

CASHMIRROR



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The monthly magazine devoted to cashmere goats and their fiber



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"Is it edible?"

Boring (Yet Important) Technical Information

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Results published in the magazine are from information supplied by clubs and organizers and no responsibility for complete accuracy can be taken although we'll certainly try to get it right the first time.

The *CashMirror* welcomes contributions of articles and photographs. Submissions may be made by mail, fax or e-mail.

No responsibility will be taken for material while in transit or in this office, although we will certainly be real careful.

Cover photos:

Charlotte Luttrell (Teddy and Santa), Linda Fox (snow scene)

"Is This Really Necessary?"

Six Years of Cashmere Business Conferences!

A Comprehensive Reference for Cashmere Goats

PCMA Proceedings Books For Sale—While They Last

CashMirror has inherited the last of the PCMA Proceedings books. They are for sale. Profits from sale of these books will be used to sponsor *CashMirror* contests and promote other cashmere goat events as we see fit. These books will be available to surfers on the internet as well and we expect them to disappear quickly, so if you want one, you should order one soon.

These books contain the proceedings of six years' Professional Marketing Cashmere Association Business of Cashmere conferences held 1995 - 2000. The books contain all papers presented at these six conferences, neatly printed, organized into sections and bound in an attractive (large) 3-ring binder.

Fifty-one papers are included on subjects including cashmere goat management, fiber issues, using goats for weed control and farm financial planning and management (see index below). This book is a valuable reference tool for new or prospective cashmere producers as well as a good perspective for experienced cashmere producers on the business aspects of raising cashmere.

These books are only \$45 (plus \$5 for shipping costs if we mail them to you, extra charge for postage outside of U.S.). Order from *CashMirror* by check or credit card.

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Refractions

by Paul Johnson

New Kids!

The new kids are here! The new kids are here! It may not be macho, but it sure is fun!

Yes, it was my idea to have a few kids before Christmas. For the grandchildren, I said. Linda knew better. Each year, I can't wait for the first kids to arrive. And every year it is more joyful and more fun than the year before. It is with the excuse that I want them easier to handle that I spend so much time with the little buggers. And it is true—the kids played with the most are the friendliest and remain easier to catch and handle later on. Too bad we can't spend the same amount of time with all the new kids born each year. But even having a few friendlies will help the others to follow along and be less spooked. Also, tame goats sell well! The friendly kids who follow customers around on their visit are usually the first to go.

Yes, lying on my back so they can frisk on my chest and stomach may be going too far, and I will regret it when they are bigger, especially the ones who miss my stomach. But, sometimes living in the moment is okay. The future can take care of itself.

This year we are naming kids and lambs after characters in the "Lord of the Rings" books. We already have Strider and Eowyn sneaking through the rungs of the gate and frisking in the center aisle of the barn. Merry and Pippin (lambs) are peeping around a bale. Arwen and Frodo are still in the jug, anxious to get out and join the fellowship.

We have the intercom linking our living room to the barn turned on, so we can hear when a birth is taking place—not that they need us. We just like to be there for a few each year. First come the sounds of the does search for something that isn't yet there and then come the mothering sounds. Most often we hear nothing at all until the new, tentative, squeaky voices of the kids, demanding food.

So my winter evening hours are now spent in the barn—bundled up in several layers of clothing, the outer garment which is of a type to provide maximum traction for little unsure hooves. I do wish they wouldn't nibble on my mustache, however.

Tagging

As you will see, in an article elsewhere in this issue, identifying your animals is fraught with choices. If you choose to identify your animals, you can choose from simple numbered tags, bar code tags, tags with microchips, implanted microchips, neck tags, or other methods. Your choice depends on how much information you want available on the goat.

The new trend seems to be (for large farms) some type of electronic chip, either on the tag or implanted in the animal,

with reader antennae on gates, so that animals can be scanned while passing through a gate, even if the animal is traveling at speeds up to 3.5 miles per hours. The amount of information you can put on a chip is amazing. Genetics, birthing information, fleece info, ad nauseam. The amount of information and the range from goat to reading device are increasing every year. They can even be read through wood, concrete, dirt, and some metals. Soon you won't even have to leave the house to check on animals!

Next, maybe the goats can be bred to contain 100 Gb. hard drives and wireless networking (LAN) already installed.

Even with a lot of practice, accidents can happen. Last field day, we demonstrated ear tagging for an audience. Big mistake. After explaining our logic for our tagging system which includes tagging one ear for bucks and the other for does, we proceeded to put the tag in the wrong ear.

Our first ear tag for this birthing season was a disaster. A beautiful little dark red doe kid named "Eowyn", with cute little wattles was our chosen victim for trying our new tags. The tags seemed bigger than usual, and didn't fit tightly on the tagger, but were supposed to be the correct ones for our tagger. We both tried to make it work, but all we got was a screaming little girl, (Linda) and screaming little goat (Eowyn). Belatedly we found these tags required an attachment to our tool that we did not have. Eowyn's ear is okay, with no long lasting damage. My ears are getting back to normal (after above mentioned screaming). TEST THEM FIRST! Not on husband as someone suggested recently, or on cat as someone warned later.

Another of life's little mysteries is why Microsoft's spell-checker doesn't like my sentences. It's as annoying as Mrs. Halwig in the third grade (The stupid Clippy the paperclip image even looks like her).

But, I digress. Are your shears ready for shearing? Blades sharpened? Like we have been meaning to do since last shearing. Plenty of blood stopper? Eartags of any type ordered for young 'uns?

Where has the year gone?! So many plans and good intentions, so little time. But hark! I hear mothering sounds from the barn!!! Bye!

When Readers Talk...



Paul,

We have received our 2002 National Western Stock Show premium book and there are no cashmere classes, just market goat classes. I have been told that CaPra is dissolving and will no longer around. What can you tell us about this and how is it going to effect the cashmere industry?

I have seen a lot of the large cashmere breeders selling out but as we are a small breeder I think this is the way the cashmere industry of Colorado is moving as it is getting to be too expensive to feed a large herd here. But there still is interest in the goats as we are selling all our kids that we want to sell.

If we can just find a dehairing business that will not cost an arm and a leg to have our cashmere processed, I think there would be a market for the fiber as more and more people are getting back to the natural fibers.

Is there is any way that you know of how to have the classes again at the National Western? There have been lots of people that visit the shows every year and I would still like to see the show go on.

On a side note I am giving a spinning class in Grandy, Colorado. Hopefully sometime this month to a group of Alpaca breeders. They are very interested in my spinning and are looking forward to the class. They also would like me to spin their fiber and possibly blend Alpaca and Cashmere fiber together...

Thank you for all your time and energy.

Bob Marshall
Marshall's Organic Acres
Wellington, Colorado
November 7, 2001

To: Editor, CashMirror

I felt very honored to receive the Grand Prize in the photo contest, and I was doubly grateful for the \$100 gift certificate.

The doubly requires an explanation. Some time ago we used the area where the

photo was taken for a breeding pen. Imagine took one look at the black buck on the other side of the window pane and attacked. It was a good window, too.

Now that window brings us \$100 with a little help from another goat.

This goes to prove that in the long run goats make up for the mischief they cause.

Thanks again!

Yvonne Taylor
Black Locust Farm
Washington, Maine
January 1, 2001

We are honored (that our photograph won in the contest--see photo on next page). Karen's agent has been warned to expect phone calls.

...Nice article, Paul, in October's issue about the state of the cashmere industry. Perhaps we are better off being small operators. I sold all our combed cashmere in one Sunday at a Farmers' Market, to handspinners. I brought it all in on a whim, no advance notice to my customers. There is a demand out there!

Ian Balsillie
Brookfield Farm
Maple Falls, Washington
December 14, 2001

I Won! I Won! (Second prize in the Cute Kid Category photography contest--10/01 CM page 17). I am thrilled and honored and I want to thank everyone who made this great event, this culminating moment in my professional goat career, possible. I want to thank Mira and Boscow (the goats), and Smith and Hawken for making such a lovely picnic table...

Okay. I'll take a burgundy Mild Goat Men T-shirt. I'd like to give it to my partner for Christmas, but I certainly don't expect you guys to get it in the mail in order to meet my schedule. So he'll get it later and that'll be okay too. Thanks for picking me! You love me! You really love me!

