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Authors:
Susan Schoenian
Bev Pearsall
Dr. Kent Holm

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Shepherd's Notebook Blog
<http://mdsheepgoat.blogspot.com>

Scrapie Q & A

What is scrapie?

Scrapie is a fatal, degenerative disease affecting the central nervous system of sheep and goats. It is in the same category of diseases as so-called "mad cow disease" and chronic wasting disease in deer and elk.

Is scrapie a genetic disease?

No. But a sheep's genetics determine whether it will get scrapie if it is exposed to infected birthing fluids. So far, no resistant genotypes have been identified in goats.

Why do we need to eradicate scrapie?

Scrapie is of public concern due to the discovery of bovine spongiform encephalopathy (BSE) and the proposed link between BSE and Creutzfeldt-Jakob's disease in people. The presence of scrapie in the U.S. sheep flock and goat herd prevents the export of breed-

ing stock, semen, and embryos to many other countries.

What is the difference between the mandatory scrapie eradication program and the Voluntary Scrapie Flock Certification Program?

The mandatory program requires that most sheep and goats be officially identified with USDA-approved ID (ear tags, tattoos, or in some circumstances microchips) when moved interstate, exhibited, or upon change of ownership. The voluntary program is a monitoring program that allows flocks to achieve scrapie "free" certification after five years of scrapie-free monitoring.

Why do sheep and goats need to be identified?

If scrapie is identified in a flock, official scrapie identification will be used to find animals in other flocks that may have

(Continued on page 4)

A New Maryland State Fair Schedule

The 2007 Maryland State Fair will be held August 24 through September 3. Traditionally, the first weekend of the fair has been for 4-H activities and the second weekend (Labor Day weekend) has been for open class livestock shows.

In 2007, this schedule is being reversed. 4-H activities will be held during Labor Day weekend, while open class shows will be centered around the first weekend of the fair. This trial schedule will likely make it easier for 4-H youth to participate in state fair. In recent years, many school systems have started classes prior to Labor Day, making it difficult for youth to participate in state fair without missing school. The new schedule is currently being worked on. <http://www.bcpl.net/~mdstfair/>.

Performance Testing

West Virginia Meat Goat Evaluation

The trial run of a Meat Goat Performance Test was conducted this summer at the West Virginia University Reymann Memorial Farm in Wardensville.

Twenty-four (24) Boer cross bucks were evaluated using the GrowSafe™ system, which includes a series of feeding stations that only one animal can use at a time. Each animal receives a RFID tag, which enables the computer system to record when and how much it ate. At the end of the test, system users can determine each individual animal's feed efficiency.

The bucks were evaluated over a 53-day test period. Average daily gain for the entire test ranged from 0.46 to 1.12 lbs. per day for a group average of 0.66 lbs. per day. There was some difficulty with the bucks getting their horns stuck in the feeder.

The West Virginia Sheep Management Project is evolving into the West Virginia Small Ruminant Project, to include meat goats.

Source: News Ewe Can Use, Fall 2006

On-Farm Performance Testing

Central performance tests provide the means to compare rams and bucks from different farms while on-farm performance testing provides a means of selecting replacements from one's own flock/herd. On-farm performance testing involves collecting and analyzing data on economically important traits.

Weaning weight is one of the most important traits for determining flock/herd performance. In a commercial situation, ewes/does that wean the most pounds of lamb/kid are likely to be the most profitable. Their daughters and sons are most likely to pass on this trait vs. animals with poor performance data.

If lambs/kids are weighed on the same day (usual) vs. the same age, weaning weights need to be adjusted for the same age, e.g. 60 days. If weaning weights are not

adjusted for age, the oldest lambs/kids will almost always have the heaviest weaning weights and vice versa, while not necessarily being genetically superior for weaning weight.

In addition, weaning weights need to be adjusted for sex, birth type, type of rearing, and age of the dam. If adjustment factors are not used, single-born males raised by 3 to 6 year old ewes/does will almost always have the heaviest weaning weights, while not necessarily being genetically superior. In most flocks/herds, many of the genetically superior lambs/kids are raised by yearlings and two-year olds, yet the raw data will not indicate this.

Adjusted weaning weights can be used to select replacements. Adjusted litter weight -- a composite trait reflecting litter size, mothering ability, lamb/kid survival, and milk production -- can be used to rank ewes/does and make breeding and culling decisions. Performance ratios can also be calculated to make comparisons among animals.

