



Wild & Woolly

VOLUME 6, ISSUE 1 □ SPRING 2007

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With a new Volume comes a new name! The Maryland Sheep and Goat Producer is now **"Wild & Woolly"**! Hope you like it!

For more information, visit:
www.sheepandgoat.com

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

Colostrum: Liquid Gold

The importance of high quality colostrum cannot be over-emphasized. Colostrum is so important that it is sometimes called "liquid gold." All mammals produce colostrum. It is the thick, yellowish, first milk produced by the female after parturition. Colostrum is rich in energy, protein, vitamins and minerals. Most importantly, it contains maternal antibodies that help protect the newborn from disease pathogens during the early part of its life.

The type of antibodies colostrum contains depends upon the antigens to which the dam was exposed by disease exposure or vaccination. Ewes and does should be vaccinated for overeating disease (*Clostridium perfringens* type C & D) and tetanus (*clostridium tetani*) in late pregnancy so that they will pass the antibodies for these important diseases to their offspring.



All newborn mammals need colostrum. While it is possible for a lamb or kid to survive without colostrum in a relatively disease-free environment, the likelihood of disease and death is much higher in lambs and kids that do not receive adequate colostrum. Orphan lambs and kids are often more susceptible to diarrhea and pneumonia because

they did not consume enough high quality colostrum.

Newborn lambs and kids have limited energy reserves and need rapid access to colostrum to maintain body temperature and survive, especially those born when it is cold. Lambs and kids are born with low

vitamin A reserves. Colostrum is usually rich in vitamin A and helps to build stores in the newborn. Colostrum is also the first source of Vitamin E for the lamb or kid. The

(Continued on page 4)

New Fair and Show Regulations for Livestock Exhibitors

Rules for the 2007 fair and show livestock exhibition season are now available from the Maryland Department of Agriculture's (MDA) web site, www.mda.state.md.us/animal_health/. Hard copies will be available soon and can be picked up at one of MDA's five regional animal health diagnostic laboratories as well as the headquarters office in Annapolis. New regulations this year include:

- Maryland exhibitors need to contact their veterinarian within 60 days of their

first show to have their animals inspected and an Intrastate Certificate of Veterinary Inspection (CVI) completed.

- The Intrastate CVI is now valid for up to 180 days from the date of approval.
- Submit the appropriate copies of the CVI for approval to any of the regional MDA Animal Health Laboratories or the headquarters office in Annapolis within 30 days of inspection. One copy will be retained by MDA, the other returned to the exhibitor.
- Self-certification of animal health. On the reverse side of the exhibitor's CVI

hard copy or as a separate document downloaded from the MDA web site is the "Livestock Exhibitor's Self-Certification of Animal Health" form. This form is to be filled out by the exhibitor prior to transporting their animal(s) to a fair or show stating that the animal(s) show no signs of contagious or infectious disease.

Contact MDA's Animal Health Office or any of their regional animal health facilities with any questions. *See page 5 for a list of locations and telephone numbers.*

Performance Testing

Western Maryland Meat Goat Performance Test

Last summer, a pasture-based meat goat performance test was initiated at the University of Maryland's Western Maryland Research & Education Center in Keedysville. The purpose of the test was to measure genetic differences in meat goats consuming a pasture diet with natural exposure to internal parasites (especially *Haemonchus contortis*/barber pole worm) and to give producers a perspective on performance under typical commercial conditions.

The only similar performance test in the United States for goats is a 200-day range test in Texas which is sponsored by the American Meat Goat Association. Other performance tests for small ruminants feed concentrate diets out of feeders and do not measure resistance to internal parasites (worms).

This year's meat goat test will begin on June 9 and end on October 6. 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 test. Health papers issued within 30 days of the start date are required.

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

Management and data collection will be the same as last year. The goats were rotationally grazed as a sin-

gle herd among five 2-acre paddocks composed of a variety of cool season grasses, including chicory. One of the paddocks containing Kentucky 31 tall fescue is being replaced with Max Q® tall fescue. An acre of pearl millet will be planted to provide additional summer forage.

Nominations for Buck Test begin April 1

The goats will not receive any supplemental feed, but will have access to free choice minerals containing Decox®. Minerals are being provided by Summit Minerals, Pulaski, VA. The goats will have continuous access to a central laneway containing three 6 x 11 ft. port-a-hut shelters, mineral feeders, fresh water, and a handling system.

