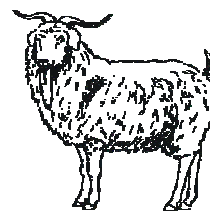




Maryland Sheep & Goat Producer



Vol. 3 Issue 6 - December 2004

PUBLISHED BI-MONTHLY BY UNIVERSITY OF MARYLAND COOPERATIVE EXTENSION
WESTERN MARYLAND RESEARCH & EDUCATION CENTER, KEEDYSVILLE, MARYLAND

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Tail Measuring Device Available

The device to measure tail (dock) length in lambs is now commercially available from Pipestone Vet Supply and NASCO. The device sells for approximately \$6.



Tail Measuring Device

The purpose of the device is to measure tail (dock) length in show lambs to determine

Maryland 4-H Sheep Tail Docking Policy *Revised for 2005*

Lambs born after January 1, 2005 will be accepted for exhibition only if tails are not docked shorter than the level of the distal end of the caudal tail fold. Lambs that are properly docked will have a minimum length of 0.7 inches at show, measured by the approved measurement device, which will be placed against the base of the tail and pin bones.

December 7, 2004

compliance with mandatory tail docking policies. In Maryland, a minimum tail (dock) length of 0.7 inches will be required for 4-H lambs in 2005. There are two lines etched on the tail measuring device : 0.7 inches and 1.4 inches. If a lamb's tail is 1.4 inches or more at the time of "weaning," research shows that there is a 99 percent probability that the lamb's tail will be 0.7 inches or longer at the time of show.

The tail measuring device is not an aid for tail docking. The recommended place to dock lambs is the distal end of the caudal tail fold. Research shows that lambs docked at this location have a 99 percent probability of having a tail that is at least 0.7 inches at the time of show.

Educating People to Help Themselves

Local Governments • U.S. Department of Agriculture Cooperating

Pipestone Vet Supply
1-800-658-2523
www.pipevet.com

NASCO
1-800-558-9595
www.nascofa.com

Electric Tail Docker

Many producers and researchers believe that the easiest and most humane way to dock lambs is to use an electric tail docker which cuts and cauterizes the tail at the same time. The heat cauterization minimizes tail infections. In recent years, electric dockers were difficult to find. This is no longer the case. The following companies market electric tail dockers:

Pipestone Vet Supply (see info above)

Sydell, Inc.
1-800-842-1369
www.sydell.com

Editor's note: The mention of product names or companies is for informational purposes and does not constitute an endorsement of either.

VA-NC Shepherd's Symposium and Commercial Ewe Lamb Sale

The annual Virginia-North Carolina Shepherd's Symposium will be held Friday and Saturday, January 7 and 8, at the new Alphin-Stuart Livestock Arena on the campus of Virginia Tech in Blacksburg, Virginia. Program topics include :

Friday, January 7

- Application of the FAMACHA© System for Managing Parasites in Sheep (Dr. Anne Zajac)
- Making Sense Out of Mineral Nutrition (Dr. Mark Wahlberg)
- U.S. Animal Identification Program: Where Are We? (Dr. Scott Greiner)
- Proper Administration and Use of Dewormers (Dr. Kevin Pelzer)
- Assessing Forage Quality and Using Results in Flock Nutrition (Lawton Stewart)

- Lamb Quality Assurance: Injection Sites and Extra-Label Drug Use (Dr. Dee Whitter)
- Preparing for the Lambing Season (Susan Schoenian)

Saturday, January 8

- Live Lamb Evaluation (Dr. Scott Greiner and Mike Carpenter)
- Ewe Body Condition Scoring and Winter Nutrition (Dr. Mark McCann)
- Lamb Carcass Evaluation and Fabrication (Drs. Scott Greiner and Mark Wahlberg and Scott Daigle)

The Virginia Sheep Producers Association will hold their annual meeting on Saturday morning at 7:30 a.m. Breakfast speakers will include ASI Director David Greene, who will discuss "National Issues and Their Impact for Mid-Atlantic Producers." Also on hand will be American Lamb Board member Joe Harper, who will give an "Update on Activities of the American Lamb Board."

