



Wild & Woolly



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Volume 9

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Sheep and Wool Skillathon

There will be a Youth Sheep & Wool Skillathon on Sunday, May 3, 2009, 9 a.m. to 12 noon, at the Maryland Sheep & Wool Festival at the Howard County Fairgrounds in West Friendship, Maryland.

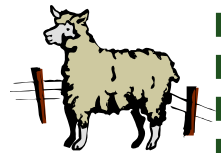
Any youth between the ages of 8 and 18 is eligible to compete as an individual and member of a team. Youth compete according to their 4-H ages: juniors, 8-10; intermediates, 11-13; and seniors, 14 to 18. Teams consist of 3 to 4 youth in the same age category from the same club, FFA chapter, or county.

A skillathon provides youth with the opportunity to blend knowledge and skills acquired from livestock projects, livestock judging, workshops, and exhibition into a single activity. A skillathon consists of a

series of stations where youth are tested on their knowledge of livestock. In the Sheep & Wool Skillathon, all stations will pertain to sheep and wool.

Pre-registration is requested by April 27. Teams must be pre-registered in order to compete. Names and ages of youth should be sent to Susan Schoenian at the Western Maryland Research & Education Center, 18330 Keedysville Road, Keedysville, MD 21756, tel. (301) 432-2767 x343, fax (301) 432-4089, or sschoen@umd.edu.

Information about the skillathon and study aids can be found at www.sheepandgoat.com/programs/skillathon/skillathon.html.



Performance of Meat Goats Grazing Tall Fescue

Tall fescue (*Festuca arundinacea*) is the most popular grass fed to livestock. It is a very hardy cool season grass that persists when and where other forages perish. However, most tall fescue pastures are infected with an endophyte that can affect animal performance and well-being. The effects of fescue toxicosis are well-documented in cattle and horses, but less so in goats and sheep.

Thus, a 3-year study was undertaken at North Carolina State University to evaluate the performance of nursing does and their suckling kids on three tall fescue cultivars: Kentucky 31 infected (K31), Jessup non-infected, and MaxQ™ novel endophyte fescue.

Kentucky 31 (K31) is the main tall fescue variety. It contains the endophyte. Jessup is

a non-infected strain of fescue, but stands of Jessup do not persist as well as K31. MaxQ™ contains a "novel" non-toxic endophyte. The persistence of MaxQ™ tall fescue is thought to be similar to K31. The seed is more expensive.

The experimental area consisted of 9 (approximately) half-acre grazing plots: 3 plots for each cultivar. The goats were 7/8 to full blood Boer.



How Good Are Your Goats ?



The Western Maryland Pasture Based Meat Goat Performance Test was initiated at the University of Maryland's Western Maryland Research & Education Center (WMREC) in 2006. The purpose of the test is to evaluate the performance of meat goats consuming an all-pasture diet, with natural exposure to internal parasites (worms).

This year's test will be conducted from June 6 until October 3. The nomination period is April 1-May 15. Male goats of any breed or breed cross, with or without registration papers (or eligibility), are eligible. A breeder may nominate up to 5 goats, preferably from the same sire. The goats must be born between December 15, 2008, and March 20, 2009 (inclusive), and weigh between 35 and 70 lbs. at the time of delivery to the test site on June 6. The fee for testing a goat is \$85. \$20 is due at the time of nomination.

Fun Fact:

One pound of wool can make ten miles of yarn



The 2009 Maryland-Delaware Beginning Sheep Shearing School will be held Friday and Saturday, March 27 and 28, 9:30 a.m. to 3:30 p.m. A school for advanced shearers (those who have attended previous schools and sheared at least 150 sheep) will be held Saturday, April 4, 9:30 a.m. to 3:30 p.m. Both schools will be held at Ridgely Thompson's farm at 1942 Uniontown Road, Westminster, MD 21157.

For the beginning school, the registration fee is \$80 per person and includes a copy of ASI's Sheep Shearing Notebook and instructional DVD. The registration deadline is March 17. Participation is limited to the first 25. The registration fee for advanced school is \$25 per person. The registration deadline is March 27. Participation is limited to the first 10.

While on test the goats will be evaluated for growth performance (average daily gain), parasite resistance (fecal egg counts), parasite resilience (FAMACHA© eye anemia scores and number of anthelmintic treatments), carcass traits, reproductive soundness, and structural correctness.