And what do you think of *Enterprise*?

Felicia Parsons
Songdog Moraine
Prior Lake, Minnesota
December 7, 2001

Kid With DV-Cam

Karen Bean sets out to test the theory that "any kid with a DV-Cam can now shoot a movie."

Isn't technology wonderful? New cameras are so user friendly, or perhaps goats are just incredibly smart, that any goat, with minimal owner training can shoot professional-looking movies.

In the photo at right, Karen and Little Jimmy "the kid" cashmere goat try out a new camera.

This photograph won first prize in the Smart Goat category of the recently-concluded CashMirror photography contest.

Photo below shows fully-trained kid operating camera without assistance.

Photographs by Ian Balsillie, Brookfield Farm, Maple Falls, Washington.



USDA ANNOUNCES PUBLIC VETERINARY BIOLOGICS MEETINGS

WASHINGTON, Dec. 4, 2001—The U.S. Department of Agriculture's Animal and Plant Health Inspection Service is holding its 11th annual public meeting to discuss regulatory and policy issues related to the manufacture, distribution and use of veterinary biological products.

Currently, APHIS is planning the meeting agenda and is requesting suggestions for topics of general interest to producers and other interested individuals.

The goal of this year's public meeting is to address issues related to the management of diseases that currently affect or have the potential to affect animal populations in the United States.

The public meeting will be held from Tuesday, April 2 through Thursday, April 4 from 8 a.m. to approximately 5 p.m. on Tuesday and Wednesday and from 8 a.m. to approximately noon on Thursday. The meeting will be held in the Scheman Building at the Iowa State Center, Iowa
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State University, Ames, Iowa.

Please submit suggested meeting topics and presentation titles to either of the persons listed below on or before Dec. 21. For proposed presentations, please include the name(s) of the presenter(s) and the approximate amount of time that will be needed for each presentation.

For further information on the agenda topics, contact Steven A. Karli, director, center for veterinary biologics, veterinary services, APHIS, 510 South 17th Street, Suite 104, Ames, Iowa 50010-8197; phone (515) 232-5785; fax (515) 232-7120 or e-mail CVB@aphis.usda.gov. For registration information, contact Kay Wessman at the same address and fax number;

phone (515) 232-5785 extension 127; or e-mail kay.wessman@aphis.usda.gov.

Please refer to Docket No. 01-108-1. Notice of this meeting is scheduled for publication in the Nov. 30 Federal Register.

Multispecies Grazing

By Linda Coffey ATTRA Program Specialist

June 2001

Benefits of Multispecies Grazing

Mixed-species grazing has several advantages. Cattle prefer grass over other types of plants, and are less selective when grazing than sheep or goats. Sheep and goats, on the other hand, are much more likely to eat weeds. Sheep prefer forbs (broad-leaved plants) to grass, and goats have a preference for browsing on brush and shrubs, and then broad-leaved weeds. Therefore, grazing cattle, sheep, and goats together on a diverse pasture should result in all types of plants being eaten, thus controlling weeds and brush, while yielding more pounds of gain per acre compared to single-species grazing. (1)

The addition of goats to cattle pastures has been shown to benefit the cattle by reducing browse plants and broad-leaved weeds. This permits more grass growth. Goats will control blackberry brambles, multiflora rose, honeysuckle, and many other troublesome plants (2). It is thought that you can add one goat per cow to a pasture without any reduction in cattle performance, and with time the weedy species will be controlled so that total carrying capacity is improved. This is a cheap way of renovating pastures, and you can sell the extra goats and kids for a profit, as well. The same principle holds for sheep. Although they are less likely to clean up woody plants, sheep are quite effective at controlling other weeds, with proper stocking pressure.

Multispecies grazing may also benefit pastures that are less diverse, by encouraging more even grazing. Cattle will tend to graze taller grasses that sheep may reject. It has been shown that sheep graze near cattle manure deposits, which cattle avoid (3); this too results in more even use of the pasture. Carrying capacity and pasture productivity are improved, and animal gains are also increased (4, 5, 6). Diversification of species results in diversification of income sources (7). Also, some researchers have found that adding cattle to a sheep flock may help reduce predation losses, after a period of bonding (8).

Cows prefer grass; sheep prefer forbs; goats prefer trees and shrubs. Nevertheless, there is regular crossover among the three types of feeders.

Another way that multispecies grazing can improve pasture and animal production is through the consumption of poisonous plants by a species that is not harmed by the toxins. For example, leafy spurge and larkspur—serious problems in the western states—are harmful to cattle, but not to sheep. Therefore, using sheep to eliminate those plants will result in more useable and safe pasture for cattle (9). Conversely, some plants are problematic for sheep, but easily tolerated by cattle (10).

Caution: Check with a veterinarian or county extension agent about weed identification. The following websites may be help-

What is ATTRA?

Appropriate Technology Transfer for Rural Area (ATTRA) is the national sustainable agriculture information service which since 1987 has provided free informational materials and research for U.S. farmers, and those who serve them. Funded by the USDA Rural Business—Cooperative Service, ATTRA is operated by the National Center for Appropriate Technology (NCAT). ATTRA offers more than 170 free informational packets, as well as custom research reports, on a host of sustainable agriculture topics. People involved with U.S. commercial agriculture are invited to request a publications list by calling ATTRA from 8 a.m. to 5 p.m. (Central Time) Monday through Friday at 900-346-9140. Many of ATTRA's publications are also available at the website: <http://www.attra.ncat.org>

ful for learning about toxic plants:

<http://cal.nbc.upenn.edu/poison/>
<http://vet.purdue.edu/depts/addl/toxic/cover1.htm>
<http://www.library.uiuc.edu/vex/toxic/scilist.htm>
<http://www.ansci.cornell.edu/plants/plants.html>

Parasites are a major concern with sheep and goats, under any system. Worm eggs are deposited on the pasture in the manure; the eggs hatch and larvae are consumed by grazing animals. If left untreated, concentrations of parasites will increase with time as this cycle is repeated. Higher concentrations of animals on a pasture may tend to magnify the infestation. Parasites are species-specific; that is, cattle parasites affect cattle, and not sheep, while sheep parasites affect sheep but not cattle. The cattle act as "vacuum cleaners", ingesting the sheep worm larvae, and preventing them from affecting the sheep. This is most helpful when sheep and cattle follow each other in a grazing system. However, goats and sheep do share parasites, and therefore grazing them together does not improve parasite control.

Because parasite eggs are deposited in the manure, and larvae only travel a short distance up grass blades, animals grazing taller forages (well above ground level) will not consume worm eggs or larvae. Therefore, goats that are given ample browse will be much less likely to become infested with parasites. If goats are forced to graze at ground level, however, the goats may acquire a serious parasite load.

Potential Problems

Problems may arise in the practice of mixed-species grazing. One of these is the potential for "bully" animals. In my experience on our own farm, the problem with mixing cattle and sheep was not the cattle being abusive to the sheep, but the

Continued on next page

Multispecies Grazing

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ram being aggressive to the cattle! We had a big Charolais cow that the ram disliked so much, we had to feed her separately in the wintertime. The ram would chase the cattle on pasture, and prevent them from coming to the water trough. At lambing time, some cattle may be difficult and bothersome to the sheep, or the shepherd!

Another problem is supplemental feeding, including the feeding of trace minerals. The mineral supplement that is adequate for sheep may not be so for cattle, and a mineral supplement that is best for cattle may be toxic to sheep, as sheep do not tolerate much copper. This difficulty, and the one of aggressive animals, may be overcome by simply rotating the animals. If the sheep are grazed for a few days, then moved to a fresh pasture and the next species put on the first pasture, you may get the benefits to your pasture and avoid these problems.

Fencing is another issue to consider. Electric fencing is generally considered to be the most economical and convenient. Opinions vary as to number of strands needed: on our farm, we use 5 strands for the perimeter, and 2 or 3 strands for the division fences. We also have a powerful charger; but if sheep get in the habit of going through the fence, it's very hard to cure them. Goats are notoriously hard to contain in an area. The article, "How to Hotwire a Goat" gives one example of a fence that may control goats (11).

