate than the data from buck (and ram) tests and on-farm testing because they factor in the performance of relatives, the heritability of the trait, and the data from linked traits, as well as the data from the individual animal.

It is not possible to make herd (or flock) or breed improvement without data. Putting data into centralized databases allows calculation of across-herd breeding values, adjustment factors, and other useful metrics for the small ruminant industry.

[livestocked.com](http://livestocked.com)

## **Following the leader**

A lone brown bear is being blamed for a horrifying incident in which 209 panicked sheep plunged off a cliff in the Pyrenees near the border between France and Spain. It's not the first time this has happened, and local farmers are mad that brown bears are being reintroduced to the pastoral, mountain region.

## **Ripening avocados with wool**

A catering company has developed an "Avocado Sock" for ripening avocados. The Avocado Sock™ is made in Alberta, Canada, using 100% Shetland wool from a 200 year old Scottish woolen mill. Socks come in four different colors. The Avocado sock retails for \$14.99 (CAN).

## **The world's most comfortable shoe**

Dubbed the world's most comfortable shoe, Allbirds are sneaker-like shoes made from wool and castor oil. The wool used is a very fine Merino wool (~17.5 microns). The loafers are machine-washable and meant to be worn without socks. Slightly fuzzy to the touch, there are two styles: lounge and runner. Both sell for \$95.

## **Union vs. goats**

Union workers in Michigan filed a grievance against Western Michigan University, contending that goats are taking away their jobs. The university used goats to clear poison ivy and other weeds from a 15 acre lot. The labor union claimed that the university violated its collective bargaining agreement when it favored the four-legged weed eaters over union workers.

## **Eradicating Goat Plague**

A mass vaccination campaign has been funded by the US Agency for International Development (USAID). The goal: eradicate goat plague by 2030. Goat plague (peste des petits ruminants) causes between \$1.5 and \$2 billion in losses each year to the world's poorest countries, whose people often depend on livestock for their survival. The new vaccine is more heat tolerant; there's not a lot of refrigeration in the parts of the world where the virus lurks. It should confer protection for 3 years. Goat plague affects goats, sheep, and wild animals. People are not susceptible. The disease is not present in the US or Europe.

## **Importance of Weighing Sheep and Goats (continued from page 7)**

### **How To Use Livestock Scales**

Buying livestock scales will do you a world of good. Invest in ones that can be used for all the goats and sheep on your property, right from their birth to their adulthood. When you weigh your animals, you can calculate the right amount of feed and doses of medication to give them. This will prevent you from over medicating or under medicating, both which will be harmful to the animals. Weighing scales will help you track the weight of meat goats which you want to market. This would be helpful if the buyers are looking to buy an animal within a specific weight range.

Allow the goats and sheep to get used to the weighing scales. Give them the time to explore it and get used to it, instead of making them stand forcefully on it. Not only will it make the weighing difficult but also give you inaccurate readings if they constantly move on it due to discomfort.

Ensure that the livestock scales lie low to the ground. If the scale surface is smooth, then place a grooved rubber mat to provide traction for the goats. It'll ensure that they don't slip on the scales. Put a small amount of feed on the scale to encourage the livestock to step on the scales for weighing.

If there is no pen or chute on top of the scales, you can place it in an alleyway of the handling facility. You may even put up the sides of the long ends of the scales to help the livestock onto the scales. It also prevents them from stepping off the scales accidentally. Ensure that the doors are open while directing the animals towards the scale but close the door once the animal is on the scale.

Weighing animals is critical for goat and sheep producers. It helps in increasing productivity and leading a profitable business. So, get them if you haven't already!

*About the author: Kevin Hill is the content editor and online marketing manager at Quality Scales Unlimited. Always an early adopter and fast learner; Kevin combines his technical knowledge with content marketing in creative ways to give Quality Scales Unlimited a competitive edge.*

## Are Vultures Killing Your Livestock ? (Continued from page 3)

Laser dissuaders and artificial vulture effigies are available for loan from the USDA wildlife services office in Annapolis. If none of these are effective for you, then you can apply for a Migratory Bird Depredation Permit. Because vultures are protected under the Migratory Bird Treaty Act of 1918, a permit is required to kill them. The permitting process can be slow, but permits are not difficult to acquire, and once you are permitted, renewing is easy.

To apply for a permit, fill out the US Fish and Wildlife's Permit Application Form (<https://www.fws.gov/forms/3-200-13.pdf>), and send it to Raymond McClain at USFW. Raymond will review your application, and return it with an attached "permit review" form. You will then mail your application and permit review and fee to: Migratory Bird Permit Office P.O. Box 779 Hadley, MA 01035.

Once they finalize your permit you will be allowed to kill problem vultures, typically a percentage of the flock, or any you see harassing your animals. The process can take 2-3 months, which is typically too long to address immediate concerns, but the permit is good for a year, and renewal process is simple.