The goats will be handled every 14 days to determine FAMACHA© eye anemia and body condition scores and the need for selective deworming. Fecal samples will be collected on days 0, 28, and 56 to determine worm egg counts and evaluate parasite resistance. The goats will be weighed every 28 days and will be scanned with ultrasound to determine carcass characteristics.

A blog (<http://mdgoatstest.blogspot.com>) has been created to enable consigners and other interested persons to follow the progress of the test. The test protocol and nomination form can be downloaded from this web site or obtained from the Western Maryland Research & Education Center, 18330 Keedysville Road, Keedysville, MD 21756, (301) 432-2767 x343 or sschoen@umd.edu.

The nomination period is April 1-May 15. There is a \$20 nomination fee for each goat. An additional \$55 will be due at the start of the test. The goats must be delivered to the test site between 9 a.m. and 2 p.m. on June 9, unless prior arrangements are made.



Sheep and Wool Skillathon

There will be a Sheep & Wool Skillathon at the Maryland Sheep & Wool Festival (www.sheepandwool.org) on Sunday, May 6, 2007 from 9 a.m. to 12 p.m. Any youth between the ages of 8 and 18 is eligible to compete as an individual and as a member of a 3 or 4 person team. There will be junior (8-10), intermediate (11-13), and senior (14-18) age divisions. The top ten individuals and top three teams will be recognized.

A skillathon provides youth with the opportunity to blend knowledge and skills acquired in livestock judging, demonstrations, and care and exhibition of livestock into a single activity. The Sheep & Wool Skillathon will consist of a series of stations where youth will be tested on their knowledge and abilities related to sheep and wool.

In 2006, the Maryland Sheep & Wool Festival hosted its first Sheep & Wool Skillathon for youth. Seventy (70) youth from four states and eight Maryland counties competed. The winning junior team was from Harford County (MD). Mark Holloway (MD) was the high individual. The winning senior team was from Carroll County (MD). Claire Bennett (MD) was the high individual.

The registration deadline for this year's Skillathon is April 20. There is no registration fee. For information or to register, contact Susan Schoenian at (301) 432-2767 x343 or sschoen@umd.edu.

<http://www.sheepandgoat.com/programs/skillathon/skillathon.html>

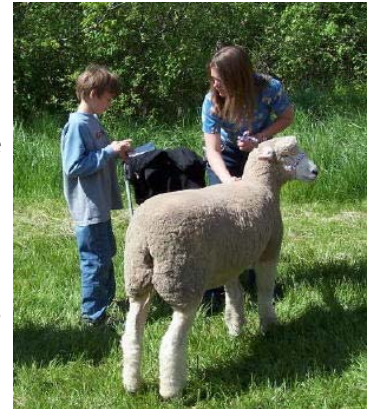


Photo by: Kate Bennett
L: Dean Bennett, R: Meagan Purdue

NRC Requirement Updated

The National Research Council (NRC) publishes a series of publications on the nutrient requirements of domestic animals. Requirements for energy, protein, minerals, vitamins, and water are defined, based on scientific evidence published in peer-reviewed technical sources.

Feeding standards, developed from nutrient requirements of the animals and nutrient composition of feedstuffs, provide readers with the knowledge and means to adopt proper feeding practices. Periodic updating of these publications is needed as new research information accumulates and new needs surface.

Nutrient Requirements of Small Ruminants: Sheep, Goats, Cervids, and New World Camelids (2007) combines revisions of The Nutrient Requirements of Sheep (1985) and The Nutrient Requirements of Goats (1981), with considerations of other small ruminants and ruminant-like species addressed for the first time.

The sheep portions update the 1985 edition in that a greater range in body size, litter size, and milk pro-

duction were considered. This edition updates the requirements of sheep based on recent research and a need to consider higher levels of productivity by larger and improved genotypes.

The quality and accuracy in the goat section greatly exceed those contained in the first edition because of the large amount of research efforts invested since the document was first published in 1981. However, many requirement issues in minerals and vitamins have not been resolved for goats. Rather, requirements were estimated from values derived for sheep and cattle studies.

Purchase from Amazon.com or National Academies Press at <http://books.nap.edu/> (Note: Type in "small ruminants" in the Discovery Engine window.

Free Executive Summary can be viewed at http://orsted.nap.edu/execsumm_pdf/11654

Note: Dr. Brian J. Bequette, University of Maryland Animal Scientist, served on the committee to revise the nutrient requirements for small ruminants.