Another idea, if cattle fence is already in place, is to string off-set wires inside the fence. This should be set in about 8", and be 12-14" above ground, and must be maintained at 4,500 volts or better to be effective (12). Also, it is a good idea to train sheep or goats to electric fence. This is done by confining them in a small area with a very powerful fence, and encouraging the animals to "test" the fence by attaching shiny objects to the fence, or by placing feed on the other side of the fence, just out of reach. For best results, the training area should be surrounded by secure fencing, such as panels or woven wire or a board fence. This practice will discourage those individuals inclined to lunge forward or run through the fence after being shocked. Please refer to the ATTRA publication, "Introduction to Fencing and Paddock Design", for more information regarding fencing.

Predators are a major problem for sheep and goats. Electric fencing helps to discourage predators, but it may also be necessary to employ a guardian animal. Some producers prefer livestock guardian dogs, such as the Great Pyrenees or the Anatolian dogs, while others are strong proponents of llamas or donkeys. Each has its advantages and disadvantages. More information on predator control is available from ATTRA.

Obstacles to Adoption

A review of the literature on multispecies grazing included the proceedings from the Multispecies Grazing Conference, held at Winrock International in 1985 (22). Dr. Evert K. Byington submitted



an article (13) which explored the question of what areas of the eastern United States could most benefit from the practice of multispecies grazing. Criteria included the number of cattle, types of pastures, availability of farmer-owned forested land for grazing, and other factors (see map). Certainly, multispecies grazing seems to be an excellent practice, with potential to improve pastures and land, and increase profits. So why is it still not a common practice, even 16 years after the conference?

Knowledge may be the main factor. The decline in sheep production means that many farmers have no experience with sheep, and so may not be confident of their ability to manage that species. Learning to raise a new species takes time and energy, and inevitably involves "trial and error," which can be terribly discouraging to a beginner. Prejudice against sheep and goats may prevent a cattleman from diversifying. Time and energy are factors, as well, since sheep and goats may increase the labor demand. Practical concerns such as those already listed—predators, parasites, supplemental feeding, fences, and facilities—may inhibit farmers. Some producers may decide that they'd prefer using a bulldozer or Roundup™ to control their weedy and brushy pastures rather than "mess with sheep or goats". Lack of markets, or lack of knowledge of markets, may be an issue in some areas, as well.

On our small farm, we kept sheep and cattle together for a while. We eventually sold the cattle, for several reasons. First of all, we found it inconvenient to hire a trucker whenever we needed to sell a calf or take an animal to the veterinarian. We could not justify installing handling facilities for the small number of cows we needed to work, so anytime they needed to be vaccinated or dehorned, we had to arrange for hauling to the veterinarian.

Continued on next page

Multispecies Grazing

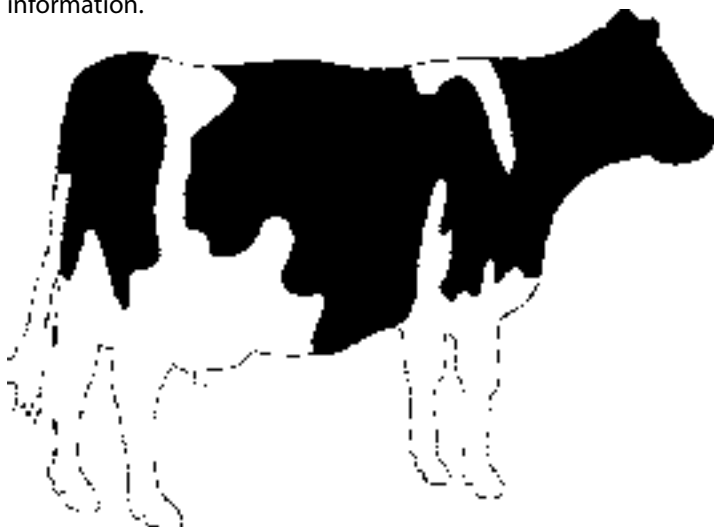
Continued from previous page

With no facilities, A.I. would be rather difficult, but keeping a bull for three cows was impractical. We could have chosen to buy calves rather than keep breeding stock, and that would simplify the management of the cattle since we would not have to worry about arranging for breeding, and would only need to hire hauling when we were ready to sell the calves. Our experience illustrates some potential difficulties for small producers.

Outlook

What results can be expected from multispecies grazing? Research techniques vary, and differences in initial pasture composition, climate, experimental procedure, and particularly stocking rate, influence results. These and other variables may account for the varying and contradictory results reported in the literature. For example, lamb gains are improved under multispecies grazing systems, while calf gains are not affected (5) or are reduced (14) or are improved (4). A producer must be observant, and manage the pastures and animals well to maximize production and prevent damage through overgrazing. Also, it is important to think "long-term"-and give pastures time to improve and enhance animal performance. When adding a new animal species to your operation, start with small numbers and build slowly after gaining experience and adapting species to one another. This will greatly reduce risk during the learning process.

In conclusion, while multispecies grazing requires more thought and management, and more investment in facilities, it can have big payoffs for your pasture and your wallet. If you do decide to add one or more species to your operation, be sure to investigate your market options and your fencing options, and then start slowly. Select healthy stock, and be observant. Please contact ATTRA if you need more specific information.



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Resources

Kerr Center P.O. Box 588 Poteau, OK 74953 (918) 647-9123

The ATTRA Project is operated by the National Center for Appropriate Technology under a grant from the Rural Business—Cooperative Service, U.S. Department of Agriculture. These organizations do not recommend or endorse products, companies, or individuals. ATTRA is located in the Ozark Mountains on the University of Arkansas campus in Fayetteville, at PO Box 3657, Fayetteville, Arkansas, 72702. ATTRA staff prefer to receive requests for information about sustainable agriculture via the toll-free number 800-346-9140.



Good News from ATTRA



The ATTRA folk also have published an article on Sustainable Goat Production. They are currently working on refining publications referred to here, on cashmere goats, and on meat, dairy and angora goats. When they finish these publications, we will publish the article on sustainable goat production.

State and Federal Scrapie Requirements: Identifying Sheep and Goats

Information from the Texas Animal Health Commission (TAHC) and the USDA's Animal and Plant Health Inspection Service, Veterinary Services in Texas. TAHC, Box 12966, 2105 Kramer Lane Austin, TX 78711-2966 1-800-550-8242

Ear Tags for Sheep and Goats?

YES. Beginning November 2001, the U.S. Department of Agriculture (USDA) requires that certain classes of sheep and goats have PREMISE identification ear tags applied BEFORE they are moved from their farm to be sold in interstate commerce OR comingled with sheep and goats from any other farms. Compliance action in Texas will not be taken until April 1, 2002.

Identification requirements extend to:

- * ALL sheep 18 months of age or older.
- * ALL breeding sheep regardless of age.
- * Sexually intact show or exhibition sheep and goats.
 - * ALL goats 18 months of age or older that are or have been comingled with sheep.
 - * ALL breeding goats that are or have been comingled with sheep.

Identification for Goats

Tattoos may be used to identify registered or meat and dairy show goats, as long as the animals are accompanied by their registration papers. A PREMISE identification number should be obtained and the ear tags should be applied to animals being culled or animals no longer accompanied by registration papers.

Commercial goats and wethers that have not had contact with sheep are exempt from identification requirements.

Texas Regulations

The Texas regulations for intrastate movement, will be drafted and presented to the Texas Animal Health Commission in February 2002. TAHC regulations will mirror the USDA premise identification requirements.

How Much Will Tags Cost?

Aside from the time it takes to attach the ear tag prior to loading sheep and goats for shipment, there is no cost, if you use the white metal or white plastic tags provided through the state-federal program. In meetings with industry representatives, a preference for a PREMISE identification system was expressed. Therefore, owners will be assigned a unique, permanent PREMISE identification number. Supplies of ear tags will carry this number, and a sequential number on the reverse side, which owners may use in maintaining individual animal records.

A free pair of tag pliers will be provided with the first shipment of tags.