If you're interested in doing on-farm performance testing and would like assistance in collecting and/or analyzing performance data, please contact Susan at (301) 432-2767 x343 or sschoen@umd.edu. A scale is available for weighing sheep and goats.

See page 8 for information on the Western Maryland Meat Goat Performance Test.



Revised Maryland 4-H Tail Docking Policy

Following the past year's show season, the Maryland 4-H Youth Development Program (<http://maryland4h.org/>), with leadership from the 4-H Animal Sciences Curriculum Committee, has reviewed the tail docking policy (<http://maryland4h.org/Programs/Animal%20Sciences/2005TailDockingPolicy.pdf>). The Curriculum Committee has conferred with numerous staff and faculty, volunteers and youth, Extension faculty in other states, and with the Maryland Sheep Breeders Association. A statewide listening session was held in Timonium in early November with over 70 participants.

The current policy will **continue** with several amendments. Breeding sheep will be treated separately from the current policy, and there will be an appeal process for market lambs.

2007 Market Lamb Policy

"Market Lambs exhibited after January 1 of the current calendar year will be accepted for 4-H participation only if tails are not docked shorter than the level of the distal end of the caudal tail fold. Market Lambs that are properly docked will have a minimum tail length of 0.7 inches at 4-H Activities, 4-H weigh-ins and taggings, and 4-H Shows, measured by the approved measurement device, which will be placed against the base of the tail and pin bones."

Appeal Process

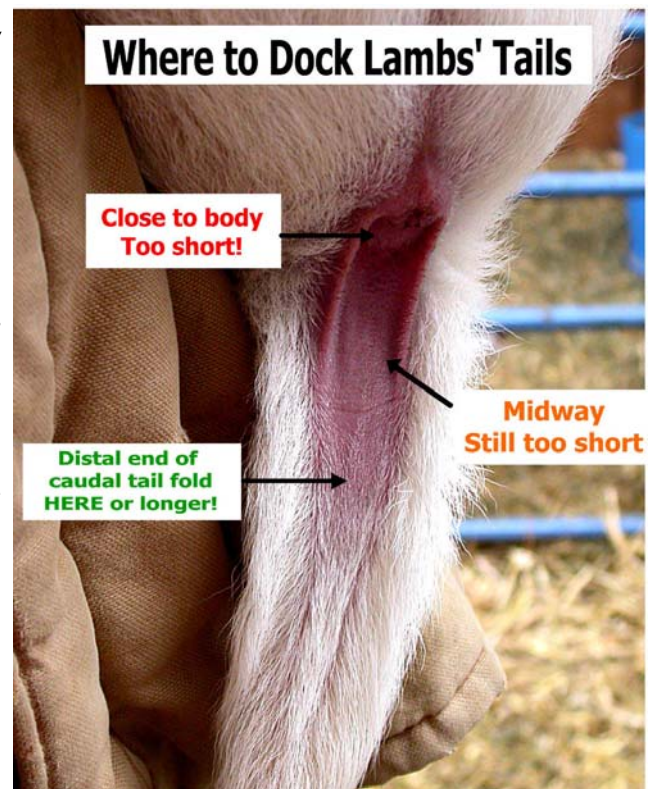
If a market lamb fails by the committee's ruling, the youth and one adult (family member, legal guardian, 4-H leader or FFA advisor) will have five (5) minutes to use the approved measuring device and attempt to prove to the committee that the animal meets the 0.7 inch standard. If this is not accomplished, the market lamb is disqualified. If the youth can prove to the committee within the 5 minute limit that the market lamb does pass the 0.7 inch standard, the animal will be permitted to exhibit at that particular 4-H show, activity, etc. At this point, there is NO further appeal process. The decision of the committee is FINAL.

Breeding Sheep

Breeding sheep will be treated separately from the current policy: *"Breeding sheep shall have NO evidence of surgical docking, prolapses, purse strings, sutures, etc. If any of these are evident in Breeding Sheep, the Breeding Sheep in question will be sent home immediately by the Extension Educator, Sheep Superintendent, or the appropriately deemed individual. There is NO appeal process for Breeding Sheep."*

The 4-H Youth Development Program in Maryland will strive diligently to apply the policy and rules fairly and consistently in all venues and with all youth. Questions regarding Maryland's 4-H tail docking policy should be directed to J. Willard Lemaster, 4-H Animal Specialist, by e-mail at Lemaster@umd.edu or telephone (301) 314-7187.