A field day and sale will be held at Saturday, October 3 at the nearby Washington County Agricultural Education Center. Bucks meeting minimum standards for growth, parasite resistance, and resilience will be eligible to sell at auction. Consigners to the test may also nominate does to the sale.

A nomination form and other pertinent documents may be downloaded from the test's web site at <http://mdgoatstest.blogspot.com>. For information about the test and/or to request a nomination packet, contact Susan Schoenian at (301) 432-2767 ext. 343 or sschoen@umd.edu.

2009 MD-DE Shearing Schools

The schools are sponsored by University of Maryland and Delaware Cooperative Extension, the Maryland Sheep Breeders Association, and the Delaware Sheep and Wool Producers Association. The New Zealand method of shearing will be taught. Instructors are David Greene, Dr. Richard Barczewski, and Aaron Geiman. Blade shearing will not be taught. For more information, contact David Greene at (410) 329-6241 or by email at greelamb@gmail.com.

Flyer for beginning shearing school: <http://www.sheepandgoat.com/programs/SSbeginning09.pdf>

Flyer for advanced school: <http://www.sheepandgoat.com/programs/SSadvanced09.pdf>

Implement Preventive Steps to Lessen Spontaneous Abortions

The challenge: Toxoplasmosis is the No. 1 cause of spontaneous abortions, and there are no vaccines to help prevent Toxoplasmosis. A helpful solution: Implement preventive measures to help prevent and control this abortion challenge.

“Toxoplasmosis (caused by the protozoan parasite *Toxoplasma gondii*) can be prevented since it is spread by kitten poop,” stated Dr. Marie Bulgin, Caine Veterinary Teaching Center, University of Idaho.

Since one of the favorite bathroom facilities for half-grown barn kittens is the grain bin or feed trough, it is not difficult to imagine how the bacteria are passed to ewes/does.”

Research shows that at least one-third of all cats in the United States carry Toxoplasmosis oocysts, and about 1 percent of cats in the population are found to be shedding oocysts at any given time. Cats, especially kittens under six months of age, pass the oocysts in their feces when they eat infected rodents, raw meat, or placentas of Toxoplasmosis-infected animals.

Although adult cats tend to be immune to Toxoplasmosis and free of the bacteria, kittens under the age of six months pass the oocysts in their feces when they eat infected rodents, raw meat or placentas of toxoplasmosis-infected animals. That said, adult cats can come into play with the spread of Toxoplasmosis oocysts when they bring back infected birds, rabbits and small rodents to their kittens.

Oocyst Shedding

Although oocysts are shed for only about one or two weeks in the life of the cat, research shows that the enormous numbers shed assure widespread contamination of the environment. Under experimental conditions, researchers have found that infected cats can shed oocysts after reinoculation with tissue cysts. It is not known whether repeated shedding of oocysts occurs in nature, but researchers point out that this would greatly facilitate oocyst spread.

Sporulated oocysts survive for long periods under most ordinary environmental conditions-- surviving in moist soil, for example, for months and even years. Oocysts in soil do not always remain in the soil as invertebrates such as flies, cockroaches, dung beetles and earthworms

can mechanically spread these oocysts and even carry them onto food. Congenital infection can occur in cats, and congenitally infected kittens can excrete oocysts, providing another source of oocysts for contamination.

Infection rates in cats reflect the rate of infection in local avian and rodent populations because cats are thought to become infected by eating these animals. The more oocysts there are in the environment, the more likely it is that prey animals will become infected, and this results in increased infection rates in cats. The parasite enters the body through the small intestine and nearby lymph nodes, then spreads throughout the sheep or goat's system via the bloodstream. *Toxoplasma gondii* can be encysted for years in the sheep/goat's brain, muscles, liver or other vital organs. Some resistance to future infection (immunity) is usually acquired by previously infected ewes/does.

Toxoplasmosis-caused abortions usually—but not always—occur during the first half of gestation. Once the pregnant ewe/doe has been infected, it takes about two weeks for the parasite to infiltrate the placenta and kill the fetuses. Blood tests can be performed on ewes/does immediately after they have aborted. But, a ewe or doe can test positive for Toxoplasmosis for years after becoming infected.