To get your PREMISE identification number and order free tags, call the toll-free designated toll-free "tag line" at 1-866-873-2824. Tags are shipped by UPS, so be prepared to provide a physical shipping address.

Approved vendors offer other styles of official PREMISE identification tags that may be purchased after you get your premise number. A list of approved vendors can be obtained by calling the toll-free "tag line," or checking the web site: www.aphis.usda.gov/vs/scrapie.htm

Tagging and Records

Identified sheep and goats may carry several ear tags, depending on how many premises or flocks from which they have been moved or sold. Tags are to accurately reflect the premises on which the animals have been comingled with other sheep or goats.

Federal regulations require that records on purchases and sales be maintained for five years for disease investigation purposes. To comply with record keeping requirements when selling sheep and goats at the livestock market, have your premise identification number recorded on the market check-in document.

For private treaty transactions, be sure the seller has met tagging requirements and record the seller's premise identification number on your receipt or bill of sale.

Why Identify?

In 1947, scrapie, a fatal degenerative brain disease affecting sheep and goats, was accidentally introduced into the U.S. Although older animals can be exposed and become infected, lambs and kids are most susceptible to the disease. Usually, lambs and kids are exposed to scrapie through fluids and tissues associated with birthing,

Scrapie develops slowly, and infected animals usually don't show signs of the disease—including weight loss, tremors, loss of coordination, swaying, or wool pulling—until they are 18 months of age or older. Infected dams may shed the infectious agent—or prion—during lambing without showing clinical signs of disease.

The true prevalence of scrapie in the U.S. is not known. In the past, surveillance, animal identification methods and eradication programs haven't been successful. The PREMISE identification system will enable epidemiologists to traced diseased

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Identifying Sheep and Goats

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animals to their flocks or herds. This is a key element in this disease eradication effort.

An Issue Affecting Trade

Animal industries in today's global marketplace must conduct adequate disease surveillance and provide accurate information on disease prevalence and eradication to maintain trade opportunities for live animals and animal products, such as breeding stock, semen and embryos.

The American Sheep Institute (ASI), in 1998, identified scrapie as an important trade issue, estimating the industry loses more than \$20 million each year in lost export sales, extra disposal costs for dead sheep and offal, and lost productivity. In the settlement of an ASI-filed trade action suit, federal funds were committed to support a national scrapie eradication program.

Eradicating the disease will heighten the industry's credibility and reputation for supplying wholesome and healthy animals and products. By 2010, U.S. animal health officials and sheep industry leaders say scrapie can be eliminated. By 2017, the U.S. goal is to be declared officially scrapie-free by international standards.

Historically, black-faced or black-faced crossbred sheep have been stricken with scrapie most often. For international trade purposes, the livestock industry must prove that other sheep breeds, and goats, are not affected.

The benefits of eradicating the disease? Australia and New Zealand, have scrapie-free designations, and these nations freely sell breeding stock worldwide with minimal restrictions.

After Ear Tags, What?

Slaughter surveillance for scrapie in sheep will begin soon, as a disease detection tool. For the first time, this will allow the industry to know the incidence of this disease.

The incidence of scrapie in goats has been extremely low, so slaughter sampling for this species will not be conducted at this time. However, goats are susceptible to scrapie, and when they are comingled with sheep, registered, breeding, or exhibition goats must be identified as discussed earlier in this article.

Scrapie in My Flock?

Based on the exposure risk, owner's needs, and applicable regulations, a state or federal regulatory veterinarian will develop a clean-up and monitoring plan for diseased and exposed flocks. This may include a combination of partial depopulation and movement restrictions to prevent potential disease spread.

The use of pilot projects will provide more options to producers for the elimination of scrapie, while retaining valuable genetics.

An federal indemnity payment, based on fair market value will be available. A premium will be paid for registered animals, based on their age.

In the past, the only way to detect scrapie was to examine brain tissue. A live animal test, called the "third eyelid test" is expected to be approved by late 2002 and will be used to test suspect or exposed animals. Genetic testing is also being evaluated to determine disease-resistance of animals.

Moving Sheep and Goats

As always, it is a good idea to check with the state of destination before moving livestock across state lines.

Scrapie Certification

An voluntary scrapie certification program has been instituted, and if you'd like to know more, call Texas' USDA-APHIS -VS office in Austin at 1-512-916-5552. A brochure also is available by mail, or on the "web" at www.tahc.state.tx.us

2001 US Feed Grain Production Down

USDA press release
October 16, 2001

Feed grain production is down from last year, because of smaller corn, barley and oats crops. Corn production is expected to total 9.4 billion bushels, down 5 percent from 2000. Lower yields and harvested acres caused the change.

Tag Wars

Directed By Linda Fox

Long long ago in a galaxy far away...

It's almost impossible to show a wall of words slowly rising into the stars in the sky—all on a piece of paper. Perhaps this is just as well.

This is a saga of ear tags (and other less-used forms of cashmere goat identification). Those of us with more than a few goats have the need for identifying our goats, preferably from a distance.

In the beginning, our first three goats purchased were mostly white and unmarked, but we knew who they were. Samantha had wattles, Pearly Sue had that horse-shaped head and HC was really sort of orange-ish, if you were going to get picky about color. Then, they had babies. Samantha's kids both had wattles, were black and of different sexes; those were easy. Pearly Sue had a white doe just like herself (including the horsey head) but the baby was smaller, so she was easy for a year or two. HC had two—one brown and one browner, so those were identifiable as well. So, identifying our herd of eight with only our brains was still possible.

Then we bought 39 in one shot and things got interesting. Some were white, some were red and a whole passel of them were brown or black. Fortunately, most of them came with ear tags. We bought the first tags and tagger we ran across in the feed store and quickly tagged our original herd so they wouldn't get lost in the shuffle. We realized that we now had to devise an ongoing system of identification for our herd to keep them straight.

Even though cashmere goats are not generally considered a registered breed, it is important to maintain accurate pedigree records—for breeding decisions and to await the day, which will eventually come (whether we are ready or not), when they are considered a registered breed. It can also eliminate a few awkward situations and make your life easier.

Ear tags seems to be the identification method of choice among cashmere breeders. There are other forms of identification including tattooing (on ears and other places), ear notching schemes and higher tech methods including microchip implants. Some smaller breeders also use different collars for identification. For the small breeder, with the tight budget, I believe ear tags are the best solution. If you are worried about more permanent identification for very valuable animals, you might want to consider tattooing, or microchips. Of course, neither of these more permanent methods will do you much good when you are trying to figure out who that black goat is at the far side of the pen unless you catch her for more detailed scrutiny.

Ear tags can be purchased in various colors, sizes and numbering schemes and can be made of plastic or metal. "Permanent" metal tags, affixed by a veterinarian, are required on animals for shipping, where brucellosis testing is required



for entrance into a state. Metal ear tags, at least those I've seen, are difficult to read up close and almost impossible to read from a distance. Our green, hard-bound friends Smith and Sherman warn that ear tags can be a source of infection and should be avoided on pet or show animals. They also point out that they don't do well on goats without ears, like LeManchas.

Ear tags can cause infection, especially if applied carelessly. They can also break, catch on things (fences, horns—other goats' and even their own) and they can rip out leaving a bloody, torn ear behind. This ripping out seems to happen mostly when the goat is young, with small, thin ears. However ears heal quickly and a replacement tag can be applied in the torn ear if it's not too severely damaged or if there's not enough ear left intact, they luckily still have another ear left to tag.

Plastic ear tags are available in a confusing array of sizes, shapes, colors and numbering schemes. You won't find goat tags; expect to shop for sheep tags to get the proper size. Most tags have a front tag piece, usually rectangular or round, and a back tag or piece, connected by thin plastic tube between the two. Sometimes the back part of the tag is numbered and identical to the front piece, and sometimes it is just a circle of plastic (called a button) intended to serve as an attachment point for the connecting tube. Ear tags come in circles, various sizes of rectangles and other artistic shapes. Most of our earlier purchased goats came with a small, hard plastic, wrap-around, plastic tag, custom printed with herd code and numbers that went through and around the edge of one ear. They were intended to be applied with a special tagger, but the prior owners showed us how to make a small slit in the ear with a knife to insert the tag. After three years, all of these tags were gone and we had to replace them with something else. Some of them left a ripped ear behind and most just broke and fell out. It appeared that the plastic became brittle with age. It seems that ear tags of any sort can be broken or lost, but these earlier tags seemed less sturdy than most.

