

Our doors are still open but our belts have been tightened—again. We have lost our postal funding, which will affect those of you who receive this publication as a hard copy. We want to continue sending *The Kidding Pen* to as many people as possible as frugally as possible and we have a few options:

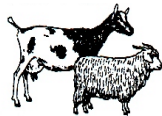
1. Go to a subscription basis for hard copies. \$3 a year per address would pay for 6 issues (postage and copying).
2. Go to an electronic-only basis (not the best idea; leaves out those of you who do not have e-mail).
3. Ask for general donations and hope we get enough funds to support continued mailings of hard copies (currently about \$450 a year for *The Kidding Pen*). We'll institute changes with the next issue.

You can help us stretch our budget by switching from hard copy to electronic subscription if you can. Please contact us to let us know if you can switch. If you can send a check to help cover mailing costs, please make the check payable to "WSU-Klickitat Co. Extension." Thanks!

The Kidding Pen is available at <http://extension.oregonstate.edu/wasco/smallfarms/Kidding%20Pen/kiddingpen.php> in English and Spanish. We welcome input from producers! Send your announcements, comments, suggestions, recipes and educational articles to:

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IN THIS ISSUE:

- 1 Save These Dates!
- 1 Free Webinar
- 1 Marketing Corner
- 2 The Lure of Going On-Line
- 2 Resources for Goat Producers and Processors
- 2 WSDA Reimburses Organic Certification Costs
- 2 Regulations Regarding Interstate Movement
- 2 Good Resource?
- 3 ARS and Partners Set Sights on Goat Scrapie
- 4 What is a Mini Dairy Goat?
- 4 Keeping Market Wethers Gaining in Hot Weather
- 5 Dietary Effects: Goat Growth & Carcass Traits
- 5 Garlic Fails to Control Worms
- 6 Implement Steps to Reduce Abortions
- 6 A Third Hand

SAVE THESE DATES!

July 12 Integrating Plants and Animals on Your Farm and Compost Management, Four Seasons Farm, Priest River, ID, 1 - 3 pm. Call 208-883-3462 or go to www.ruralroots.org.

July 18–25 American Dairy Goat Association National Show, Sacramento, CA. Greg Morris at redbird2@elpaso.net or 828-748-7830. www.adga.org/NationalShow/NationalShow.aspx.

July 29 Free Webinar: Sheep and Goats: What They Can Do for You. See article.

Oct. 10–17 American Dairy Goat Association Convention, Buffalo, NY.

<http://2009adgaconvention.web.officelive.com/default.aspx>

Sept. 12-15, 2010 National Goat Conference Tallahassee, FL. "Strengthening the Goat Industry." More info to follow.

FREE WEBINAR

On July 29 at 10 a.m. Pacific Time, you may participate in a free webinar (live online training) called "Sheep and Goats: What They Can Do for You." Specialists Linda Coffey and Margo Hale will discuss:

- Multiple benefits of sheep and goats
- Selecting breeding stock
- Evaluating animal health
- Marketing meat, milk, and wool products, including organic
- Your questions about sheep and goat production.

To register, go to

www.attra.ncat.org/webinars2009/sheepandgoat.



MARKETING CORNER

FREE: Miniature Bethlehem burros. The jenny is 8 years old and the joey is 6 or 7. Call 509-261-0980.

WANTED: Dairy goat milking supplies.

- 150 to 300 gal. self-contained bulk milk tank; reconditioned preferred but will consider purchase of one that is repairable.

- Stainless steel sink with three deep bays

- Stainless steel hand-washing sink

Contact Shawn or Sheila Anderson at 509-775-3881

or crowhopfarm@yahoo.com.



THE LURE OF GOING ON-LINE

by Susan Kerr, WSU Extension Educator - Klickitat Co.

www.agriseek.com/sell/b/Livestock/Goats. Place to advertise and sell goats online. Direct negotiations between buyer and seller.