Colostrum (continued from page 1)

iron content of colostrum is 10 to 17 times higher in colostrum than normal milk. Colostrum also has laxative qualities and helps to eliminate fecal matter in the newborn's digestive tract.

Research has shown that livestock vary in the quantity and quality of colostrum that they produce. Younger females tend to produce less colostrum than mature females. Inadequate nutrition during late pregnancy can reduce the quantity and quality of colostrum. In most underfed ewes, the lambs' needs for colostrum often exceed the dam's production, whereas females which are well-fed in late pregnancy usually produce more colostrum than their babies need.

Lambs and kids should nurse as soon after birth as possible in order to receive adequate colostrum. After parturition, it is a good idea to strip each teat to remove the wax plug and make sure the ewe or doe has enough colostrum to feed her offspring. Antibodies are large protein molecules that can only cross the intestinal wall and enter the bloodstream of the lamb and kid during the first 24 to 36 hours of life. Absorption is most efficient the first few hours after birth.

Lambs and kids that are too weak to nurse can be fed colostrum with a nipples bottle or stomach tube. It is recommended that newborns receive 10 percent of their body weight in colostrum within 24 hours of birth. This means that a 10 pound lamb should receive one pound (16 ounces) of colostrum. Colostrum should be fed at blood temperature, 2 to 4 ounces, at 3 to 4 intervals.

Sources of Colostrum

The best source of colostrum is the newborn's dam. If this is not possible, fresh or frozen colostrum from other females in the flock can be used. It is always a good idea to milk out ewes and does that have extra milk (colostrum) and to freeze it for later use. Females which give birth to singles often have enough colostrum for a second baby. Colostrum from females in your own flock is the best because it will have custom-made antibodies. When using colostrum from another flock, try to choose a flock with a similar disease status.



Cow colostrum can serve as a substitute for lamb and goat colostrum, but because cow's milk is not as nutritious as ewe's milk, more volume (about one third) must be fed to lambs. Milk from the colored breeds is better because it is higher in fat. Though Johne's disease is not as common in sheep and goats as it is in cattle, it is advisable to get cow colostrum from a herd that has tested Johne's-free.

Frozen colostrum should be thawed slowly in a warm water bath. Do not use direct heat or this will destroy the antibodies. It is best to freeze colostrum in small quantities because once frozen colostrum is thawed, it cannot be re-frozen. Frozen colostrum can be stored for up to 12 months without losing its antibodies, whereas fresh colostrum can only be refrigerated for a week before quality declines.

There are numerous commercial colostrum products on the market. Be sure to read the labels of these products carefully. Most of these products do not contain sufficient quantities of antibodies. They are nutritious and should be fed if no other source of colostrum is available, but they cannot replace high quality colostrum. There are a few cattle products on the market which are "true" colostrum replacers or substitutes. When fed, they are able to raise the blood concentration level of antibodies to the species standard. Lamb or kid milk replacer is never a substitute for colostrum.

Diseases transmitted via colostrum

Some diseases are transmitted from the dam to the offspring via the colostrum and milk. Both ovine progressive pneumonia (OPP) and caprine arthritic encephalitis (CAE) are transmitted in this manner. These diseases are very similar. Lambs that consume colostrum from a CAE-positive doe can test positive for OPP. Similarly, a kid that consumes colostrum from an OPP-positive ewe can test positive for CAE. To prevent the transmission of either disease from positive dams to offspring, the offspring should not be allowed to nurse or consume colostrum from positive dams. They should be fed pasteurized colostrum or cow colostrum. The bacteria that causes Johne's disease can also be transmitted through colostrum, though it is not the primary mode of transmission.

Read full article at www.sheepandgoat.com/articles/colostrum.html.

Comings and Goings

COMING - Dr. Dahlia Jackson

Dr. Dahlia Jackson was recently hired as the Small Ruminant Specialist at Delaware State University in Dover, DE. She started her new position on February 12th.

Dr. Jackson was born in St. Catherine, Jamaica. She grew up on her grandparent's farm where they raised cattle, hogs, chickens, and goats.