Source: Dr. Richard Byrne, 4-H Program Leader, Maryland Cooperative Extension, December 1, 2006.



Scrapie Q&A (continued from page 1)

been exposed to scrapie and are at risk for spreading the disease to other flocks.

What animals must be identified under the mandatory scrapie eradication program?

In order to be adaptable to all segments of the sheep and goat industry, the USDA identification requirements are complicated, with many confusing exceptions. States, livestock markets, and shows can have additional rules. It's simplest just to tag every animal when it leaves your property. If you think you have a situation that may not require ID, call the USDA office at (410) 349-9708. *Editor's note: Since none of our livestock markets are "slaughter only" markets, animals consigned to them are not considered to be "going directly to slaughter". Thus, when you sell cull animals or market animals to a livestock auction, they are not going "directly to slaughter," according to USDA's definition.*

How do I get ear tags for the mandatory scrapie eradication program?

Contact John T. Swann at (410) 349-9708 or John.C.Swann@aphis.usda.gov. He will assign a Flock ID and order your free eartags and pliers to apply them.

Can I use tattoos instead of eartags?

Yes. Your Flock ID plus an individual animal number may take the place of an eartag. A registration tattoo may also take the place of an eartag if the animal is accompanied by its registration papers.

Editor's note: Tattoos are not very visible in animals with dark-colored ears.



When should I apply scrapie ID to my animals?

For most producers, the most practical time to apply official scrapie ID is when the animals leave their property, but the tags may be applied anytime before that.

What do I do if one of my animals loses its scrapie tag?

Put another tag in and record both numbers.

What should I do if the sheep or goat I bought doesn't have a scrapie tag?

The seller is required to tag the animal. If the seller fails to do so, the buyer is required to tag it. If you make a record of your tag number, the date, the breed, and the name and address of the seller, then you will be able to prove that the animal was not born in your flock (in case it later develops scrapie).

Who should enroll in the Voluntary Scrapie Flock Certification Program?

Any producer may enroll his or her flock. Flocks selling breeding animals may find this to be a marketing advantage.

What are the requirements of the Voluntary Scrapie Flock Certification Program?

- Identify all animals over one year of age in the flock/herd.
- Maintain records as required by the program.
- Have your flock/herd inspected annually.
- Report scrapie-suspect animals to proper animal health authorities.
- Submit tissue samples of any scrapie-suspect animals and from animals suspected of having other neurological or chronic, debilitating diseases.
- Report acquisitions of animals from flocks with a lower status or from flocks not participating in the program.

How do I enroll in the voluntary scrapie flock certification program?

To enroll, contact Dr. Kent Holm at (443) 349-9708 or Kent.B.Holm@usda.gov.

NOTE: Producers in other states need to contact their local USDA-APHIS office for information about the scrapie programs.

Scrapie Eradication on Schedule

"The goal is to eliminate outbreaks of scrapie by 2010 and to have the United States officially declared scrapie-free by international standards by 2017." This statement was released in September 2001. We are at the mid-point of the 10-year goal of eliminating scrapie.

The number of scrapie-infected flocks increased in the first few years of increased surveillance, but appears to have peaked, and may be starting to decline. Since initiation of increased slaughter surveillance, there has been a 55-percent decline in the number of black-face sheep found scrapie-positive at slaughter. The vast majority of scrapie-positive sheep found through slaughter surveillance have been black face or black-face crosses; however, cases have been found in white face sheep and infected flocks have contained scrapie-positive animals from various white face and hair sheep breeds (and rarely goats).

A major challenge is to increase the number of animals being sampled. Since 2003, samples have been collected from 110,958 sheep from 110 establishments. Sheep have been sampled in every state except Alaska. There have been 270 confirmed positive cases of scrapie.

Another major challenge is getting a handle on scrapie in goats. Since 1990, there have been 18 cases of scrapie found in goats. Scrapie in goats is most often the result of exposure to infected sheep; however, an infected goat can spread the disease to other goats and could serve as a potential reservoir for the disease.

Unlike sheep, no useful genetic-resistance markers have been found in goats. However, this research is on-going. To eradicate scrapie, both species must be included in the program. In 2007, scrapie monitoring in goats will be increased.