Ed Lehigh of Colorado Serum Company notes that it is easier to prove that the cause was not this protozoan by obtaining a negative serological (blood) reading. “It is reasonable to conclude that any doe testing positive for Toxoplasmosis as long as six months after she has aborted is still highly infected with the disease and therefore is a threat to the other animals in the herd,” he states. Although aborted placentas can be tested, getting accurate results can be difficult.

Lehigh points out that the longer a ewe or doe was infected before she aborted, the easier it is to determine if Toxoplasmosis was the cause. He also maintains that, because most producers have no idea when the actual



(Continued on page 4)

*Implement Preventive Steps To Lessen Spontaneous Abortions
(Continued from page 3)*

infection took place, placental testing is less helpful than blood testing. A fetal blood test is available and works best during the last half of the pregnancy. If the fetus is infected when quite young, antibodies may not appear in the blood, but it could still be harboring Toxoplasmosis.

Prevention

To help prevent Toxoplasmosis, Dr. Bulgin suggests keeping kittens out of the barn and feeders during the late pregnancy period of ewes. She also recommends feeding Rumensin of monensin during the last six weeks of pregnancy as this will prevent the toxo cysts from hatching and infecting the tissues, including the fetus and placenta of the ewe.

Other steps that can be taken to help reduce the spread of Toxoplasmosis include keeping feed, grain and hay away from cat feces; neutering/spaying all adult cats; and immediately getting rid of cat feces since the disease-causing organism "comes alive" after a 24-hour period.

Another preventive measure is carefully placing containers of rat bait to keep the rodent populations as low as possible. Relying on cats to keep the rodent population down is a Catch-22 as such action could compound the potential of introducing Toxoplasmosis to your sheep, goats and cats.

Source: Special issue of the Sheep & Goat Health Report, a National Institute for Animal Agriculture Publication

Just For Youth

State Skillathon Team Places 7th

Congratulations to the Maryland 4-H Livestock Skillathon Team which placed 7th in the National 4-H Livestock Skillathon Contest held at the North American Livestock Exposition in Louisville, Kentucky. Team members included Brittany Bowman (Howard County), Logan Charles (Charles County), Molly Hancock (Charles County), and Rachel Manning (Calvert County). The team was coached by Sheryl Bennett, Howard County 4-H Extension Educator.

Rachel Manning placed 13th in the National Contest. Molly Hancock was 15th. The national skillathon included a fleece judging class and questions about wool. Both young ladies scored perfect 50's in the fleece judging class.

Team members also competed in the 2008 Sheep & Wool Skillathon at the Maryland Sheep & Wool Festival. Rachel Manning placed first and Brittany Bowman placed 8th overall.



Maryland 4-H Livestock Roundup

A 4-H Livestock Roundup will be held July 6-8 at the Frederick County 4-H Camp Center. The event is open to all Maryland senior and intermediate 4-H members.

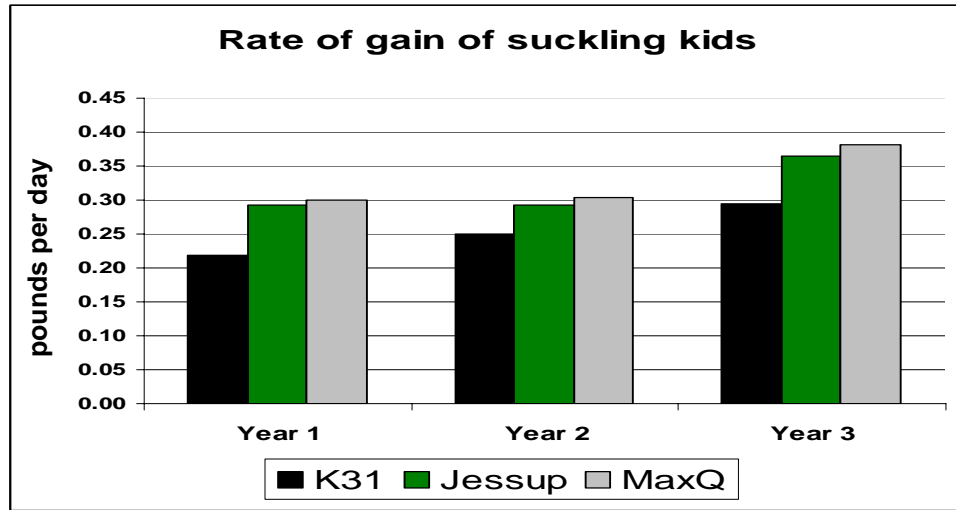
Activities and events will include guest speakers, barnyard Olympics, seminars, a junior stockman's event, field trips, a livestock photo contest, and a dance. There will be four topic tracts: beef, sheep, swine, and goats.