She received all of her agricultural degrees at the University of Maryland Eastern Shore. Her M.S. degree focused on improving reproductive efficiency in meat goats and involved examining the influence of melengestrol acetate or kid removal to induce breeding during the late non-breeding or postpartum period in goats. Her PhD research focused on the influence of breed and nutrition on growth, parasite resistance, carcass traits, and meat quality of crossbred Katahdin lambs. It included synchronizing estrus in ewes and managing females during pregnancy, lambing, and lactation.



Dr. Jackson has also been involved in projects involving the use of poultry litter as a nitrogen source in small ruminants and anthelmintic resistance.

GOING - J. Willard Lemaster

J. Willard Lemaster is no longer with Maryland Cooperative Extension.

Willard served as the 4-H Animal Science Specialist for seven years. During his tenure, he was very supportive of sheep and goat programs, such as the Sheep & Wool Skillathon and lamb carcass contest at the Maryland Sheep & Wool Festival, 4-H/FFA Meat Goat Show at the Maryland State Fair, and the Pasture-Based Meat Goat Performance Test in Western Maryland.

Willard's expertise in ultrasound scanning will be sorely missed. We wish him well in his new career.



MDA Animal Health Offices & Labs

Annapolis Animal Health Office
410-841-5810

Centreville Animal Health Diagnostic Lab
410-758-0846

College Park Animal Health Diagnostic Lab
301-314-1870

Frederick Animal Health Diagnostic Lab
301-694-1548

Oakland Animal Health Diagnostic Lab
301-334-2185

Salisbury Animal Health Diagnostic Lab
410-543-6610

June 2007 Calendar of Events

June 9 - Meat Goat Performance Test Begins

Western MD Research & Education Center, Keedysville, MD
Info: 301-432-2767 x343 or x301
sschoen@umd.edu or cmason@umd.edu

June 16 - Fecal Egg Counting Workshop

Western MD Research & Education Center, Keedysville, MD
Info: 301-432-2767 x343 or x301
sschoen@umd.edu or cmason@umd.edu

June 20- Maryland Wool Pool

Maryland State Fairgrounds, Timonium, MD
Delivery is 8:00 a.m. - 2:30 p.m.
Info: Rich Barczewski at 302-857-6410; rbarczewski@desu.edu

see page 10 for March through May events

UMES Update from Dr. Niki Whitley



We are basically done with lambing (some yearlings left that we bred later than the main flock) and kidding will start any time now. I'll give a full update after kidding, but things went much better for lambing than last year and I am looking forward to seeing the kids we get this year.

The current research focus at UMES is alternative dewormers and other parasite control methods to decrease chemical use, with projects funded in part through Northeast SARE (for more information see <http://www.uvm.edu/~nesare/index.html>). UMES

was also asked to be involved in projects from two other grants that are being submitted involving parasites – one with Dr. Dahlia Jackson at Delaware State University and the other with Dr. Tom Terrill at Fort Valley State University.

While grazing animals for parasite research, we will also work with Virginia State University on a project looking at the impact of wild birds on diseases like Salmonella and Listeriosis in small ruminants.

If you would like to give your opinion about the type of research you would like to see conducted in small ruminants (sheep/goats), please do not hesitate to contact me at 410-651-6194 or nwhitley@umes.edu.

2007 Sheep and Goat Inventory

All sheep and lamb inventory in the United States on January 1, 2007, totaled 6.19 million head, down 1 percent from 2006, but still 1 percent above 2005. After



two consecutive year-to-year increases, inventory growth was hampered by extremely dry weather in the Southwestern part of the United States.

Ewes one year old and older, at 3.71 million head, were 1 percent above last year. The 2006 lamb crop of 4.09 million head, was down 1 percent from 2005. The 2006 lambing rate was 112 lambs per 100 ewes one year old and older.

Shorn wool production in the United States during 2006 was 36.0 million pounds, down 3 percent from 2005. Sheep and lambs shorn totaled 4.85 million head, down 4 percent from 2005. The average price paid for wool sold in 2006 was \$0.68 per pound.

Goats up 3% in U.S.

All goat inventory in the United States on January 1, 2007, totaled 2.93 million head, up 3 percent from 2006. Breeding goat inventory totaled 2.44 million head, up 3 percent from 2006.