Identification and records are key components of the National Scrapie Eradication Program. They are necessary to locate infected flocks and trace exposed animals. It is estimated that 50 percent of producers are using USDA-provided tags, with a significant percent of the remaining animals being identified at livestock markets. More than 118,668 out of an estimated

175,000 sheep flocks and goat herds have been entered into the scrapie program database.

There are 2,034 flocks participating in the Voluntary Scrapie Flock Certification Program. 299 flocks are certified. During fiscal year 2006, 260 flocks were newly enrolled or certified in the program.

Genotyping is another tool that is being used to eradicate scrapie. Genotyping is used to clean up infected and source flocks. In addition, the use of scrapie genotyping is greatly increasing the number of scrapie-resistant rams being used for breeding.

Reference: Scrapie Eradication on Schedule to Meet 10-year Goal, ASI Sheep Industry News, November 2006.

Link: <http://www.aphis.usda.gov/vs/nahps/scrapie/>



Scrapie positive Montedale ewe that lost body condition and became very ataxic in the rear legs. The day of necropsy, she was very "jittery" and nearly started to seizure each time that she was touched. Held head down, possibly related to her state of unsteadiness/incoordination. The side view shows her short-based stance/hunched appearance. The dorsal spinous processes are very prominent due to her decreased body condition.



Picture from the rear shows bare patches from rubbing.

Photos and captions courtesy of APHIS-USDA.

Featured Web Sites

Pipestone Lamb and Wool Program

<http://www.pipestonesheep.com>

The Pipestone Lamb and Wool Program is a sheep management education/consulting program offered by Minnesota West Community and Technical College located at Pipestone, Minnesota. Pipestone has a national reputation for sheep management knowledge, education, production, and marketing. Enrollment in all programs over the past 30 years totals 11,305 sheep producers from all 50 states and 10 foreign countries. They recently launched three new online courses. The courses provide fundamental sheep management information designed for any size or type of sheep operation. The three courses include Introduction to Sheep Management, Introduction to Sheep Health, and Ewe Ration Formulation.

E (Kika) de la Garza Institute for Goat Research

<http://www.luresext.edu/goats/>

The E (Kika) de la Garza Institute for Goat Research at Langston University in Oklahoma is one of the premier goat research institutions in the United States. They conduct research related to dairy, fiber, and meat goats. Their web site contains a wealth of information for goat producers: fact sheets, quizzes, research abstracts, scientific articles, field day proceedings, nutrient calculators (for balancing rations), an online manual for conducting fecal egg counts, a quarterly newsletter, workshop information, meat

goat performance test data, and a web-based training and certification program for meat goat producers. Be sure to check it out.

ASI Sheep Industry News

<http://www.sheepindustrynews.org>

The *Sheep Industry News* is now available online. The site was developed as another way to offer this sheep-specific publication to interested readers. This easy-to-navigate site allows visitors a way to view the top stories, along with pictures, for each edition. It gives more exposure to the publication's advertisers, and allows visitors to access past issues of the *Sheep Industry News*. Visitors will be able to navigate between this site as well as <http://www.sheepusa.org>. Source: ASI

Mid-Atlantic 4-H Market Goat Project Guide

<http://www.ext.vt.edu/resources/4h/4hpubs/pdfs/380-310.pdf>

The Mid-Atlantic 4-H Market Goat Project Guide may be downloaded as a PDF file. The publication is a joint effort between Cooperative Extension in Maryland, Delaware, and Virginia. The 18-page guide, written for 4-H youth, parents, and volunteers, contains sections on show requirements, market goat selection, facilities and equipment, health, feeding, preparing market goats for show, showing market goats, record keeping, resources, and project calendar.

Cost Share for Conservation Practices

Sheep and goat producers may be eligible to receive financial assistance funding through USDA's Environmental Quality Incentives Program (EQIP), as part of the 2002 Farm Bill. The Natural Resource Conservation Service (NRCS) has leadership responsibility within USDA for implementing EQIP.

Producers interested in installing conservation practices through EQIP should contact their local NRCS or Soil Conservation District office, located at USDA Service Centers. Although, the application period for EQIP is continuous, NRCS sets dates to rank received applications based on environmental benefits. The first ranking period will cover all FY07 EQIP applications received by December 15, 2006.

In fiscal year 2007, EQIP applications will be evaluated on a regional basis. Grazing practices and incentives to manage crop rotations and continuous no-till production will be this year's focus. Visit <http://www.md.nrcs.usda.gov/> or <http://www.nrcs.usda.gov/>.