The current Premier Sheep Supply catalog has a similar one-piece tag called a Snapp tag. It is a nylon loop that is 1-1/2"

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Tag Wars**Continued from previous page**

X 3/8". They require a special tool to put them on. Perhaps the nylon would be more durable than the plastic of our old tags.

We tagged our first 24 kids with, 2" long, 3/4" wide, white plastic tags which came in bags of 25. A plastic hollow post on the front tag piece ended in a sharp metal tip which, when applied, ended up on the far side of a hole in the middle of a 1" plastic color-coordinated button on the inside of the ear. The large, black, lasered-in, numbers were fairly easy to read from a distance, durable and our only problem was distinguishing between goat number 6 and goat number 9. We tagged doe-lings in the right ear and boys in the left, except for Blackberry, who ended up with her tag in the left ear because we had a brief lapse of attention.

The next year we bought yellow tags. I couldn't find the brand we had the year before, so I bought something similar. They came pre-numbered, in bags of 25, with a rectangular front and a button back. The point on the post was different. It was still metal, but not sharp and there was a small hole in the end of the point. It seemed odd that the point differed, but I put the difference down to brand peculiarities. We were glad they still seemed to fit in the prior year's tag applicator so we didn't have to make that investment again. We tagged our first kid and noticed that the less-sharp point was very difficult to get through the ear and seemed much more distressing than usual for the victim. We are a little squeamish about ear tag application anyway, especially on kids, so we decided we really didn't want to put the rest of the goats through the application of the rest of these tags. I headed back to the feed store, and they, after listening to my complaints about undue stress and pain to the animals caused by their faulty tags, showed me the correct tagger that I should have been using with these tags.

There are, as everybody except me probably knew, two types of tags and two types of taggers. On one type, the tag contains the sharp point and makes the hole in the ear; on the other, the tagging device contains the point and punches the ear hole for the pointless tag. It is important to match the ear tag to the proper application device.

I bought the other tagger, somewhat irritated that I had to make another tool investment, but relieved that from now on, we could buy either tag type and still be able to tag our kids with minimal discomfort—for us and the goats.

The next year, we bought orange tags of yet a different brand. I don't remember if they were pointy or un-pointy, but they were rectangular and fit one of our taggers. As we now needed more than the single bag of 25 tags, we started to note the cost. You can spend \$30-\$40 on 25 tags, by the time you have purchased both sides, if you aren't careful. There is a variation in cost depending on the tag brand and source. The orange tags were less spendy, but there were zeros printed in front of the final two digits. We found these tags harder to read than our two-digit tags. The extra zeros did, however, take away the confusion between the 9's and the 6's.

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Paul's Said Tale

(A Failure for the Little Red Tags)

Well, I really did it this time! Our first buck born last year really looked like a winner. I was very excited about the prospects for him. He was one of a set of triplets—Wanda, Maryann and Url. The Duke of Url, as we called him, was the wonder buckling—he was big, well-formed and even friendly. He was the star of our 2000 farm field day.

Toward the end of summer, late one evening, folks who own a slaughter facility came over to pick up our buckling culls. It was dark and most of the bucklings including Url, are/were black. Their little red ear tags were either missing or unreadable this late in the season. Need I say more? Dark, late, week night, tired, in a hurry, glasses fogged over. But wait! It gets better/worse.

In discussion with the meat goat folk, I discovered they just throw away the hides. So I arranged to have the hides frozen until I could pick them up. A week later, I was checking the little bucklings when I discovered Url was missing. After two days of searching through the thick brush and trees, I realized what must have happened. I procrastinated as long as I could for picking up the hides up, knowing one is/was Url, the (former) future, (deceased) champion buck of Goat Knoll.

Moral of this tale? Don't let Paul separate goats after dark and use better identification on your goats.

How to Ear Tag a Goat

1. Place "female" side of tag in tagger. It will generally only fit in the tagger with the correct side up.
2. Slip post of "male" side of tag on tagger.
3. Place a gob of neosporin or other gooey antiseptic on post end of tag (helps prevent infection and helps lubricate).
4. Retrieve victim. Locate ear to be tagged and desired tag location on ear. Avoid veins and edge of ear. One reference suggests placing mid ear rather than close to head to avoid ear tag from becoming wedged in the ear.
5. Hold kid close to you and immobilize its head so it can't squirm when tag is being applied.

Tag Wars

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Blue was the tag color of choice for the next year's kids. We went back to two-digit tags. Our tagging (47 kids) went without incident, except for tagging one of the first small doelings in the left ear. She didn't care so we left it there.

The following year's tagging event was full of mishaps. We have always seen the value of tagging kids as early as possible. At birth is probably best, especially if kids are born and remain in the herd. If kids and mothers are juggled, they should, at the latest, be tagged before release from the jug. Even though we recognize the value of early tagging, we have never done it. We've always had a problem punching holes in thin, tiny baby ears, and don't like to see their little ears weighted down with heavy tags, so each year we tag much later than we should.

I had ordered a new type of tag mail order. They were called Supertags® and claimed to be the "world's finest ear tag." They were 3 digit tags, beginning with 100. They were a little less than 2" long and a little more stylishly shaped than rectangular. When they arrived, I found they had thick, long black posts. Furthermore, I had failed to fully research these new tags—they required yet a different tagger than the two we now owned. This different tagger has no metal pin (either pointy or unpointy) to insert in the tag during application; instead it merely clamps the two halves of the ear tag together. The new tags sat on the barn workbench for several weeks while we decided whether to order another tagger and use them or not. I envisioned the large posts poked cruelly through cute kid ears. They continued to gather dust on the workbench while kids and new mothers moved in and out of the kidding stalls. After a month, we had 58 tagless kids bouncing in the barn and pastures. We had several problems during this time matching kids to the appropriate mothers.

A friend mentioned a smaller sheep tag which I might prefer for kids (Rototags). I ordered a batch of these itty bitty tags, along with a new itty bitty tagger for our kids. They looked perfect! They were small and looked like we could punch them through new kid ears with minimal guilt. We immediately spent an afternoon sorting out kids and affixing the new tags. We mis-tagged one buck kid, in the right ear. We also lost one of the small tags in the barn straw and had to tag one kid with a higher unused number. We ended up getting two of the kids' numbers mixed as well, but finally we had them all marked. These cute little red tags looked like they belonged on the kids and our barn life became easier...

...except, these small (1-3/8" X 3/8") tags were impossible to read from much distance. Also, the kids liked to chew on each others' tags. After a month, almost half of the tags were either unreadable or gone. We eventually ordered larger red tags and replaced the small tags with the larger tags with identical numbers.

This year we were smarter—we didn't wait until the first kids arrived to search for tags; we have had them for a month. We found a new kind, mail order from Premier that were similar

Goat Knoll Simple Tagging Scheme

Use a different color tag for each year's kids.

Start with number one each year; kids are assigned their number by birth order. The first kid born is number 1, the 29th kid gets tag number 29. This is useful as we can tell, at a glance when comparing sizes, if we are comparing two kids who are about the same age.

Doe kids get a tag in their right ear; bucklings and wethers in the left ear.

In our computer data base, the color of tag becomes a letter in front of the number. For example yellow tag 31 becomes Y31 in our data base.

What are we going to do when we run out of colors? I suppose we could either reuse colors after a time, perhaps using a different letter for their designation in the data base. Even though few older goats would still be here when we re-used a color, they would still exist in the data base as we never delete any goats from the data base (We mark them gone, but do not delete their information as we still use it for statistical purposes.) Or, when re-using a color, we could begin each year's number at 100, or some larger number than existed in the first use of the tag color. We'll definitely have to fine tune our scheme when we run out of colors.

A Better System?

Our tagging system contains only information about birth date and sex. Some breeders use a tagging system that contains identification for lineage as well. The tag information might indicate parents or other information important to the breeder, such as number in birth.