The Virginia-North Carolina Shepherds' Symposium is open to all sheep producers in the Mid-Atlantic region. The meeting is arranged so that participants can attend all or any part of the two day meeting. Full (two-day) registration is \$45 per person; \$25 for youth. One day registration is \$20 (no meals included). All registrations, including one day registrants and youth will receive a copy of the proceedings. Pre-registration is due no later than December 27 to:

Virginia Sheep Producers Association
Animal & Poultry Sciences (MC 0306)
Virginia Tech
Blacksburg, VA 24061
Phone: (540) 231-9163
Fax: (540) 231-3713

Checks should be made payable to VSPA. Registrants should include their name, address, phone number, e-mail, and fax number (if applicable).

A commercial bred ewe lamb sale will be held at the conclusion of the symposium. Ewes of various crosses (Dorset, Suffolk, Texel, and Finn) will be sold in groups of 2 to 5 based on breed, service sire, and pregnancy status/due date.



Sign-up for Ewe Lamb Payments

Sign-up for the 2004 Retained Ewe-Lamb Program is still underway at local Farm Service Agency (FSA) offices. Program eligibility and requirements are essentially the same as last year's program. Producers may receive up to \$18 for each ewe lamb they retain in their breeding flock or purchase for breeding.

American Lamb Checkoff

Sheep producers, feeders, and first handlers (packers) will have the opportunity to decide whether to continue the Lamb Promotion, Research, and Information Order (Order), more commonly known as the Lamb Checkoff Program, during a referendum which will be held early 2005. The referendum will be conducted at local USDA Farm Service Agency (FSA) offices. Ballots will be available during the voting period at county FSA offices and via the Internet. Ballots must be returned to the appropriate local county FSA offices.



Lamb Checkoff Q and A

Why was the Lamb Checkoff Program started?

All segments of the domestic industry, believing it was critical to increase demand for and expand the market share of American Lamb requested that USDA create the Lamb Checkoff Program pursuant to the Commodity Promotion, Research and Information Act of 1996. A sheep industry task force, representing all industry segments recommended to USDA that funds be collected from each segment: producers, feeders, and packers.

When did assessments begin?

Collection of assessments began on July 1, 2002. The annual budget for the American Lamb Board (Board) is approximately \$2.3 million. Administrative costs are limited to a

maximum of 10% of the collections in any fiscal year.

Who decides how assessment funds are spent?

The 13-member Board is composed of 6 producers, 3 packers or first handlers, 3 feeders, and 1 seedstock producer. The Board, which administers the program, is appointed by the U.S. Secretary of Agriculture. The Board meets at least three times per year to establish goals and budgets for new programs and to evaluate the success of work completed. Board members serve voluntarily and are not paid for their time. Board policies are implemented by a small 3-member full-time staff in Denver, Colorado. USDA has oversight responsibilities of the program's administration.

What are the goals of the Lamb Checkoff Program?

The Lamb Checkoff Program is designed to expand market share of American Lamb and foster an opportunity for prosperity for all its contributors by:

- Increasing demand by getting people to ask for American Lamb year-round.
- Branding American Lamb as the preferred choice in the marketplace.
- Differentiating American lamb from competitors with our "10,000 Miles Fresher" and "American Lamb from American Lamb" campaigns.
- Minimizing the volatility of seasonal product sales through targeted promotions.
- Promoting to encourage use of the whole lamb – using all cuts.
- Leveraging and expand American Lamb Board Resources through cooperative relationships with corporate and industry partners.

What are some of the highlights from the Lamb Checkoff Program?

- Advertisements placed in leading food and restaurant publications educating consumers about American Lamb's benefits.
- Rising star chef "lambassadors" shared American Lamb recipes and tips at a variety of food and wine events.
- Retail promotions engaged retailers with American Lamb by partnering with Buena Vista Winery and Kraft Foods.

- Satellite media tours brought seasonal American Lamb messages to radio listeners and television viewers.
- The American Lamb Board web site was revamped and updated to include a recipe database, industry marketing tools, and a wealth of American Lamb information.
- Education materials: "American Lamb Makes the Plate"
- Publicity in magazines and newspapers and over 4 hours of non-paid media (TV) touting American Lamb in the past year.

Why are we having this referendum?