For show people:

- www.utextension.utk.edu/4H/projects/AdditionalResources/Goat/Showmanship%20for%20Market%20Goats%20in%20ennessee.pdf
- www.thejudgingconnection.com/pdfs/What_Makes_a_Good_Goat_Showman.pdf
- www.admani.com/AllianceShowFeeds/Video%20Index.htm
- www.americangoatsociety.com/forms/ShowmanshipRev040207.pdf
- <http://uvalde.tamu.edu/staff/rick/Goat%20Gathering%20IV/Management%20&%20Show%20Tips/SHOWMANSHIP.pdf>

www.animalagriculture.org/publications/sheepintropage.asp
Sheep and goat health report by National Institute for Animal Agriculture.

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

WEB RESOURCES FOR GOAT PRODUCERS AND NICHE MEAT PROCESSORS

by Terry Meisenbach

eXtension has launched two Communities of Practice to the public: **Goats** and **Small Meat Processors**.

The goat industry Web site provides help for new producers as well as those with experience who need an answer to a specific question. The site includes answers to frequently asked questions (FAQs) about meat, dairy and fiber producing goats. If a question cannot be found in the FAQs, the "Ask an Expert" feature can be used for a quick response. The site also includes in-depth, peer-reviewed articles covering all aspects of goat production. Go to www.extension.org and choose Goats.

The Niche Meat Processor Assistance Network (NMPAN), with experts from over 25 universities has developed content to tackle a critical challenge for livestock farmers and ranchers who want to sell into niche markets: meat processing. The group has published over 100 online articles explaining issues critical to niche meat processing from core topics such as applying for USDA inspection and creating a food safety plan, to presenting new tools like an operating cost calculator for mobile processing units. Go to www.extension.org and look in the "small meat processors" resource area.

WSDA REIMBURSES ORGANIC CERT. COSTS

The Washington State Department of Agriculture (WSDA) is offering reimbursement for some costs of organic certification. Qualified producers, handlers and food processors are encouraged to apply for the funds. Reimbursements are limited to 75% of licensing costs up to a maximum of \$750. Funds are available for both the 2008 and 2009 certification year on a reimbursable basis. Applications for the cost-share program can be obtained by contacting the WSDA at (360) 902-1805 or downloading the application from www.agr.wa.gov/FoodAnimal/Organic.

USDA AMENDS REGULATIONS REGARDING INTERSTATE MOVEMENT OF SHEEP & GOATS

from www.aphis.usda.gov/newsroom/content/2009/03/sheep&goat.shtml

WASHINGTON, March 31, 2009--The USDA's Animal and Plant Health Inspection Service (APHIS) is amending its regulations regarding the interstate movement of animals to require APHIS approval of livestock facilities that handle sheep and goats in interstate commerce. This includes stockyards, livestock markets, buying stations, concentration points or other premises where sheep and goats are assembled for interstate commerce.

Under this rule, facility operators must meet certain standards and conditions related to the receipt, handling and release of sheep and goats at the facility. To receive APHIS approval, they must also comply with certain animal identification and recordkeeping requirements. These standards and conditions are based on existing APHIS regulations related to interstate movement of sheep and goats to prevent the spread of Scrapie. The rule became effective May 1, 2009.

GOOD RESOURCE?

Is anyone familiar with this resource? We've received conflicting info about its usefulness and accuracy. Some say it is very helpful and others complain it isn't relevant to U.S. goat production and contains glaring errors, such as incorrect recommendations about copper. We're just curious about your thoughts if you are familiar with this resource:

The Goat Handbook by Ulrich Jaudas and Dr. Seyedmehdi Mobini. Published by Barron's Educational Series, 2006. ISBN-10: 0764132687 or ISBN-13: 978-0764132681.



ARS AND PARTNERS SET SIGHTS ON GOAT SCRAPIE

by Jan Suszkiw

from www.ars.usda.gov/is/AR/archive/apr09/goats0409.htm

Scrapie is a fatal degenerative brain disease of goats and sheep. It causes tremors, lip-smacking, weight loss, a hopping gait and other signs. Since 2001, USDA's Animal and Plant Health Inspection Service (APHIS) has coordinated an accelerated National Scrapie Eradication Program to eliminate Scrapie from U.S. sheep and goats. But transmission, progression and genetic underpinnings of Scrapie in goats are poorly understood. Low occurrence rates, underreporting and details of tissue testing make eradication challenging.

A new, live-animal Scrapie test is being applied to goats and a goat genetics study may provide additional insights about this disease in goats.