This information can be contained in the numbering or lettering scheme or it can be contained on additional tags. The goat, after all, does have two ears and one ear is generally able to handle more than one tag—especially on a fully-grown goat.

We bought a buck that had three or four tags in his ears, of varying shapes, sizes and designations. He looked like a Nubian with his ears weighted down, hanging by his cheeks. We removed excess (for our system) tags before he could feel that he was more important than the other bucks.

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Rototags™ with their dandy applicator. They look cute on little kid ears, but kids will chew on them. They will probably need to be replaced later with a more substantial tag.

The Y-Tex tag applicator—post on tagger inserts into back of tag, tag point makes hole in ear.

Tags at left look similar, at first blush, to tags at right. However—the hole in the tag top is a different size, requiring a different pin for the tagging device. These tags are new, relatively cheap, even with the custom printing on bottom of the tag.

Tags below are applied with "Total Tagger". Tags look much like the tags below them except for the hole clear through the top of the tag.

Allflex "Total Tagger"—Bottom clamp holds bottom of tag, sharp pin on top extends through top of tag to punch hole.

Above: Supertags™. They have a large plastic post and are applied with a larger version of the rototag applicator (not shown).

Four digit Allflex™ "Global" tags. They are applied with the "Total Tagger".

Allflex™ tags and buttons. Metal point on tag punches the hole. Bottom of tag can be a round button or another piece like the front of the tag.

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Tag Wars

Continued from previous page

in size to previous successful tags, but cheaper. The tags appeared to be the same as prior tags used, with the point on the tag doing the punching. However, when we tried to tag our first kid this year, we found that the tagger does not quite fit this new tag. Apparently there are different sized pins for the tagger. These pins extend into the tag piece, to stabilize the tag and keep it straight during application. It seems that both our taggers can be modified by the purchase of a special pin to fit these new tags, but we'll need to order it to make these tags work well—or we'll need to order different tags. I guess some people just learn faster than others. When you really need Yoda's help to make sense of it all, he's usually mucking around in a swamp somewhere.

If you have a few goats, giving them identification beyond what they were born with may not be important. However, if you are beyond just a few, it will be useful for you and others who help you to be able to definitely determine which goat you are talking about, and being able to do this from a distance is helpful.

With the new state and federal premises identification requirements for sheep (and goats who contact sheep) in connection with scrapie eradication (see page 11, this issue), even the small goat producer who sells, transports or shows animals, may have to take a closer look at permanent identification.

Tags in the Wrong Ears!

Every year, we seem to tag at least one kid in the wrong ear. Usually it's one of the first ones we tag, before we are being careful. If it's a doe kid mistagged, we don't seem to have a later problem. However, we were at risk for unplanned breedings by a mis-tagged buckling. He was a small buckling, compared to others his age. We noticed the mistagging shortly after we did it and dutifully made a note of it in our records.

Later, at weaning time, we removed the young bucklings to a separate area, using only their left ear tags to identify them. We had forgotten about the mis-tagged buckling. We also removed the doelings, and after three weeks, put the weaned doelings back with the older does.

Two months later, as we were looking at the does in the barn one night, I noticed that one doeling had thicker horns than the others and had a studly-looking stance for a doe. "She" was also sniffing another doe's rear—which isn't totally unheard of, but not a frequent occurrence. I climbed over the pen and caught the kid. A quick check found her "fully-equipped." We moved him to the buckling pasture and made a note on our records to check for early kids.

We were lucky in this case, with no unplanned kids. However, from now on, if we mistag a buckling, we will remove the tag and put another in the correct ear immediately!



Meat Goat Production in Georgia

By Calvin Alford, University of Georgia Extension Animal Scientist; James Strickland, Extension Veterinarian, Kim Lewis, student, UGA College of Veterinary Medicine; Sarah Simpson, VPI & SU

Goats are the most widely-dispersed meat animals and have been raised for centuries to provide meat, milk, fiber, cashmere and leather. Due to their small size, adaptability to harsh environments and availability, they have been more popular in nations lacking refrigeration, animal management skills and modern transportation.

Since goats have not been of great economic importance in the United States (except in Texas), there has been little research concerning goat nutrition, reproduction or genetics. However, as we become more conscious of efficiency of production, the goat is being viewed in a more favorable light. When measuring production of lean meat on forages alone, goats are without equal. In addition, no creature fills in more blanks in alternative agriculture, resource conservation and non-traditional animal production than the goat.

The United States' goat population consists of approximately 750,000 Angora goats, close to 1 million dairy goats and more than 1 million meat goats. This publication deals solely with Spanish or meat-type goats in Georgia and covers their history, selection, and management—from predator and disease control to reproduction and marketing.

Origin and Evolution of Breed

The Spanish meat goat—also called the brush or briar goat—is of uncertain origin. The population probably consists of goats brought into Colonial America that migrated west with their owners and bred with goats from Spain and Mexico. Later, dairy breeds and Angoras intermingled throughout the population.

Spanish goats come in a variety of colors and patterns; most are horned. Their size is variable depending on location. Mature brush goats in Georgia are smaller than their Texas counterparts. Spanish bucks in Georgia weigh 80 to 120 pounds with nannies weighing 60-80 pounds. Texas billies, however, can weigh up to 200 pounds and nannies up to 130 pounds.

Georgia brush goats have been selected over the years for survival of the fittest with some selection pressure placed on color, horns and size. Selection for survival has led to small, light-milking, adaptable goats mainly because a small animal can meet its nutritional needs more easily than a large one. There has been some infusion of dairy breeds into Georgia meat goats with varying degrees of success.

Using dairy bucks on native does increases the size and milk production of the resulting female offspring. However, on a low plane of nutrition, these dairy crosses may lack vigor and adaptability. Udder and teat problems may also develop when dairy blood is incorporated.

The recent introduction of the South African Boer Goat has provided producers a new source of germ plasm. This heavily muscled, well-tempered goat has become quite popular since its importation in 1993. Research indicates that using partial or full-blood boer billies increases the size, muscle and growth rate of the kid crop. The effect of the boer on the resulting females should be to increase the size, muscle and milk production; however, research to document the boer female's reproductive efficiency has not been conducted.

The importation of the Kiko, a New Zealand breed selected for survival and growth rate is also likely to improve meat goat production. The Kiko is a large framed, early-maturing goat with high feed conversion rates. Crossing Kiko with other breeds should result in increased heterosis.

Selection

While production depends a great deal on feeding and management, genetic selection for performance and visual characteristics is also important. In order to make important selection decisions, one must have an effective method of keeping records. All nannies should be identified by ear notches or ear tags. Record birth date, sale date, weaning weight and/or sale weight of each kid and simply select those nannies that return the most total pounds of kid per year. Use the sons of the most productive nannies to sire the next kid crop, and keep the best female kids as replacements. Bucks should be changed every two years to prevent inbreeding and loss of vigor in the herd.

Limited performance testing and selection have been carried



Figure 1. An excellent group of Spanish nannies.

out with meat goats; few growth rates have been reported. Many Georgia producers wean goats weighing 30 to 35 pounds at four months and 40 to 50 pounds at six months. When using growth rate for selection, remember that it depends not only on genetics, but also on feeding and management.

In addition to rapid growth, multiple births and kidding three times in two years, other traits to consider when selecting goats are large body size, muscling and sound feet and legs. Establish your criteria and cull does that are poor milkers, poor uddered, unsound, or have a poor reproductive efficiency.

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Georgia Goat Production

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An effective method for herd improvement involves dividing does into breeding groups by visual and performance traits, then selecting bucks to complement the characteristics of the group.

Facilities

The nature of goats must be considered when designing facilities and working with them. Goats exhibit "flocking" behavior and will follow each other. They also are very active and like to climb, so take care to keep fence lines clear of rocks, stumps and timber. Generally, goats move away from buildings, alleys and other dark areas. This must be considered when constructing working chutes and pens. The value of working pens cannot be underestimated when it comes to handling these small, agile, unpredictable animals for procedures such as deworming, identification and foot trimming.