The Complexity of Rectal Prolapses

A rectal prolapse is when part of the rectum protrudes outside the body. It is easy to recognize. The exposed tissue is usually a bright, cherry red (at first). Continuous straining worsens the problem. If left untreated, a rectal prolapse can become a life threatening condition and a cruel way for an animal to die, as untreated animals may prolapse their entire intestinal tract and go into shock.

Rectal prolapses occur more in sheep than goats and can occur in other livestock and humans, as well. Immediate slaughter is usually recommended for market lambs. For more valuable animals, treatment is possible, though animals which prolapse should not be retained for breeding. Treatment usually involves "amputating" the exposed tissue.

Rectal prolapses are a complex health condition in sheep. Many factors have been proven or suggested as causative factors: sex, age, condition, diet, coughing, diarrhea, implanting, and tail dock length. It is usually not a single factor, but a combination of these factors which cause the problem.

Perhaps due to anatomy, hormones, or other factors, ewe lambs are more likely to prolapse than male lambs (1.9-2.3x more likely, according to research). Rectal prolapses occur most commonly in feedlot lambs and other lambs being finished on high concentrate diets. However, lush clover or legume pastures (due to their estrogen activity) have also been implicated as a causative factor. Implanted lambs experience a higher incidence of rectal prolapses.

Anything which causes a lamb to strain can lead to rectal a prolapse: e.g. chronic coughing, due to dusty feed or infection; or coccidiosis or other forms of chronic diarrhea. Some lambs have a genetic predisposition to rectal prolapses. According to a recent

study, the heritability of rectal prolapses is 0.14.

When tails are docked too short, the muscles attaching to the tail bone are weakened. Several studies have implicated short-tail docks as a cause of rectal prolapses in lambs fed high concentrate diets. A 2000 multi-state cooperative study showed that short-docked lambs experienced a higher level of rectal prolapses than medium or

long docked lambs: 7.81 (short) vs. 3.97 (medium) vs. 1.85% (long). However, there was no difference among lambs consuming a pasture diet.

A 1990 University of Minnesota study showed the same link between short tail docking and rectal prolapses in feedlot lambs. A more recent Texas Tech study (2006) failed to establish a link between tail dock length and rectal prolapses in feedlot lambs, but the researcher stated, "the results of

this study do not eliminate dock length as a contributing factor to rectal prolapse, but rather offer other factors that are equally or more significant."

Rectal prolapses can largely be prevented with good feeding and management practices. Here are some guidelines to follow: 1) dock wooled lambs no shorter than the distal end of the caudal tail fold - *see page 3*; 2) consider rearing lambs on pasture or including more forage in the feedlot diet; avoid overfeeding lambs, especially ewe lambs; 3) limit legume content of pastures; 4) feed balanced rations; and 5) prevent coccidiosis with good management and/or the use of approved coccidiostats (Bovatec®, Deccox®); and 5) AVOID THE FOLLOWING: feeding dusty or moldy feeds, using rams that sire prolapse-prone lambs, keeping ewe lambs that prolapse, implanting ewe lambs, finishing ewe lambs in a feedlot.



Rectal prolapses are the result of many factors.

Western Maryland Meat Goat Performance Test

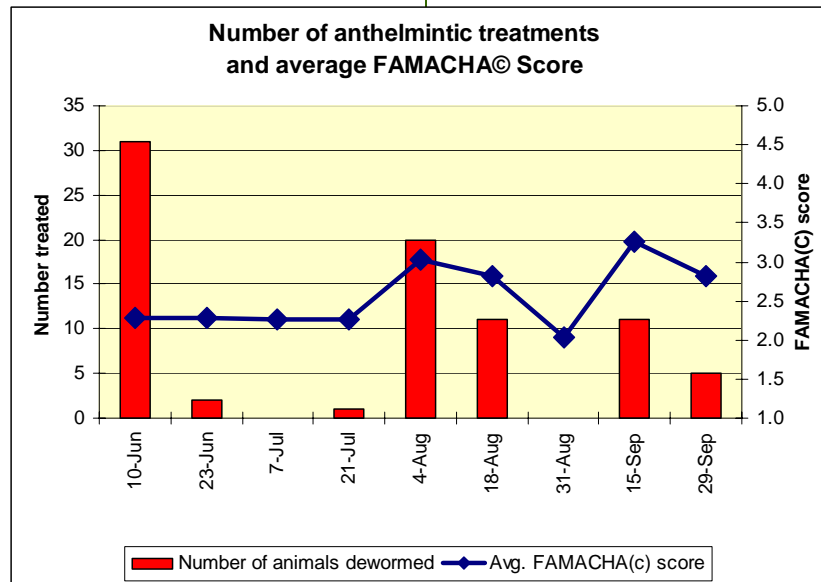
A pasture-based meat goat performance test was initiated at the Western Maryland Research & Education Center in Keedysville on June 10, 2006. The purpose of the test was to measure genetic differences in meat goats consuming a pasture diet with natural exposure to internal parasites.