Contact Ray McClain about permitting, or with any questions or concerns at (877) 463-6497 or at [Raymondmond.E.McClain@APHIS.USDA.Gov](mailto:Raymondmond.E.McClain@APHIS.USDA.Gov).

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## End of Era In Western Maryland (continued from page 1)

But now, the goat test era is over. Goat producers will be encouraged and assisted in their move to the next step in performance testing: within and across-herd EBVs. EBV stands for estimated breeding value and is a prediction of genetic merit. The data is far more accurate than the data from buck tests.

### 2018

A sheep research program will be initiated at the Western Maryland Research & Education next spring. The pastures are being re-established and new infrastructure is being put in, as the hoop house that was installed several years ago was completely destroyed this past winter.

Internal parasites (GI worms) will likely continue to be the focus of the research program, as it is a logical follow-up to the goat test and parasites remain a major obstacle to profitable small ruminant production. We also plan to plant different forages for grazing. If you have ideas for potential research, feel free to contact me at [sschoen@umd.edu](mailto:sschoen@umd.edu).

### Thanks !

I'd like to express appreciation to my "Goat Team": Jeff Semler, David Gordon, Pam Thomas, and Mary Beth Bennett. Others who played key roles include E. Nelson Escobar, Niki Whitley, Willie Lantz, Chris Anderson, Jeanne Deitz-Band, Lexie Simmons, and Amy Garza.

Dr. Dahlia O'Brien at Virginia State University (previously at Delaware State University) was instrumental to the success of the test, as she performed all the fecal egg analyses.

Thanks to the Maryland Grain Producers Utilization Board for providing funding for the pen vs. pasture studies.

Thanks to everyone who supported the goat test over the years, including all the consigners and buyers of bucks.



## Upcoming Events

### November 3

Frederick County Sheep Breeders Association  
Annual Dinner  
Dutch's Daughter Restaurant, Frederick MD  
Info: [www.fredericksheepbreeders.com](http://www.fredericksheepbreeders.com)

### December 9

Delmarva Small Ruminant Conference:  
All Worms All Day  
Delaware State University, Dover, DE  
<https://www.desu.edu/events/2017/12/09/all-worms-all-day-delmarva-small-ruminant-conference>

### November 30, December 1-2

Dairy Sheep Association of North America  
Annual Symposium  
Orford, Quebec, Canada  
Info: <http://www.dsana.org/>

### January 30-February 3, 2018

American Sheep Industry Convention and  
American Goat Federation Seminar and meeting  
San Antonio, TX  
Info: [www.sheepusa.org](http://www.sheepusa.org) and  
[www.americangoatfederation.org](http://www.americangoatfederation.org)

### April 7-8

Wool Handling School  
Blue Ridge Community College,  
Weyers Cave, VA  
Info: John Benner at [benner89@vt.edu](mailto:benner89@vt.edu)  
or (540) 245-5750 x2

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# Delmarva Small Ruminant Conference - All Worms All Day

## December 9, 2017

### AGENDA

**To Register go to: <https://www.desu.edu/events/2017/12/09/all-worms-all-day-delmarva-small-ruminant-conference>**

Time		Adult Program		Youth Program
8 to 9:15 a.m.		Registration and continental breakfast		
9:15 to 9:30 a.m.		Welcome and overview		
9:30 to 10:15 a.m.		Everything you wanted to know about worms, but were afraid to ask (Matthews)		
		Concurrent session		Welcome to DSU Future Blue Hens Fear the Turtle Worms/parasites: vocabulary ice breaker Why worms all day? Five Point Check@: what is it?
10:15 to 11 a.m.		They get infected when they eat grass: the role of pasture management in internal parasite control (Escobar)	Coccidia: the other parasite that will get them! (Whitley)	
11 to 11:15 a.m.		Morning break		
11:15 to 12 noon		Sometimes you got to shove a drug down their throat: proper use of dewormers (Schoenian)		
12 noon to 1 p.m.		Lunch: goat and lamb chili		
1 to 1:45 p.m.		Concurrent sessions		
		It's in the genes: genetic control of internal parasitism (O'Brien)	To worm or not to deworm: on-farm decision-making tools for deciding who to treat and when (Schoenian)	Five Point Check@: small group scenario activity and presentations Internal parasites: up close and personal
1:45 to 2:30 p.m.		Hey, that doesn't work: busting myths about parasite control (Escobar)	Hey, that does work: exploring alternatives for internal parasite control (Matthews)	Why read medication labels? Got guts? Anatomy of the ruminant stomach
2:30 to 2:45 p.m.		Afternoon break		
2:45 to 3:30 p.m.		Putting the pieces together: sustainable integrated parasite management (Whitley)		This is Small Ruminant JEOPARDY!

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