The Order provides that a referendum be conducted within three years after the program is launched to determine if the Lamb Checkoff Program should continue. The "delayed" referendum is designed to allow the contributors to see programs funded with contributor's assessments and to determine if the checkoff is working for them. For the program to continue, it must be approved by a majority or of those producers voting who also represent a majority of the volume of lamb produced, fed, or slaughtered.

Who can vote in the referendum?

Anyone who was or is a lamb (sheep) producer, feeder, or first handler or authorized representative engaged in the production, feeding, or slaughter of lambs during the period from January 1, 2004 through December 31, 2004 is eligible to vote in the referendum.

When will the results of the referendum be available?

The USDA will likely announce results about 60 days after the voting period ends by USDA.

Will I receive my request for refund?

Yes. Refunds requests filed since July 2002 will be honored by the Board regardless of the outcome of the referendum.

Source: American Lamb Board

<http://www.americanlambboard.org>

Temple Grandin to be Keynote Speaker at Conference

Temple Grandin, perhaps the world's foremost authority on humane livestock facilities and handling methods to reduce animal stress, will be the keynote speaker at the 2005 "Farming for Profit and Stewardship" Conference. The meeting, presented by Future Harvest- a Chesapeake Alliance for Sustainable Agriculture(CASA), will be held Jan. 14th and 15th at the Four Points Sheraton in Hagerstown, Maryland.

Presented by Future Harvest-CASA, the 6th annual conference is a regional forum featuring workshops and speakers aimed at presenting new information and ideas to improve the farmer's bottom line.

Dr. Grandin, an Associate Professor of Animal Science at Colorado State University, is known for her work in livestock behavior and stress management, as well as her influence on the livestock industry. She has consulted for many big name corporations, including McDonalds, to create new systems for humane animal transport and slaughter.

A lively and thought provoking speaker, Dr. Grandin has appeared on television shows such as 20/20, 48 hours, CNN Larry King Live and been featured in *People Magazine*, the *New York Times*, *Forbes*, *U.S. News and World Report*, and *Time Magazine*.

She is the author of *Livestock Handling and Transport*, *Genetics and the Behavior of Domestic Animals*, as well as 300 articles in both scientific journals and livestock periodicals on animal handling, welfare, and facility design. A new book, *Animals in Translation*, is due to be published by Simon & Schuster early next year.

Grandin has also told her personal story and struggle with autism in her book *Thinking in Pictures*. It is her experience with autism that Grandin credits for her greater understanding of animals under stress.

For information about the Conference, contact Future Harvest-CASA at (410) 604-2681 or fhcasa@friend.ly.net.

<http://www.futureharvestcasa.org>

Genetics 101

by Susan Schoenian

There are two primary ways to make genetic improvement in sheep and goat flocks: 1) crossbreeding; and 2) selection. Traits which respond well to crossbreeding (e.g. survival and fitness) do not respond well to selection and vice versa.



Crossbreeding

Crossbreeding is the mating of individuals of different breeds or breed types. Crossbreeding has two advantages: 1) hybrid vigor; and 2) breed complementarity. Hybrid vigor or “heterosis” is the superiority of crossbred offspring, i.e. when an offspring is better than the average of its two parents. There are effects of heterosis in crossbred offspring, crossbred dams, and crossbred sires. For example, the survival of a crossbred lamb is 9.8% higher than a purebred lamb due to heterosis. A crossbred female will wean 18% more pounds of lamb(s) than a purebred female as a result of heterosis. It is likely that ram heterosis influences traits such as libido, conception rate, hardiness, and longevity. Composite breeds, such as the Katahdin and Polypay, also benefit partially from heterosis.

Breed complementarity is the improved production efficiency that results from crossbreeding systems that let the strengths of the sire breed offset the weaknesses of the dam breed and vice versa. A perfect example of breed complementarity is when you cross a Boer buck with a dairy doe. The superior conformation of the Boer offsets the dairy breed’s poorer muscling, while the dairy female has superior milking ability as compared to the Boer.

Crossbreeding should not be done indiscriminately, rather breeders should have a well-defined goal in mind. The purpose is to optimize performance, not necessarily maximize it. A crossbreeding system also needs to be simple and manageable or it will not be implemented.