Thirty-five Boer (6), Kiko (17), Boer x Kiko (11), and Genemaster (1) buck kids, 3 to 6 months of age averaging 48.9 ± 3.5 lbs, from six states (MD, PA, WV, VA, GA, OK) were assigned to the first test. Thirty-one goats finished the test on October 7. Ending weights averaged 69.3 ± 4.0 lbs. Four goats were eliminated for health reasons. No goats died during the test.

Management

The goats were rotationally grazed as a single herd for 112 days among five 2-acre paddocks composed of tall fescue (Max Q® and endophyte infected), orchardgrass, chicory, Birdsfoot trefoil, clover, and various forbs. The goats did not receive any supplemental feed. They had access to free choice minerals containing Deccox®. Minerals were provided by Summit Minerals (Pulaski, VA). The goats always had access to a

central laneway containing three 6 x 11 ft. port-a-hut shelters, mineral feeders, and fresh water. A handling system was used for evaluating and treating.



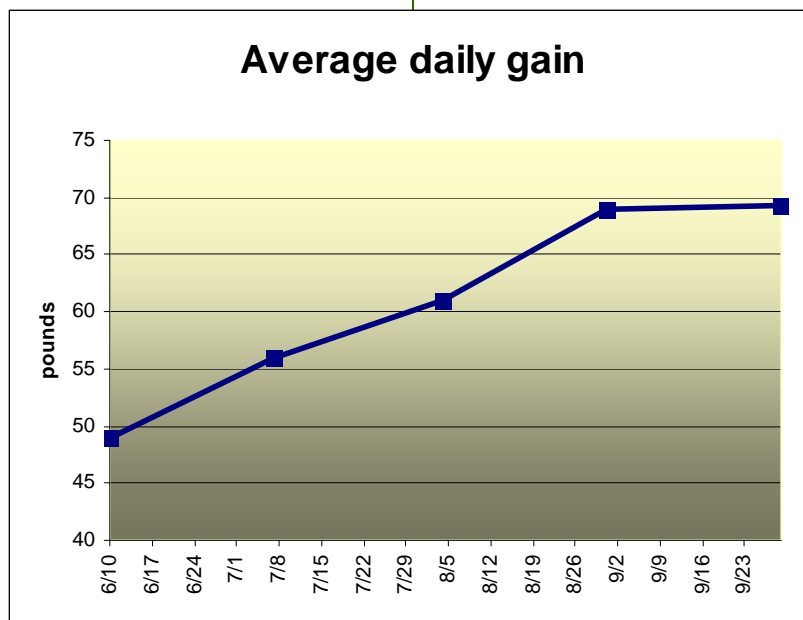
During the early part of the test, an outbreak of sore-mouth occurred. By the time the test concluded, there were no observable soremouth lesions. During the test, some goats required treatment for respiratory problems, fever, lice, and other miscellaneous problems. While on test,

the goats were evaluated for growth performance, parasite resistance, and carcass merit.

Parasite Resistance

All of the goats were dewormed (with Cydectin®) at the start of the test and fecal samples were collected (from the rectum) at 0, 28, and 56 days into the test. Fecal egg counts are being determined using the

Modified McMaster procedure.



The goats were handled every 14 days to determine FAMACHA© and body condition scores and the need for selective deworming. Bottle jaw was observed in only one goat. During the 112-day testing period, 51 anthelmintic treatments were administered to the 31

(continued from page 8)

goats for an average of 1.65 treatments per goat, excluding the initial deworming. Four (4) goats did not require deworming during the testing period. Thirteen (13) were treated once. Seven (7) were dewormed twice. Four (4) goats required three anthelmintic treatments. Three (3) required four treatments. The FAMACHA© system proved to be an effective tool for managing internal parasites in grazing goats.