Pens should be sturdy, preferably solid-sided and at least 4 feet tall. The working chute should extend from a crowding pen on one side of the main pen. Ideally, the working chute should be curved. It also needs to be solid-sided, about 10 feet long, 4 feet high, and 12 inches wide with sliding gates dividing it into sections. For horned goats, the chute should be tapered, with the top nearly twice as wide as the bottom. Canvas flaps suspended along the chute may keep the goats' heads down and prevent riding.

Goats do require some shelter from inclement weather, especially during kidding as young goats are vulnerable to respiratory infection and hypothermia. A sturdy shed that is dry and opens to the south usually provides adequate protection. The structure should provide a minimum of 5 square feet (ideally 8 to 10) of floor space per goat, be closed on 2 or 3 sides, and be roofed low to the ground to trap body heat. Rear eave heights of 4 feet to 6 feet and front eave heights of 6 feet to 8 feet are adequate.

Effective goat fences are ones which keep the goats in and aid in keeping predators out. Topography, economics and predation pressure determine what type of fencing is most suitable. Currently, one of the most common and conventional fences used is woven wire combined with barbed wire. Also called "wire net" or "hog wire," this wire mesh is usually 47 inches in height. It is generally topped by 1 or 2 strands of barbed wire and has 1 strand just above ground level. Problems arising from this and most other fencing are that horizontal strands or stays encourage climbing.

Manufacturers now sell a special "goat net" containing vertical stays 12 inches apart rather than the common 6 inches. These wider rectangles allow horned goats to back out more easily, eliminating entrapment. Barbed wire can also be used to confine goats, but many strands are needed. Some ranchers have had success with 8 or more strands of closely spaced 15-1/2 gauge barbed wire.



Figure 2. Use big, stout billies to sire your kid crop.



Figure 3. Money-maker: Yearling with a big set of twins.

Electric fencing also shows promise. If properly constructed, these can be effective and relatively inexpensive. For perimeter fences, five or more wires alternating hot and ground can be constructed for approximately one-third the cost of woven wire. Electric fencing can also be used to cross-fence or temporarily divide pastures. The addition of wooden staves or twisted wire stays between permanent posts helps tighten the wire and make it more goat-proof.

Besides keeping the goats in, fences are important for keeping out predators such as bobcats, coyotes and dogs. Woven wire is the most effective, especially if an electric trip-wire is run 8 inches high and 6 to 10 inches outside the fence. Other methods of predator control include night penning, kidding in protected pastures and the use of guard animals. Trapping, hunting and

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other lethal methods of predator control can also be used with care. Donkeys and llamas are used as guard animals, but the most common animals used are dogs. Many breeds have been used as guard dogs, ranging from mixed breeds to traditional guard breeds such as Great Pyrennes, Komondor, and Anatolian Shepherd. Three traits are essential for a good guard animal: it must bond with the animals it is protecting, it must be courageous in the face of a predator, and it must accept the responsibility of its job. To bond with the goats, the dogs should be introduced to them as puppies when 8 to 12 weeks.

Nutrition

Meat goats are minimal care animals that are browsers by nature. Goats spread their grazing pressure more evenly over all vegetation classes than sheep or cattle. This allows them to utilize forage and browse (brush) which is otherwise wasted, while also providing biological control for unwanted vegetation in cattle pastures and forests. In Georgia, some of the weeds preferred by goats include blackberries, thistles, honeysuckle and kudzu. This brush control and pasture improvement provides real benefits often equaling \$40 to \$70 per breeding female per year. For unimproved pasture, goats are without equal. It is a common myth that goats are able to make use of poor quality and trash feeds, but actually goats appear to require more quality in their rations than larger ruminants. They are able to thrive under adverse conditions because they are more selective in feeding and better able to conserve critical nutrients. Thus, the ideal option is adequate year-round grazing with only mineral supplementation.

Remember that goats are active foragers that will cover a wide area in search of scarce plant materials. They are well suited to this form of grazing since their prehensile lips are able to choose



Figure 4. Livestock guarding dogs decrease predation.

only the most nutritious parts of available plants. While goats generally prefer and select browse, they do consume some forage to compensate for the quality of their diet. These traits make goats a valuable asset in multi-species grazing pastures. Pasturing goats with sheep, cattle or other species maximizes productivity of the land. As a general rule, six mature goats equal one cow on improved pastures and ten goats equal one cow on browse or brushy areas.

Meat goats' nutrient requirements include energy, protein, minerals, vitamins and water. Utilization of all nutrients depends on an adequate supply of energy. Supplied by both carbohydrates and fat, energy is usually the most limiting nutrient. Energy deficiencies, which may result from inadequate feed intake or low quality feed, are noted by retarded kid growth, delayed puberty, reduced fertility, depressed milk production and a lowered resistance to disease and parasites. Age, body size, growth, pregnancy, lactation, weather, physical activity and stress influence energy requirements.

Proteins are essential in any diet, because proteins are the building blocks of all cells. Proteins consist of amino acids which are required not only by cells of the body, but also by secretions such as enzymes, hormones and milk. Deficiencies of protein can lead to reduced rumen efficiency, retarded growth and fetal development, depressed milk production and, in extreme cases, serious or fatal ailments. Because goats are ruminant animals, they are able to use some non-protein nitrogen to synthesize protein. Protein requirements depend on a variety of factors such as maintenance, growth, reproduction and lactation.

In general, mineral requirements for goats are similar to those of other ruminants. Seven major and nine minor (trace) minerals are essential for livestock. The major (macro) minerals that must be provided in large quantities include calcium, phosphorus, sodium, chlorine, magnesium, potassium and sulfur. Phosphorus is often deficient in pastured goats. The 1½ - 2 calcium to 1 phosphorus ratio is important to maintain in mineral supplements to aid in the prevention of urinary calculi. Calcium levels are usually sufficient in grazing conditions for meat goats, but dairy goats may need supplementation. Sodium and chlorine are commonly provided as free choice salt. Goats not receiving enough of either may consume soil or debris. Placing salt in less frequently grazed areas can encourage them to move to these areas. Note that trace mineralized salt should not be used in this manner as trace elements could be oversupplied. The next macro mineral, magnesium, is required for nervous and enzyme system function, and is related to calcium and phosphorus metabolism. Magnesium deficiency is often associated with grass tetany, which is treated with intravenous calcium and magnesium administration. Potassium deficiencies are uncommon except in high concentrate diets in which supplements should be fed to correct this problem. The final major mineral, sulfur, is usually adequate in common feedstuffs.

Trace or micro minerals include iron, iodine, copper, molybde-
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num, zinc, manganese, cobalt, selenium and fluorine. Deficiencies of these minor minerals are rare if a trace mineral supplement is offered free choice. Vitamins are essential for normal body processes. Typical pastures should contain adequate levels of vitamins. Vitamin A is the only one likely to be deficient, and then only during extended droughts when green forages are not available. Goats have an advantage over other ruminants in their ability to pick the most palatable green parts of forage. This allows them to consume the most vitamin-rich portions. Take care to supplement the diet of goats forced to consume low quality diets and old weathered hays.

Water is the most critical of all nutrients. Meat goats should be provided all the fresh, clear water they will consume. Generally they require 1 quart to 1½ gallons per head per day. Water intake depends on temperature, water content of forage, amount of dew, exercise level and the salt and mineral content of the diet. While goats are highly sensitive to water quality, they also are extremely efficient in water use. Goats approach the camel in the low rate of turnover per unit weight. In providing water, use common sense. Due to the playful nature and climbing of kid goats, they may fall in large troughs. If a large trough is used, it is wise to place large rocks in it so the kids can climb out.

Health

Herd health and management practices are major factors in determining the profitability and success of producing goats. A normal goat has a temperature of 104 degrees F and a heart rate of 70 to 80 beats per minute. The respiration rate is 12 to 15 breaths per minute. Heart and respiration rates are faster in kids. Rumen sounds or movement should occur one to two times per minute. Parasites, especially internal, prove the greatest challenge to goat health. Common diseases ranging from viral and bacterial infections to digestive maladies are important to remember in planning management and budgeting costs.