Selection

Selection is when you choose which animals get to mate and to whom. The amount of progress you can make through genetic selection depends on several factors: 1) heritability; 2) selection differential; and 3) generation interval. Heritability is the portion of a trait that is due to genetic factors. Most traits have both an environmental and genetic component. What you see or can measure in an animal is called phenotype. The animal’s genetic make-up is genotype. Phenotype is a combination of the animal’s genotype and environmental factors.

$$\text{PHENOTYPE} = \text{GENOTYPE} + \text{ENVIRONMENT}$$

Reproductive traits tend to have low heritabilities. For example, litter size is only 10% heritable. In other words, 90% of the differences in litter size are due to environmental factors, such as health, nutrition, age, and season. Growth traits are moderately heritable. For example, post-weaning rate of gain (60-120 days) is 40% heritable in sheep. Carcass and fleece traits are moderate to highly heritable. For example: 50% of the variation in rib eye area is due to genetics, while 55% of staple length in fleeces is due to genetics. Parasite resistance appears to be moderately heritable: 20 to 40%.

Selection differential is the difference between the selected animals and the average of the flock. For example, if the average weaning weight in your flock is 60 lbs. and you select parents that had weaning weights of 80 lbs., the selection differential would be 20 lbs. Obviously, more genetic progress can be made if this difference is large. The generation interval is the period of time it takes for the offspring to produce offspring themselves. It tends to be equivalent to the average age of females in the flock. You will make more rapid genetic progress if you maintain a youthful flock. In fact, if you are truly making genetic progress in your flock, your best animals genetically will be your yearlings.

$$\text{GENETIC PROGRESS} =$$

$$\frac{\text{HERITABILITY} \times \text{SELECTION DIFFERENTIAL}}{\text{GENERATION INTERVAL}}$$



Williard Lemaster (C) uses ultrasound scanning to determine a ram's rib eye area.

Sheep/Goat Genetics Conference - Oct. 30, 2004

When making selection decisions, it is important to emphasize economically important traits and traits which are important to your breed. For example, reproductive traits, such as litter size and milking ability, are more important to dam selection than sire selection, whereas rate of gain and feed efficiency are more important to sire selection. There's nothing wrong with selecting maternal breeds with greater growth and muscling, but this should only be done to the extent that it does not compromise maternal traits and vice versa.

You must also consider genetic correlations when making selection decisions. For example, birth weights and post-weaning growth have a positive genetic correlation. In other words, selection for faster gaining animals usually results in heavier birth weights. In the beef business, selection for growth resulted in bigger calves, which caused calving difficulty. Some traits have a negative correlation, e.g., staple length and fineness. If you select for heavier, longer fleeces, you will also get coarser fleeces. The more traits you select for, the slower your genetic progress will be.

Lastly, it doesn't matter how genetically superior an animal is if it lacks the nutrition and health to reach its genetic potential.

Making Progress in Youth Shows By Evaluating Carcasses

The State Fair of Virginia holds a Lamb Carcass Contest in conjunction with its youth market lamb show. Since 1999, over 1,200 lambs have been evaluated for carcass merit and live performance.

Each year the carcasses are placed into five categories (Gold, Purple, Blue, Red, and Pink) to award contest premiums. The carcasses are ranked using a combination of carcass merit and live performance.

Carcass Merit Standards:

- Minimum fat thickness of 0.1 in.
- Maximum fat thickness of 0.35 in. (YG 3.9)
- Minimum REA for carcass weight using the formula : $1.4 + (0.02 \times \text{hot carcass weight})$.
- Minimum quality grade of Choice minus
- Minimum carcass weight of 45.0 lbs.