Registration information is available from local 4-H offices. Participation will be limited to the first 80.

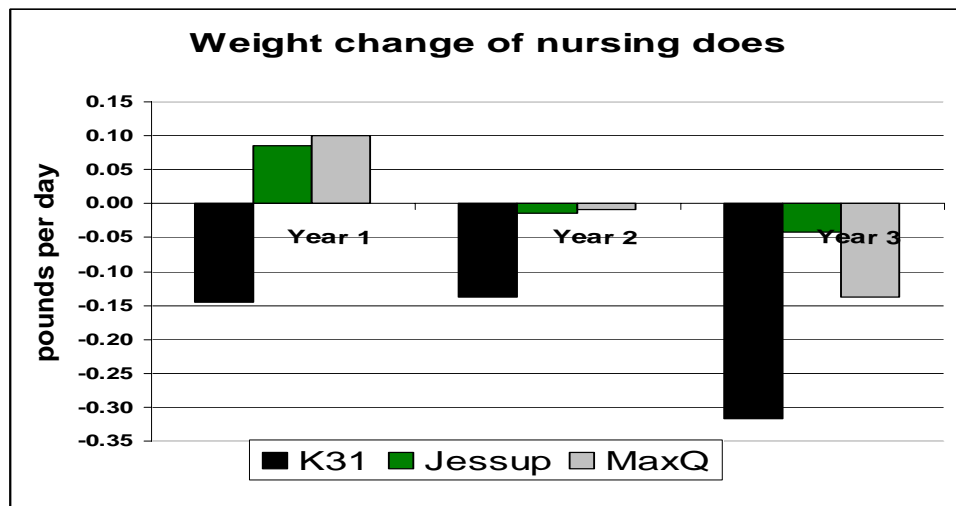
Performance Of Meat Goats Grazing Tall Fescue, (continued from page 1)

Experiment Details			
	Year 1	Year 2	Year 3
Grazing dates	4/16-5/26	3/29-5/25	4/4-5/25
Crude protein percentage	21	20	21
NDF (fiber) percentage	56	56	56
No. of kids	70	63	72
Avg. age of kids, days	56	18	24
Avg. wt. of kids, lbs.	27.5	16.3	18.7
No. of does	45	36	36

Results indicate that suckling kids performed well on fescue pastures, though kids grazing K31 gained less weight than those grazing the other cultivars. Suckling kids gained more weight on MaxQ™ and Jessup than K31 in years 1 and 3. Gains were similar in year 2.



Nursing does gained more weight on MaxQ™ and Jessup than on K31 in year 1 and lost less weight on MaxQ™ and Jessup than K31 in years 2 and 3. Does grazing K31 were unable to maintain their body weight and had a dramatic decrease in serum prolactin levels which could have important reproductive implications (decreased milk production and reproductive performance).



Maryland Rural Enterprise Development Center

MREDC:
mredc.umd.edu

"the place for the agricultural and natural resource community to go to for valuable information"

The Maryland Rural Enterprise Development Center (MREDC) is now the place for the agricultural and natural resources community to go for valuable information thanks to the creation of a new website: mredc.umd.edu. The website was formally introduced at the Maryland Ag Commission meeting on February 11, 2009.

MREDC was established by the University of Maryland College of Agriculture and Natural Resources (AGNR) to serve these communities through programming and support. The need for such an effort was identified through a series of statewide listening sessions and documented in a Maryland Agriculture Commission report to the Governor. Specifically, MREDC's mission is to:

- Serve as a portal for educational and outreach resources in marketing and business development planning;
- Assist entrepreneurs in agriculture and natural resources enterprises in developing new marketing plans and opportunities;
- Serve as a launching pad to a wide variety of web-based university, community, and professional resources for developing profitable, sustainable businesses
- Provide new and next-generation farmers with access to training, mentoring and business development resources; and Provide continuing education and networking opportunities for agricultural support agency personnel, Extension staff and agricultural economic development specialists statewide.