Building on Early Successes

The new test is called the "rectal mucosal-associated lymphoid tissue (RMALT) test" and is based on the currently used third-eyelid test. Developed by the Agricultural Research Service (ARS) and Washington State University, the third-eyelid test has been used since 2002 as an official test to detect Scrapie in sheep. It involves snipping a tiny piece of lymphoid tissue from the animal's third eyelid, staining it with antibodies and examining it under a microscope. Lymphoid tissue is used because it collects malformed proteins ("prions") which are thought to cause Scrapie.

The rectal biopsy is used in deer, elk and sheep. It's quick to perform and painless to the animal, thanks to local anesthetic. "Rectal biopsy also allows for more repeat samples from an individual animal when needed," says ARS microbiologist Katherine O'Rourke, a member of the Scrapie research team.

In January 2008, APHIS approved use of the RMALT test as a Scrapie-detection tool after large-scale trials comparing its accuracy to third-eyelid biopsies and postmortem examinations of tissue from infected sheep. Additional work on the accuracy of the test in goats is underway.

Setting the Stage for Selective Breeding

A key facet of Scrapie prevention in sheep flocks involves use of selective breeding to increase the proportion of sheep with the version of the prion protein gene (dubbed R171) that confers resistance. Goat producers don't have that option yet; the R171 prion gene version has not been found in goats. But there are several different gene variants in goats, some of which might confer resistance to Scrapie. No one has confirmed genetic resistance in goats thus far, but some tantalizing leads are emerging.

"In sheep, the discovery of resistance genes was key to developing a broadly-accepted eradication

program. If Scrapie is found in a flock, only the genetically-susceptible sheep are removed, allowing producers to retain quality animals," says O'Rourke. "As we learn more about goat genetic resistance, we hope the same approach can work for them."

Towards that end, ARS-Pullman geneticist Stephen White is leading a team of scientists to characterize the prion protein gene of goats and identify important gene variants in individuals and breeds. The Pullman team has so far examined the prion protein gene sequences from 446 goats representing 10 breeds, 8 of which have never been characterized for their potential Scrapie response.

The team's analysis found four gene variants (R143, S146, H154, and K222) in the genes of Boer, Nubian, Saanen, Toggenburg and other goat breeds. These gene variants were rare or absent in animals that developed Scrapie in previous outbreaks, which suggests these gene variants might help the animals in some way. A fifth variant (M142) was found mainly in Alpine and Toggenburg goats and it is known to delay incubation of Scrapie from infection to clinical disease. More work is needed to demonstrate true resistance for any of these genetic variations.

Putting Together the Pieces

In related work, the Pullman scientists are monitoring six goats from a Michigan farm with a known history of Scrapie infection. In March, two of the infected goats, named "Nutmeg" and "Meeko," gave birth to three kids, providing the scientists with an unprecedented look into parent-to-offspring transmission of Scrapie and inheritance of genes affecting the animal's response to the disease.

Genetic testing revealed that Meeko's kid is genetically susceptible, which allows monitoring of Scrapie's onset and development during the animal's life. Nutmeg gave birth to twins—one genetically susceptible and the other with a variation that may eventually prove to confer resistance.

"We learned that unlike sheep, goats' placentas are not a very reliable indicator of the Scrapie status of the dam," says O'Rourke. "We'll do some more research to determine why this is and how it affects transmission in a herd."

Researchers are formulating a strategy aimed at helping the U.S. goat industry eliminate Scrapie. The current effort takes a multi-pronged approach that includes reporting clinical suspects; early detection through slaughter surveillance, flock management and selective breeding in sheep; Scrapie-free flock certification; and producer outreach and education.

"Prevention is always a more desirable route than removal of infected animals or exposed animals. So research on resistance genetics and transmission modes will be especially important contributions," says O'Rourke."

WHAT IS A MINI-DAIRY GOAT?

by Andrea Green

A miniature dairy goat is the product of a standard-sized purebred goat bred to a Nigerian Dwarf for the first generation of mini dairy goats. Only registered goats can be used to produce a mini goat. Each generation of correct miniature goats will be called an experimental until the third generation, whereupon individuals may be entered in the American herd book providing they meet breed standards.

Why Miniature Dairy Goats?