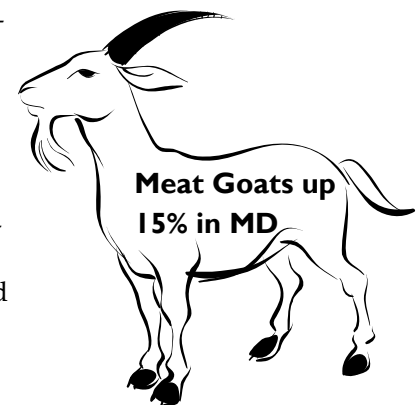
Milk goat inventory increased 2 percent to 296,000 head, while Angora goats were down 8 percent totaling 238,000 head. The 2006 kid crop totaled 1.92 million head for all goats, up 4 percent from 2005.

More sheep and goats in Maryland

In Maryland, the sheep and lamb inventory increased 5 percent. The 2006 lambing rate was 120 lambs per 100 ewes. But, number of sheep shorn and pounds of wool produced declined by 11.8 percent.

Maryland wool prices averaged 51 cents per pound in 2006, below the national average (due to differences in wool type), but above all nearby states. Sheep numbers increased in Virginia (+7%) and West Virginia (+6%), but declined in Pennsylvania (-2%)

Meat goat numbers increased by 15 percent in Maryland. Meat goat numbers also increased in Virginia (+7.3%), West Virginia (+10.5%), and Pennsylvania (+2.7%). Delaware sheep and goat statistics are not reported individually.



SFCP, NSEP and NAIS - What's the real deal?

USDA acknowledges that there has been some confusion about the NAIS and how it interacts with existing scrapie eradication programs such as the voluntary scrapie flock certification program (SFCP) and the national scrapie eradication program (NSEP). Here are some facts will, hopefully, help to clear the confusion.

- For this reason, at the federal level, enrolling in the SFCP or requesting official tags as part of NSEP does not register your premises in the NAIS. Conversely, choosing to register your premises in the NAIS does not affect your flock identification number or your status in the SFCP. The three programs compliment each other, but are distinct.
- The NAIS is voluntary. SFCP is voluntary. Complying with the identification requirements of the national scrapie eradication program is required by a regulation that has been in place since August 2001.
- Producers are not required by USDA to participate in the NAIS in order to either enroll in SFCP or to get the official eartags provided free to producers through the NSEP.
- Some of the NAIS approved eartags have also been approved for scrapie program use. This allows producers to participate in all three programs using the same eartag. As with other NAIS tags, premises reg-

istration with NAIS is required to purchase these tags.

- Continued grassroots input is critical to the success of the NAIS. Accordingly, USDA and its state and industry partners have established NAIS working groups to provide recommendations and input as we move forward with the system.
- Each species working group membership consists of representatives from various levels and segments of their industry.
- The sheep working group has recommended that sheep producers who decide to participate in the NAIS be allowed to use the identification devices the numbering systems currently used for SFCP and NSEP.
- The recommendation does not mean that producers participating in SFCP and NSEP will be registered in NAIS. Only those who choose to register would have the option to continue to use SFCP and NSEP identification devices.

NAIS contact in Maryland:

Marilyn Bassford
(410) 742-6023
nais@dmv.com

2007 MD-DE Sheep Shearing Schools

A Beginning Sheep Shearing School will be held Friday and Saturday, March 16 and 17, 9:30 a.m. to 3:30 p.m. at the Thompson Farm in Westminster, MD. The school is open to anyone in Maryland, Delaware and surrounding states who wants to learn to shear sheep.

The minimum age is 16. Each registrant will receive an ASI Shearing Notebook and instructional DVD. Participation is limited to the first 25 people who register by March 9. The registration fee is \$80. Checks payable to the Carroll County Extension Advisory Council (CCEAC) should be sent to David L. Green, 2014 White Hall Road, White Hall, MD 21161-9712, e-mail: greelamb@bcpl.net.

An advanced sheep shearing school will be held on

Saturday, March 31, 9:30 a.m. to 3:30 p.m. at the Thompson Farm in Westminster, MD. The advanced school is for persons who have attended previous schools or sheared more than 150 sheep and want to refine their skills and increase their speed. Participation is limited to the first 10 people who register by March 23. The registration fee is \$25 and should be sent to David Green. The ASI Shearing Notebook and instructional DVD are available for \$30.



The New Zealand method of sheep shearing will be taught. The instructors will be David Green, Rich Barczewski, and Aaron Geiman.

Sheep and Goat Research Update

Southern Section, American Society of Animal Science - Summary of Small Ruminant Section

By Susan Schoenian

Recently, I attended the annual meeting of the Southern Section of the American Society of Animal Science in Mobile, Alabama. There were more abstracts pertaining to small ruminants (sheep and goats) than any other subject matter. While much of the research utilized meat goats and hair sheep, most of it relates equally to all types of goats and sheep. Here is a summary of some of the research abstracts.