Carcasses meeting the above standards are ranked using percentage, boneless, closely trimmed retail cuts (% BCTRC), and live average daily gain (ADG). The formula to estimate % BCTRC uses carcass weight, fat thickness, body wall thickness, and rib eye area. It represents the predicted proportion of the carcass that is saleable retail product. Rate of gain is calculated for each lamb from the time of nomination in late July to state fair time (approximately 70 days). Carcass premium categories were established as follows:

Gold	>50% BCTRC & > 0.5 ADG
Purple	>50% BCTRC & ADG < 0.5 or >49% BCTRC & ADG > average
Blue	>49% BCTRC & ADG > average or >47.5% BCTRC & ADG > average
Red	>47.5% BCTRC & ADG < average or %BCTRC < 47.5
Pink	Carcass failing to meet one or more of the standards

The ADG standard is the average performance of all market lambs exhibited in the live show within the year. Over the six years the program has been conducted, there has been a steady increase in weight (both live weight and carcass weight) and a corresponding increase in REA. While a portion of the increase in REA is directly related to weight, the lambs have also improved in overall muscling, as indicated by a higher percentage of lambs meeting the minimum REA standard for the carcass weight. Despite increases in weight over time, fat thickness and overall cutability (% BCTRC) has remained relatively constant in recent years.

The percent of carcasses in the Gold, Purple, and Blue premium categories has increased over time, suggesting that the exhibitors are more effectively selecting, feeding, and managing their lambs to reach a desirable target end point. This is confirmed by the general trend for a lower percentage of Red and Pink premium lambs.

Source: Virginia Livestock Update, Nov. 2004.

“New” Lamb Carcass and Performance Contest at 2005 Festival

The Lamb Carcass Contest at the 2005 Maryland Sheep & Wool Festival will be conducted in a similar manner as the youth market lamb show at the Virginia State Fair, with two differences: the lambs will not be placed live and the lambs will not be killed. Ultrasound data will be used to determine carcass data. Blue, red, and white premiums will be awarded to the lambs based on their carcass score and rate-of-gain.

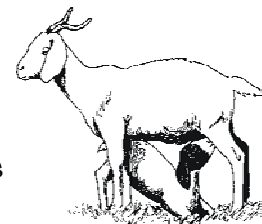
The “new” Lamb Carcass and Performance Contest will be conducted on Saturday, May 7 at 3 p.m. at the Festival. The registration deadline for the contest is April 15. The registration fee is \$10 per lamb. Exhibitors may enter two lambs. Lambs may be ewe, wether, or ram lambs, of any breed or breed cross. The minimum weight is 80 lbs. There is no maximum weight limit. Lambs must be slick sheared within 5 days of the Festival.

For additional information, contact Susan Schoenian at (301) 432-2767 ext. 343 or sschoen@umd.edu.

Focus on Research

Source of Colostrum Matters

Researchers in Spain compared the effectiveness of refrigerated and frozen goat colostrum and commercial sheep colostrum in kids. Forty-five (45) kids were split into three groups according to the type of colostrum fed. The refrigerated and frozen colostrum were administered twice daily for 2 days, each kid receiving 5% of its body weight. The commercial colostrum was administered according to the recommendations of the manufacturer. Blood samples were obtained from the kids every 12 hours from birth to 3 days post-partum, and two additional samples were taken at 15 and 30 days of life. The IgH¹ concentration was measured. At birth, the kids were agammaglobulinemic.



The peak IgH concentration was at 24 hours with frozen colostrum fed kids, 36 hours for kids fed refrigerated colostrum, while those fed commercial sheep colostrum peaked at 30 days. The researchers concluded that kids fed only commercial colostrum did not acquire the necessary immunity to protect them during the first month of life.

¹Immunoglobulin

Reference: Small Ruminant Research, Sept. 2004.

Genetic Selection Reduces Fecal Egg Counts in Lambs

Australian researchers compared four strategies for reducing nematode fecal egg counts (FEC) in young grazing Merino sheep: 1) an experimental vaccine; 2) protein supplementation; 3) strategic anthelmintic drenching, and 4) genetic selection for resistance.

Averaged over a 224-day period, FEC's were reduced 69% by genetic selection, 35% by protein supplementation, 28% by drenching, and were unaffected by the experimental vaccine. Live weight gain was reduced by vac-

cination and increased by supplementation. Selected animals grew 9% less clean fiber and had lower fiber diameters. Supplemented animals grew more clean fiber with a broader fiber diameter. FEC's in untreated selected sheep were lower than strategically drenched unselected sheep. Monitor sheep, run in the plots after termination of the experiment had significantly lower FEC's when run in plots grazed by supplemented and selected sheep (on average 35% and 46% lower, respectively, compared to plots previously grazed by unsupplemented and random sheep). No important interactions between the various treatments was detected.