Some people with small acreage are looking for a smaller milk-producing animal for a family's milk supply. Purebred dairy goat breeders have been pushing for greater stature for the show ring, which has resulted in all the standard dairy goat breeds getting larger. Smaller goats are easier to handle than their larger relatives, so hoof trimming, clipping, showing and milking are easier. A mini dairy goat can often produce 2/3 the amount of milk as a standard dairy goat while consuming 1/2 as much feed—a real benefit in times of rising feed costs. Smaller goats are in demand for the pet market as well. Nigerian Dwarf influence may also expand the normal breeding season and increase milk butterfat, too.

What Breeds Will Be Registered?

- Mini-Alpines
- Mini-LaMancha, also known as MiniMancha
- Mini-Nubian, also called Dwarf Nubian
- Mini-Oberhasli
- Mini Saanen or Mini-Sable if colored
- Mini-Toggenburg



Pictured above are a standard Oberhasli in back, a Mini Oberhasli in the middle with a Nigerian Dwarf in front.

How Much Will a Mini Dairy Goat Produce?

Miniature dairy goats produce from 2 lbs. (2 pts.) to 10 lbs. (1¼ gal.) a day, with an average of 5 to 6 lbs. (3 qts.) of milk daily. Genetics, nutrition and management play important roles in milk production. Unlike many of the standard breeds, Nigerian Dwarfs breed year-round, which makes it more feasible to have a steady supply of milk all year. Indeed, many miniature dairy goats are year-round breeders.

How Tall Will the Miniature Dairy Breeds Be?

Measured at the withers, the preferred maximum height will be 1" shorter than the minimal height for the corresponding standard dairy goat. The minimum height will be 23" for does and 24" for bucks. The preferred height is a recommendation for which all

breeders should strive but will not be considered a disqualification in the show ring.

Maximum Heights

Breed	Does	Bucks
Mini-Alpines	27"	31"
Mini-LaMancha	27"	29"
Mini-Nubian	29"	31"
Mini-Oberhasli	27"	29"
Mini-Saanens/Sables	29"	31"
Mini-Toggenburg	25"	27"

For more information:

Miniature Dairy Goat Association
c/o Andrea Green
PO Box 7244
Kennewick, WA 99336-0616
(509) 591-4256 Cell: (509) 845-3646
ajud@verizon.net or mdga@verizon.net
<http://miniaturedairygoats.com>

KEEP WETHERS GAINING IN HOT WEATHER

by Susan Kerr, WSU-Klickitat Co. Extension

Keeping market wethers eating and gaining during hot weather can be challenging. Here are a few tips that can help. Please send us more if you have them.

1. Provide plenty of shade for all animals. This is a no-brainer.
2. Provide plenty of cool and fresh water for all animals. Ditto about the no-brainer!
3. Take advantage of goats' natural social competition tendencies -- goats in a group eat more than they do as individuals.
4. Feed frequent small meals instead of just one or two large meals a day.
5. Between meals, draw attention to feed by re-distributing it in feeders, etc. Curious goats will come see what you are doing and may be inspired to take another mouthful.
6. Offer fresh, high-quality feed.
7. Make sure goats have plenty of feed overnight when it is cool.
8. Consider using a fan to keep goats comfortable if they spend time in a barn during the heat of the day. Make sure they cannot chew the electric cord or things may get REALLY hot!
9. Avoid feedstuffs that generate a lot of heat during digestion such as straw and low-quality hay.

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RESEARCH REPORTS: DIETARY EFFECTS ON GOAT GROWTH AND CARCASS TRAITS

[Editor's note: complete results of the research summarized below are available on pp. 15-19 of the Sheep and Goat Research Journal, Vol. 22, 2007, at www.sheepusa.org/index.phtml?page=site/get_file&print=1&file_id=d997a107f3ae90935acb84081842f1a0. The summary was edited for readability and space issues].