Homemade Cures For Goats

<http://www.motesclearcreekfarms.com/asp/articles/Homemade-Cures-Recipes.asp>

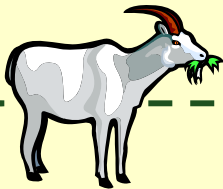
Many sheep and goat owners are seeking more natural and less expensive methods to treat their livestock. Clear Creek Farms (in Tennessee) has published a list of Homemade Cures (Recipes) for goats on their web site.

The web site gives a homemade recipe for a "Nutri-drench" type supplement: 1 part corn oil (not canola or vegetable oil), 1 part molasses, and 1 part corn syrup.

There is no guarantee that homemade "cures" will work or be as effective as traditional drug-based therapies or commercial products. The advice of a large animal veterinarian or experienced producer should be sought when livestock are not responding to treatment(s).

Fun Fact :

Goats are selective eaters



Frederick County Sheep Breeders Association



<http://www.fredericksheepbreeders.com>

The Frederick County Sheep Breeders Association is dedicated to promoting sheep related activities in Maryland; supporting sheep and the area's farm flocks; educating its members and the public; supporting youth shepherds' 4-H activities; and helping to improve the sheep industry.

Their recently expanded web site provides a wealth of information pertaining to sheep and sheep-raising, including links to news, events (a calendar), members, photos, officers and committees, and membership.

Find These Resources On The Web

RationMixer

An Excel spreadsheet for batch mixing rations for sheep, goats, and other livestock.
<http://www.sheepandgoat.com/spreadsheets/rationmixer.xls>

A Producer's Guide to Meat and Poultry Processing Regulations in Maryland

<http://www.agmarketing.umd.edu/Pages/EB%20372%20Meat%20Regulations.pdf>

Direct Marketing Farm-Raised Meats in Maryland

<http://www.agmarketing.umd.edu/Pages/EB%20372%20Meat%20Regulations.pdf>

Food Processing Resource Directory

<http://www.agmarketing.umd.edu/Pages/Food%20Processing%20Resource%20Directory-2009.pdf>

Sheep & Goat Health Report

<http://www.animalagriculture.org/publications/sheepintropage.asp>

Maryland Niche Meat Marketing Initiative



Niche meats are growing in popularity as consumers hunger for exotic flavors, such as grass-fed beef, goat, sheep and other livestock; while others seek to support small-scale farming and conservation; and health-conscious consumers pursue more nutritious meat produced and processed using non-conventional methods. But moving into niche meat production can be complicated.

The University of Maryland Extension Ag Marketing Program [www.agmarketing.umd.edu] is organizing a Maryland niche meats and poultry marketing initiative. The goals of this initiative include:

- Developing a searchable, geographic product database to facilitate product searches by consumers, restaurants, and institutional buyers- this effort will supplement, not replace the "Maryland's Best" directory and other on-line listings.
- Providing information and resources for product development, regulatory issues, and collaborative marketing efforts. Offering training and economic analysis to determine "best fit" business structures and the profit potential of niche meat markets in the Mid-Atlantic region.

If you're a Maryland farmer and interested in carving out a marketing niche for your specialty meat and poultry products, fill out and return the Maryland Niche Meat & Poultry Producers' Marketing Initiative Interest & Directory Form. The form can be downloaded from the web at www.sheepandgoat.com/programs/MarylandNicheMeat.pdf.

West Virginia Small Ruminant Test

Nominations for the 2009 West Virginia Small Ruminant (sheep and goat) Performance Test are due April 1. Rams and bucks must be delivered to the WVU Reymann Memorial Farm (near Wardensville) between 8:30 a.m. and 2 p.m. on Monday, April 20. The test will conclude on July 1, and there will be a sale on July 25.

To be eligible, rams and bucks must be born between January 1, 2009, and February 20, 2009, inclusive. A maximum of 60 rams and 30 bucks will be accepted.

The West Virginia test is the only small ruminant performance test that utilizes residual feed intake data as a measure of feed efficiency. Residual feed intake is actual minus (-) expected feed intake (based on size and growth potential).