Growth Performance

The goats were weighed every 28 days using an Alum-Tech dial scale. Average daily gain (ADG) varied among time periods and averaged 0.258, 0.202, 0.293, and 0.01 lbs. per day for the four 28-day periods. The overall ADG for the 31 bucks was 0.19 ±.04 lbs.

Among individual goats, ADG varied from 0.036 to 0.286 lbs. Jeanne Deitz-Band (Many Rocks Farm, Keedysville, MD) consigned the top gaining buck that

did not require any anthelmintic treatments. It was a Kiko buck that gained 0.232 lbs. per day. The top gaining buck was a high percentage Boer consigned by Willie Lantz (A.L.L. Boer Goats, Oakland, MD). It gained 0.286 lbs. per day, but required two anthelmintic treatments.

2007 Test

Next year's meat goat performance test will start on June 9, 2007. Up to 50 goats will be accepted from consigners from any state. The test is open to male goats of any breed, born between December 15, 2006 and March 15, 2007 (inclusive). The goats must be weaned for at least two weeks and have received two vaccinations for *Clostridium perfringens* (overeating disease) and tetanus prior to the start of the test. Health papers issued within 30 days of the start date are required. Consigners will be required to sign a statement releasing the University of Maryland from any liability. The testing fee will be ~\$75 per goat.

Goats with abscesses, sore mouth, foot rot, or signs of any other contagious disease will be refused entry to the test. Upon arrival, the goats will stand in a foot bath containing zinc sulfate. They will be dewormed with Cydectin® and treated for external parasites with an insecticide. During the first few days of the test, the goats will be treated for coccidiosis in the water.

Management and data collection will be the same as 2006. One of the paddocks containing Kentucky 31 tall fescue will be replaced with Max Q® tall fescue. Efforts will be made to include a browse pasture in the grazing program.

A blog (<http://mdgoatstest.blogspot.com>) has been created to enable consigners and other interested persons to follow the progress of the testing program. The Western Maryland Meat Goat Performance Test is sponsored by the University of Maryland Cooperative Extension.

Performance Test Data for 31 Bucks

Trait	Low	High	Average
Starting weight, lbs.	29.0	72.0	48.9
Ending weight, lbs.	52.0	98.0	69.3
Average Daily Gain, lbs. per day	0.036	0.286	0.190
Number of times dewormed, # ¹	0	4	1.65
Rib eye area, square inches	1.06	1.86	1.43
Backfat, inches	0.04	0.14	0.077
Scrotal circumference, cm ²	18	30	24.5

¹Excluding initial deworming

²A breeding age buck of 7 to 8 months of age should have a scrotal circumference of at least 25 centimeters.

Calendar of Events

January 12-13 – 8th Annual Future Harvest-CASA Farming for Profit and Stewardship Conference

Four Points Sheraton, Hagerstown, MD
(410) 549-7878 or fhcasa@verizon.net
<http://www.futureharvestcasa.org/conf.html>

January 13 – Virginia-North Carolina Shepherd's Symposium and Commercial Bred Ewe Lamb Sale

Alphin-Stuart Livestock Arena, Virginia Tech, Blacksburg, VA
Dr. Scott Greiner at (540) 231-9163 or sgreiner@vt.edu
http://www.ext.vt.edu/news/periodicals/livestock/aps-06_11/aps-382.html

January 24-27 – American Sheep Industry Convention

Hyatt Regency Hotel on the Riverwalk, San Antonio, TX
Judy Malone at (303) 771-3500 or judym@sheepusa.org
<http://www.sheepusa.org/>

February 21-24 – Direct Marketing Conference

Holiday Inn Select, Solomons Island, MD
Shannon Dill at (410) 822-1244 or sdill@umd.edu
<http://www.madmc.com/>

March 9-10 – Appalachian Grazing Conference 2007

Lakeview Resort, Morgantown, WV
Info: Becky Casteel at (304) 293-6131 or Becky.Casteel@mail.wv.edu
<http://www.wvu.edu/~agexten/temp/07AppalGrazgConfRegis.pdf>

For more, click on “Calendar” on the web page,
<http://www.sheepgoatmarketing.info>



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Sheep & Goat Extension Program
University of Maryland
Western Maryland Research & Education Center
18330 Keedysville Road
Keedysville, MD 21756-1104