Growth and Carcass Characteristics in Goat Kids Fed Grass- and Alfalfa-Hay-Based Diets with Limited Concentrate Supplementation

by S. Wildeus, J.M. Luginbuhl, K.E. Turner, Y.L. Nutall and J.R. Collins

Summary: Two experiments were conducted to evaluate the effect of feeding legume hay (alfalfa) or mixed-grass hay on average daily gain (ADG) and carcass characteristics of growing goats. In the first experiment, 24 Spanish kids were pen-fed free choice chopped alfalfa (16.8% crude protein) or mixed grass hay (9.4% CP) and a corn/soybean meal supplement (16% CP) at 1.5% of body weight for 102 days. Goats were harvested at a commercial abattoir. ADG (62 vs. 37 grams per day), carcass weight (14.8 vs. 12.8 kg) and dressing percent (52.9% vs. 50.4%) were higher in alfalfa than grass-hay-fed goats, respectively. Backfat and percentage kidney/pelvic fat was lower in bucks (0.12 cm and 1.8%) than in does (0.17 cm and 5.7%) and wethers (0.22 cm and 4%).

In the second experiment, 10-month-old Boer and Boer-cross wethers (n=16) were pen-fed free choice chopped alfalfa (15.2% CP) or grass hay (10.9% CP) for 84 days. Forage was supplemented with concentrate (16.3% CP) at 1% of body weight. Carcass characteristics were determined as described for Experiment 1. Wethers fed alfalfa hay had a higher ADG (158 vs. 119 grams per day) and dressing percentage (54% vs. 52.2%) but did not differ in other carcass characteristics. Alfalfa feeding improved growth rate and dressing percentage but had no effect on other carcass characteristics; sex class influenced primarily carcass-fat content.

GARLIC FAILS TO CONTROL WORMS IN GOATS AND SHEEP

from Wild and Woolly, Spring 2009 Vol. 9 Issue 1

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 gastrointestinal 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 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 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 FEC or 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. Twelve 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.

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



Photo provided by Joy Weer, Goat Mountain View Farm, www.goatmountainview.com. Used with permission.

IMPLEMENT POSITIVE STEPS TO LESSEN SPONTANEOUS ABORTIONS

from Wild and Woolly, Spring 2009 Vol. 9 Issue 1

Toxoplasmosis caused by the protozoan parasite *Toxoplasma gondii* is the #1 cause of spontaneous abortions and there are no vaccines to prevent it. Therefore, producers must implement measures to prevent and control this challenge.

“Toxoplasmosis can be prevented since it is spread by kitten poop,” stated Dr. Marie Bulgin of the Caine Veterinary Teaching Center at the 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 parasite is passed to ewes and does.”

Research shows that at least one third of all cats in the U.S. carries Toxoplasmosis oocysts and about 1% of cats in the population shed 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 parasite, kittens often shed Toxo eggs in their feces. Adult cats can contribute to the spread of Toxoplasmosis oocysts when they bring back infected birds, rabbits and rodents to 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 found that infected cats shed cysts after reinoculation with tissue cysts. It is not known whether repeated shedding of oocysts occurs in nature, but researchers say this would greatly facilitate oocyst spread.

Sporulated oocysts survive for long periods under most ordinary environmental conditions, surviving in moist soil for months and years. Oocysts in soil do not always remain in the soil because flies, cockroaches, dung beetles and earthworms can mechanically spread them and 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 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; 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 immunity to future infection is usually acquired by ewes/does after infection.

Toxoplasmosis-caused abortions usually 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. However, a ewe or doe can test positive for Toxoplasmosis for years after becoming infected.

Ed Lehigh of Colorado Serum Company notes it is easier to prove the cause was *not* this protozoan by obtaining a negative blood test. “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.”

Although aborted placentas can be tested, getting accurate results can be difficult. Lehigh points out the longer a ewe or doe was infected before she aborted, the easier it is to determine if Toxoplasmosis was the cause. 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 and does. She recommends feeding Rumensin® (monensin) during the last six weeks of pregnancy to prevent toxo eggs from hatching and infecting the fetus and placenta. Other steps 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. Another preventive measure is carefully placing containers of rat bait to keep rodent populations low. Relying on cats to control rodents is a Catch-22 because such action could increase 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

A THIRD HAND

by Susan Kerr, WSU-Klickitat Co. Extension

Make a list of expiration dates for livestock medications and update this info as you purchase new medications. Post the list in a prominent place such as your medication refrigerator or medicine chest to help prevent the unpleasant surprise of outdated medications. Purchase new medications as needed and safely discard medications as they expire.