For more information, contact Brad Smith at Brad.Smith@mail.wvu.edu or 304/257-4688 or Sara Hare at Sara.Hare@mail.wvu.edu or 304/874-3561.

Download 2009 guidelines from <http://www.caf.wvu.edu/avs/sheep/PDF/2009RamTest/2009Guidelines.pdf>.

Focus On Research



Garlic Fails To Control Worms In Goats And Sheep

There is some speculation that garlic may stimulate the immune system of an animal and that long-term exposure to garlic may lead to a lower susceptibility to gastro-intestinal nematodes (worms). However, garlic failed to control internal parasites in goats and sheep in separate studies in Arkansas and Delaware.

In Arkansas, 14 Spanish and Spanish x Boer doe kids were administered water (control group) or a commercially-available, certified-organic garlic product, garlic juice. The does were maintained in outside pens and fed bermudagrass hay and a corn/soybean supplement. Fecal and blood samples were collected 0, 7, and 14 days after treatment. There were no significant differences in fecal egg counts (FEC) or packed cell volume (PCV) between the treatment groups.

In another experiment, 29 Spanish doe kids were administered water, garlic juice, or fed garlic bulbs. These goats were maintained on bermudagrass pasture. Fecal and blood samples were collected 0, 7, and 14 days after treatment. There were no significant differences in fecal egg counts (FEC) or packed cell volume (PCV) between the treatment groups.

Source: *Veterinary Parasitology*. February 2009.

Two experiments were conducted at Delaware State University to evaluate the efficacy of garlic in reducing fecal egg counts in sheep and goats. In the first experiment, 18 Katahdin ewe lambs were placed in individual pens and administered either 3 ml of garlic juice or water for 21 days. Weekly fecal samples were collected. There was no effect of treatment with garlic juice.



In the second experiment, 23 crossbred Boer kids were placed into treatment groups based on their FAMACHA© scores. 12 goats received a single treatment of 0.16 ounces of garlic juice; 11 did not. Fecal egg counts were higher in the garlic-treated goats than the untreated groups.

Delaware State University will continue to conduct studies to evaluate the efficacy of potential natural plant dewormers, including garlic.

Sources: Abstracts, American Society of Animal Science Southern Section. February 2009.

Probiotics Fail To Improve Performance

A probiotic is a nutritional supplement that contains live, active bacteria that are purported to improve immune and gastrointestinal function

At the University of Maryland Eastern Shore (UMES), 63 crossbred Boer goats were used in five separate experiments to determine the effects of a commercial probiotic supplement on growth performance, diet digestibility, carcass traits, and fecal bacterial populations.

The goats were fed a commercial pelleted concentrate diet with or without supplemental commercial probiotic. Though goats fed the probiotics grew better in two of the experiments, there was no difference in performance in the other three experiments.

Probiotic-supplemented diets had no effect on diet digestibility, carcass traits, or fecal microbial populations. Probiotics failed to elicit any consistent benefits when included in the diets of healthy, growing meat goats.

Source: *Journal of Animal Science*, February 2009.

Testing For Anthelmintic (Dewormer) Resistance On Delmarva Farms

Delaware State University assessed anthelmintic resistance on nine goat and sheep farms in the Delmarva region. A fecal egg count reduction test was conducted on each farm to determine the effectiveness of individual anthelmintics: Albendazole, ALB; Ivermectin, IVM; Moxidectin, MOX; and Levamisole, LEV. Prior anthelmintic use was used to determine which anthelmintic(s) to test on a farm. Resistance is defined as a failure of the anthelmintic treatment to reduce fecal egg count by 90 percent or more. The data are presented in the table below.

Farm	State	Species	ALB Valbazen®	IVM Ivomec®	MOX Cydectin®	LEV Prohibit®
A	Delaware	Goat	96.3		100	
B	Delaware	Goat		-31*		99
C	Virginia	Sheep	70*		1.5*	99
D	Virginia	Sheep	79*	33*	74*	100
E	Maryland	Goat			81*	
F	Maryland	Goat	69*			84
G	Maryland	Sheep	98			
H	Maryland	Sheep			100	
I	Maryland	Sheep		86*	33*	93*
* Deemed resistant						

The data show that anthelmintic resistance is prevalent on Delmarva goat and sheep farms and that resistance varies by farm.