The results indicate that the largest and most persistent effect on FEC in the host and worm contamination on the pasture was achieved by genetic selection.

Reference: *Livestock Production Science*, May 2003.

Cohabitation Increases Estrus Activity in Ewes

Several years ago, researchers at Virginia Tech studied the effect of cohabitation with white-faced ewes on the estrus activity of Hampshire and Suffolk ewes exposed to rams in June. Two groups of 24 Hampshire and 26 Suffolk purebred ewes that lambled in January, February, and March and had been isolated from rams since the previous fall breeding season, were utilized for the study. From June 1 to July 2, treated (T) ewes were exposed to vasectomized rams and to 65 white-faced (WF) ewes. Control (C) group ewes were exposed to vasectomized rams only.

Cohabitation with white-faced ewes increased ovulation percentages from 46% (42% in Hampshires, 50% in Suffolks) in C ewes to 76% (79% in Hampshires, 72% in Suffolks) in T ewes. Mating percentage increased from 14% in C to 30% in T ewes. Rams with T + WF ewes spent more time checking ewes for estrus than did rams with C ewes. Researchers concluded that cohabitation with WF ewes increased ovulation and mating percentages.

Reference: *Journal of Animal Science*, 1990.

MUMS ACT - What it Means to Sheep and Goat Producers

The MUMS Act recently passed will create an Office of Minor Use and Minor Animal Species Drug Development within the Food and Drug Administration (FDA). Its mission will be to issue grants, determine eligibility for listing on the drug index, and serve as a liaison among government agencies to improve opportunity for drug approvals. Furthermore, the FDA is authorized to promulgate regulations allowing drug applications for minor species and minor uses to receive conditional approval when a drug is demonstrated to be safe and have a reasonable expectation of efficacy. This conditional approval, evaluated annually, would be limited to five years, until final approval is achieved.

Similar to the program created in 1983 by the Human Orphan Drug Act, which increased the availability for rare human diseases, the new MUMS law offers pharmaceutical companies incentives to develop drugs for uncommon diseases in major animal species and diseases in minor species. Minor species encompasses thousands of animal species, including fish, sheep, and goats. Minor uses are drug treatments for animal diseases (in any animals) that occur infrequently or limited geographic areas.

Source: American Veterinary Medical Association

Computer Spreadsheets Available

The following Excel spreadsheets can be downloaded from the Maryland Small Ruminant Page: www.sheepandgoat.com.

1. Sheep and Meat Goat Ration Evaluator
2. Comparing Nutrient Costs
3. Sample Meat Goat Enterprise Budget
4. Sample Sheep Enterprise Budget
5. Comparing Marketing Alternatives

The *Ration Evaluator* enables the user to evaluate a ration to determine if it meets the requirements of the animals that are being fed. *Comparing Nutrient Costs* allows the user to compare the per lb. cost of protein and energy as supplied by different feedstuffs. The *Meat Goat and Sheep Budgets* are enterprise

budgets that can be used to determine the expected profitability of a sheep and/or goat enterprise based on the user's resources, management, feeding, and marketing practices. *Comparing Marketing Alternatives* can be used to compare the net price obtained from marketing lambs/kids: 1) off the farm; 2) through a local auction market; 3) through a regional auction (such as New Holland); and 4) to a middleman, such as an order buyer or meat processor. Persons who do not have Internet access can request the spreadsheets from Susan. The spreadsheets work with Excel, Quattro Pro, and Star Office.

Confused Sheep Wrecks Car

According to the Churchill Insurance Co., one of the more bizarre insurance claims made to them last year involved a sheep. A confused sheep saw its reflection in a car door and, in a fit of outrage, attacked the vehicle causing more than \$1,800 in damages. The incident happened while a 58-year-old driver was on holiday in Scotland.