- Small ruminant research at the University of Maryland Eastern Shore (UMES) is under the direction of Dr. Niki Whitley, a regular contributor to this newsletter. Dr. Whitley and her students presented several abstracts.
 - There was no difference in feedlot performance or digestibility of diet in meat goats fed a diet supplemented with probiotics. Dr. Whitley suggested that probiotics would be more likely to have a beneficial effect on highly stressed animals, such as those purchased at a sale barn and co-mingled in a feed lot.
 - Meat goats receiving high-tannin grain sorghum (milo) in their diet did not have different fecal egg counts, packed cell volumes, or FAMACHA© scores as compared to goats fed low-tannin grain sorghum. High tannin forages such as sericea lespedeza have been found to reduce fecal egg counts in small ruminants. However, Dr. Whitley stressed the point that all tannins are not equal and that some will not suppress internal parasitism in small ruminants.
 - A 4-year study to compare the differences in Katahdin crossbred lambs sired by Suffolk, Dorper, or Texel rams was recently completed at UMES. Suffolk sired lambs grew faster than Dorper and Texel-sired lambs, while Texel-sired lambs had greater parasite resistance than Suffolk and Dorper-sired lambs. Regardless of sire type, grass-fed lambs had higher concentrations of conjugated linoleic acid (CLA) in their meat and a more favorable ratio of omega-3 to omega-6 fatty acids.
- Thirty-one male meat goats from six states completed the first Western Maryland Pasture-Based Meat Goat Performance Test in 2006. The goats gained on-average 0.19 lbs. per day and required 1.65 anthelmintic treatments (each) during the 112-day test. Boer x Kiko kids required fewer dewormings than Kiko and Boer kids.
- Researchers at Virginia State University documented a modest periparturient rise in fecal egg counts in hair sheep ewes, though there was no difference between Katahdin and St. Croix ewes. Nor did fecal egg counts, packed cell volumes, and FAMACHA© scores of the ewes suggest the need for deworming prior to lambing, as is a common recommendation in sheep. (Periparturient means around lambing/kidding time).
- Researchers at Langston University in Oklahoma found a low incidence of infertility in young bucks that completed the Langston University Buck Test from 1999 to 2006. Only 3.8 percent of bucks failed to pass a breeding soundness examination. The researcher concluded that there is a low rate of infertility in well-managed buck kids older than six months of age. However, bucks were not evaluated for breeding capacity (libido).
- In a multi-year study at Tennessee State University, data is showing that sire and dam breeds interact to influence kid weights at birth and weaning. For 781 kids, birth weights were highest for Boer-sired kids and lowest for purebred Kiko and Spanish kids. Data from 635 kids showed that 90-day weaning weights were heaviest for Boer x Kiko and Kiko x Kiko kids and lightest for Boer x Boer and Spanish x Spanish matings. The kids were not creep fed in this study, and males were left intact. Previous data documented the superiority of Kiko does for fitness and performance traits as compared to Boer does. Spanish does tended to be intermediate in most traits, but had the highest efficiency ratio, expressed as litter weight divided by doe weight.
- At Kentucky State University, supplemental feeding (at 2.5% of body weight) of fall born Boer cross kids on endophyte-infected tall fescue pastures improved performance, but did not affect body condition or FAMACHA© scores. The researcher suggested that improvements in forage quality through introduction of desirable legumes or browse species and forage management strategies may produce similar results, since grain supplementation may not be economically feasible.

(continued from page 8)