Source: Abstracts, American Society of Animal Science Southern Section. February 2009.

Free Online Business Planning Software

According to anecdotal evidence, those who prepare a business plan are 10 to 20 times more profitable than those who don't.

A few months ago, the Center for Farm Financial Management (CFFM) at the University of Minnesota released free online software for creating business plans at www.agplan.umn.edu.

AgPlan™ helps rural business owners develop business plans. It includes templates for commodity-based agriculture, value-added agriculture, small rural businesses, and commercial fishing. The software is suitable for both large and small operators.

Business planning is an important part of successful farming, especially during these difficult economic times.



USDA Establishes Naturally-Raised Marketing Claim

In January, the U.S. Department of Agriculture issued a voluntary standard for naturally-raised livestock and meat marketing claims. USDA previously established voluntary standards for organic and grass-fed livestock and meats.

The naturally-raised marketing claim standard states that livestock used for the production of meat and meat products have been raised entirely without growth promotants, antibiotics (except for ionophores used as coccidiostats for parasite control), and have never been fed animal by-products.

In establishing the naturally-raised marketing claim, USDA analyzed over 44,000 comments received from producers, processors, consumers, and other interested parties.

The naturally-raised marketing claim standard was published in the January 21, 2009, Federal Register.

Calendar of Events

March 27-28

Maryland-Delaware Beginning Shearing School
Ridgely Thompson Farm, Westminster, MD.
Info: David Greene at greelamb@gmail.com or (410) 329-6241.

April 4

Maryland-Delaware Advanced Shearing School
Ridgely Thompson Farm, Westminster, MD.
Info: David Greene at greelamb@gmail.com or (410) 329-6241.

May 2-3

Maryland Sheep & Wool Festival
Howard County Fairgrounds, West Friendship, MD
Info: www.sheepandwool.org

May 29-30

West Virginia Ram, Ewe, Club Lamb & Goat Show and Sale
Tri-County Fairgrounds, Petersburg, WV
Info: Lucy Kimble at 301/257-1442 or Dennis Miller at 540/896-3053

June 6

Start of Western Maryland Pasture-Based Meat Goat Performance Test
Western Maryland Research & Education Center, Keedysville, MD
Info: Susan Schoenian at (301) 432-2767 x343 or sschoen@umd.edu

June 17

Maryland Wool Pool
Maryland State Fairgrounds, Timonium, MD
Info: Dr. Rich Barczewski at (302) 857-6410 (day time) or (302) 659-1211 (evenings, before 9 p.m.) or rbarczewski@desu.edu.

June 6

Start of Western Maryland Pasture-Based Meat Goat Performance Test
Western Maryland Research & Education Center, Keedysville, MD
Info: Susan Schoenian at (301) 432-2767 x343 or sschoen@umd.edu

October 3

Western Maryland Goat Field Day and Sale
Washington County Agricultural Education Center, Boonsboro, MD
Info: Susan Schoenian at (301) 432-2767 x343 or sschoen@umd.edu



Wild & Woolly, is published quarterly by the University of Maryland Cooperative Extension. It is written and edited by Susan Schoenian, Sheep and Goat Specialist, at the Western Maryland Research & Education Center (WMREC), 18330 Keedysville Road, Keedysville, MD, tel. (301) 432-2767 x343 or 315, fax (301) 432-4089; e-mail: sschoen@umd.edu or Pamela Thomas, administrative assistant, pthomas@umd.edu. The cost of receiving the newsletter by mail is \$10 per year, payable to the University of Maryland. The newsletter can be accessed for free on the Internet at <http://www.sheepandgoat.com/news/index.html>. Internet users can ask to be added to a list to receive an e-mail message when a new newsletter has been posted to the web.

Comments and suggestions regarding the newsletter are always welcome. References to commercial products or trade names are made with the understanding that no discrimination is intended and no endorsement by University of Maryland-Cooperative Extension is implied.

More information on sheep, goats and upcoming events can be accessed at:

<http://www.sheepandgoat.com/>
<http://www.sheep101.info/>
<http://mdsheepgoat.blogspot.com>
<http://www.sheepgoatmarketing.info>

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