Featured Web Sites

Southern Consortium for Small Ruminant Parasite Control

The Southern Consortium for Small Ruminant Parasite Control was formed in response to the critical state of the small ruminant industry associated with the emergence of anthelmintic-resistant worms. SCSRPC is a group of scientists, veterinarians, and Extension agents devoted to (1) developing novel methods for sustainable control of gastrointestinal nematodes in small ruminants; and (2) educating the stakeholders in the small ruminant industry on the most up-to-date methods and recommendations for control of gastrointestinal nematodes. The SCSRPC web site contains publications, presentations, and links related to small ruminant internal parasite control. It also contains resource materials for the FAMACHA© system being taught in Maryland and other states.

<http://www.scsrpc.org>

Maryland Sheep & Goat Directory

As of 12/08/04, there were 196 entries in the MARYLAND SHEEP & GOAT DIRECTORY, initiated last year to help producers market their breeding stock, market animals, and other sheep and goat products. The directory is open to all breeds of sheep and goats and to producers in any state or province. Entries can be made online to the directory. A form can also be downloaded from the web site. For persons without access to the Internet, a form can be requested from the Western Maryland Research & Education Center. Printed forms can be mailed or faxed. Deletions, corrections, and additions to directory listings can be requested by e-mailing Susan Schoenian or Susan Morren at sschoen@umd.edu or smorren@umd.edu.

<http://www.smallfarmsuccess.info/sheepandgoat.cfm>

Editor's note: Many producers have reported making sales as a result of their listing in the MARYLAND SHEEP & GOAT DIRECTORY.

Web-based Ration Balancing for Goats

A web-based goat nutrient requirement calculation system has been developed by Langston University. There are calculators for requirements of metabolizable energy for suckling, growing, mature, gestating, and lactating goats, and Angora goats, and of metabolizable protein for growing, mature, gestating, and lactating goats, and Angora goats. Metabolizable energy requirements can be adjusted for factors such as grazing activity energy cost, acclimatization, and previous nutritional plane. The web site includes a tool to determine amounts and composition of supplemental concentrate appropriate for particular forages. Also, there is a spread sheet-like application for total mixed rations.

<http://www.luresext.edu/goats/research/nutreqgoats.html>

Calendar of Events

January 7-8

VA-NC Shepherd's Symposium and Commercial Ewe Lamb Sale, Virginia Tech, Blacksburg, VA
Info: Scott Greiner at (540) 231-9163 or sgreiner@vt.edu

January 14-15

Future Harvest-CASA Conference
Sheraton Four Points Hotel, Hagerstown, MD
Info: (410) 604-2689 or fhcasa@friend.ly.net

January 26-29

Joint Convention of American Sheep Industry Association and National Lamb Feeders
John Asquaga Nugget, Reno, Nevada
Info: ASI at (303) 771-3500 or info@sheepusa.org

February 3-5

PASA's 13th Annual Farming for the Future Conference, State College, Pennsylvania
Info: pasafarming.org/conferences/

March 22-24

Appalachian Grazing Conference
Morgantown, West Virginia
Info: (304) 293-6131 ext. 4231

May 7-8

Maryland Sheep & Wool Festival
Howard County Fairgrounds, West Friendship, MD. Info: (410) 531-3647 or sheepandwool.org.



The *Maryland Sheep & Goat Producer* is published bi-monthly by the University of Maryland Cooperative Extension. It is written and edited by Susan Schoenian, Area Agent for Sheep and Goats at the Western Maryland Research & Education Center. Contributors include Dr. Niki Whitley from the University of Maryland Eastern Shore, tel. (410) 651-6194, e-mail: nwhitley@mail.umes.edu; and Willie Lantz, Garrett County Extension Agent, tel. (301) 334-6960, e-mail: wlantz@umd.edu. To receive the newsletter, contact Susan at the Western Maryland Research & Education Center, 18330 Keedysville Road, Keedysville, MD 21756, tel. (301) 432-2767 ext. 343, fax (301) 432-4089; e-mail: sschoen@umd.edu. The cost of receiving the newsletter by mail is \$10 per year, payable to the University of Maryland or free if accessed over the Internet. Internet users can be added to the list to receive an e-mail message when the latest newsletter has been posted to the web at <http://www.sheepandgoat.com/news/>. Comments and suggestions regarding the newsletter are always welcome.

Susan Schoenian
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W. MD Research & Educ. Center