- At the Grazing Lands Research Laboratory in Reno, Oklahoma, purebred Katahdin lambs fed a concentrate diet were found to have higher concentrations of CLA in their meat than Suffolk lambs. The ratio of omega-6 to omega 3 fatty acids was lower in Katahdin lambs as compared to Suffolk lambs. These results were reflected positively in the crossbred Katahdin x Suffolk and Suffolk x Katahdin lambs, suggesting that the Katahdin may be a good breed to use in crossbreeding programs to improve the fatty acid profile of lamb meat. In the future, the researchers plan to look at the fatty acid profile of grass-fed lamb.
- Under the direction of Dr. Joan Burke, various studies are being conducted at the Dale Bumpers Small Farms Research Center in Booneville, Arkansas, to evaluate different strategies for controlling gastro-intestinal parasites in small ruminants. Dr. Burke has previously presented papers on the efficacy of copper oxide wire particles to control barber pole worm infection in small ruminants.
 - Boer and Boer x Spanish doelings were used to evaluate the interaction between protein supplementation and copper wire oxide particles in the control of parasites. While the copper wire oxide particles (2 g bolus) were effective in the control of existing parasite infections, there was no advantage to supplementation with cottonseed meal (41% CP) as compared to a corn/soybean supplement (14% CP) fed at 0.48 lbs/day.
 - Yearling Boer does were used to evaluate the interaction between copper oxide wire particles and grazing sericea lespedeza in the control of *H. contortus*. None of the does treated with copper oxide wire particles (5 g bolus) required treatment by day 28 vs. 56 percent of the untreated does. Fecal egg counts were lower for the does that had grazed sericea lespedeza for 21 days as compared to does that grazed tall fescue for the same period.
 - Different doses of copper oxide wire particles were administered to Boer x Spanish kids to determine their effect on internal parasites. A dose as low as 0.5 grams was effective at reducing fecal egg count in the kids, but an additional treatment was shown to be necessary within 4 weeks, according to Dr. Burke.
- Dr. Jim Miller, a parasitologist in the School of Veterinary Medicine at Louisiana State University, conducts various studies related to the control of internal parasites in small ruminants.
 - Grazing sericea lespedeza and feeding it as hay has reduced fecal egg counts in sheep and goats. Results of a study conducted in Louisiana showed that ground sericea lespedeza hay reduced fecal egg counts of existing parasite infections, which could help to reduce pasture contamination with worm larvae.
 - Another study looked at the effect of pelleting on the anthelmintic efficacy of sericea lespedeza hay against gastro-intestinal parasites in goats. Pelleting did not reduce the efficacy of sericea lespedeza hay against parasitic nematodes and may facilitate the broader use of this forage in small ruminant parasite control programs.
 - Another study looked at the effect of vaccination of goats with H-11/H-gal-GP antigens from intestinal membrane cells of *Haemonchus contortus*. In the UK, vaccination of sheep with the antigens has been effective at reducing barber pole worm infections. The results of this study were promising as multi-vaccinated goats had lower fecal egg counts and higher packed cell volumes compared to unvaccinated goats.
- Field application of liquid nitrogen fertilizer was not effective at reducing gastro-intestinal parasites in weanling meat goats. The study conducted at North Carolina State University was ended after 33 days when the majority of the goats began developing bottle jaw.
- The University of the (US) Virgin Islands, under the direction of Dr. Bob Godfrey conducts various studies using hair sheep.
 - Dorper x St. Croix ewes performed as well in an accelerated lambing system as native St. Croix ewes. They produced fewer lambs, but weaned more of their lambs and produced lambs with heavier weaning weights.
 - A twice-a-day feeding regime increased feed consumption and decreased weight loss in lactating ewes grazing native pastures during the cool season, but did not influence milk production and litter weaning weights as compared to once a day feeding or no grain supplementation.

Calendar of Events

March 16-17, 31 - Sheep Shearing Schools

Thompson Farm, Westminster, MD (see pg. 7 for details)

March 22 - Dairy Goats 101

Washington County Extension Office, Boonsboro, MD
Info: 301-791-1304 or jsemmler@umd.edu or sschoen@umd.edu
<http://www.sheepandgoat.com/programs/07shortcourse.html>

March 24 - MD Dept. of Agriculture Open House

50 Harry S. Truman Parkway, Annapolis, MD
Info: 410-841-5882 or <http://www.mda.state.md.us>

April 3 - Wool Sheep 101 (Same location & info as March 22 class)

April 28 - Maryland Ag Day,

University of Maryland, College Park, MD
Info: mddayhelp@umd.edu or <http://www.marylandday.edu>

May 5-6 - Maryland Sheep & Wool Festival

Howard County Fairgrounds, West Friendship, MD
Info: 410-531-3647 or info@sheepandwool.org

May 19 - Integrated Parasite Management (IPM) Workshop

Hunterton County, New Jersey
Info: Andrea Holladay at 908-537-2265 or dancingwatersfarm@att.net

See page 5 for the June calendar. For more, click on "Calendar" on the web page, <http://www.sheepgoatmarketing.info>



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