Because of the mild temperature and high annual rainfall in the Southeast, internal parasites are significant threats. Parasite problems are intensified in conditions of overcrowded and non-rotated pastures. Roundworms, stomach worms and coccidia are the most prevalent internal parasites. Symptoms of parasite infestation include rough hair coat, weakness, bottle jaw, weight loss, diarrhea and anemia. Heavily-infested goats will have pale mucous membranes due to blood loss or anemia. A fecal sample examined by your veterinarian can provide a definitive diagnosis on the type and degree of infestation, as well as the recommended treatment.

A regular program of deworming (every six to eight weeks) coupled with pasture rotation is essential for controlling the various internal parasites. Sorting the animals by size and then dosing all for the heaviest of the group is more effective than treating according to an average body weight. Thiabendazole is the only approved anthelmintic for goats, but is not very

effective because of parasite resistance. A veterinarian should be consulted for off-label use of such products as ivermectin, febendazole and levamisole.

Coccidiosis is a contagious disease, especially of young goats and shows symptoms similar to other internal parasites. While generally a disease of young kids, most adults are mildly infected and will continuously shed oocysts that infect kids. Anywhere there is manure contamination, coccidia can spread. Regular deworming programs are ineffective against coccidia. Diagnosis of coccidia based on clinical signs of diarrhea and bloody stools or by fecal examination can call for consultation with your veterinarian.

External parasites such as lice, flies, mosquitoes and ticks can also affect goats. These pests, most prevalent during spring, summer and fall, can be treated with livestock sprays.

Goats are susceptible to a number of other common diseases. If a problem occurs in your herd, consult your veterinarian. Shipping in new goats, especially from crowded conditions at sales, provides the perfect opportunity for the spread of infectious diseases. Newly-purchased animals should be quarantined and checked carefully.

Pinkeye is an infective eye condition caused by both viruses and bacteria that thrive under the above conditions. The eye first has a watery discharge that progresses to pus. The eye will swell and the cornea turns white. Infected goats should be isolated and treated with an ointment or eye powder, as well as antibiotics if necessary.

Another disease common in recently-shipped goats is pneumonia. Symptoms include high fever, labored breathing, coughing and nasal discharge. These symptoms may become chronic and difficult to treat if a veterinarian is not consulted.

Soremouth is a highly contagious viral disease that causes weeping sores and scabs on the lips and mouths of goats. Humans can contract this virus, so be careful when handling infected goats. Few medicines help in the treatment of soremouth. A live virus vaccine is available, but is risky and not recommended unless your herd has soremouth.

Another less common viral disease is caprine arthritis encephalitis, or CAE. It is more widespread in dairy goats than meat goats, but since many goats in Georgia have some dairy influence, CAE is a concern. The virus is transmitted through the milk and colostrum of infected mothers to nursing kids, as well as by contact. Infected kids from two to six months are characterized by rear leg paralysis. The more common manifestation is as arthritis in adult goats. Does also develop chronic inflammation of the mammary gland with decreased milk production. There is no treatment for this disease, so testing of animals is essential. The kids of infected does should not be allowed to nurse, but

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rather should receive pasteurized colostrum and milk replacer.

Tetanus, resulting from a wound infection, can also affect goats. The toxin produced by the anaerobic bacteria in the wound causes the muscles to become rigid. Stiffness, slowness to eat and chew, and awkward swallowing are early symptoms. The third eyelid will also be visible. Loud noises and movement will cause the goat to have violent spasms. Goats are nonresponsive in most cases, but an anti-toxin may be helpful if administered early. Prevention by proper wound care and vaccinating with tetanus toxoid after dehorning or castration is the best policy to follow.

Foot rot is not common in goats unless they have wounds on their feet or stand for long periods in wet, unsanitary areas. Lameness and swelling above the hoof are early symptoms. Liberal trimming of the hoof and treating with copper or zinc sulfate or formalin are the routine treatments.

Several digestive diseases can cause problems in goats. Enterotoxemia (overeating disease) seldom exhibits symptoms other than sudden death. The disease is caused by a clostridium organism, of which there are two types, C and D. These clostridia are normally present in the digestive tract. An abrupt change in feeding schedule or consumption of a large amount of grain cause the clostridia to grow rapidly, producing a toxin that causes death within a few hours. Vaccinations should eliminate this problem.

Mastitis is seen in many goats. Crossbreeding native does with milk goats has produced large udders, which are more susceptible to this condition. Large teats are more vulnerable to injury. They will also drop and enlarge more at kidding, making it impossible for the newborn to nurse. If help is not available immediately, the kid will starve or have an inadequate colostrum supply. Culling is the best way to deal with does who have contracted mastitis.

Very few drugs are approved for use on goats. For this reason it is important to have a client-patient relationship with a veterinarian who can prescribe other medications. Goats that are kept in adequate pasture and browse and are not overcrowded have fewer disease problems. Internal parasites can be controlled by pasture rotation, fecal checks, and de-worming. Careful buying of new breeding stock and isolation can help prevent bringing in new diseases. Check with your veterinarian about parasite and disease control. It is also important to remember that most of the goats are sold for meat, so withdrawal times before slaughter must be observed, and injections should be made in the neck to protect more expensive cuts of meat.

Reproduction

Goats are seasonally polyestrous with estrous cycles every 20 to 21 days from July through January. Few does cycle in March and April. February, May, June, and July are considered transi-

tional months. Tropical breeds of goats may cycle year-round. Goats reach sexual maturity at five to nine months, but it is not recommended to breed them until they have reached 60 percent of their adult weight, or one year of age.

The presence of a buck causes does to come into estrus. Estrus (standing heat) lasts about 24-36 hours and is recognized by tail-shaking, flagging, nervousness, frequent urination, bleating, swollen vulva, and discharge.

With proper nutrition and management, three kid crops every two years are possible. An ideal management scheme would be to breed in February, then again in September. A buck may breed 50 to 200 does in a single breeding season, but it is recommended that three or four bucks be put with 100 does. As mentioned earlier, bucks should be changed often to prevent inbreeding in the flock (at least every two years).

Nutritional requirements during production are varied according to the state of production. Bucks should be placed on an increased plane of nutrition six weeks before breeding so that they can stand the rigors of covering many does. The nutritional requirements of does vary greatly, depending on the stage of production and gestation.

Between weaning and breeding the doe is in a dry period with nutrient requirements at their lowest. A maintenance diet is sufficient as long as weight lost during lactation is recovered before breeding.

Flushing two weeks before the breeding season can increase the kidding percent. Flushing is increasing the nutrition of the animal prior to breeding, which can increase the ovulation and conception rates. This can be done by turning goats on fresh, lush pasture or by feeding grain for the two or three weeks before the breeding season. This is effective with thin does, but does that are in good condition generally do not benefit.

During early gestation (100 days after breeding) nutritional requirements are not critical and maintenance level will suffice. In late gestation (last 50 days), nutrition is critical since 70 percent of fetal growth occurs during this time. Protein and energy requirements increase drastically, often warranting supplemental feeding programs in the third trimester.

The first eight weeks of lactation have the greatest nutritional demand of any time in the production cycle. This period generally coincides with spring growth, but in accelerated kidding programs, the nutritional requirements must be met with supplemental feeds.

The gestation period varies from 147 to 155 days, the average about 149 days. Does generally deliver two kids averaging four to six pounds each. Labor begins with one to ten hours of uterine contractions followed by rupture of the water bag.

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Within an hour of the water breaking, the first kid should be delivered, and all of the kids should be delivered within three hours. A shelter should be available to pregnant does in case of bad weather. Dystocia is rare in goats. Most difficulties occur from mal-presentations in which assistance should be provided. The producer should ensure that each kid receives colostrum within two to four hours postpartum.

Horned kids can be easily disbudded at four to ten days. Males to be kept but not for breeding can be castrated at this time or at weaning. At one to three weeks the kids should be given a clostridium-tetanus vaccine if the doe was not vaccinated prior to kidding. Kids can be vaccinated between one and two months and receive a booster two weeks later. Most kids are marketed at four to seven months and at live weights of 40 to 60 pounds and therefore are not generally castrated. If kids are to be sold, this occurs around weaning (three to five months). Kids kept after weaning are usually replacement does or for breeding stock.

Producers often replace 20 percent to 25 percent of their breeding does each year. These doelings, selected at weaning, should be chosen with emphasis placed on multiple births, early-born kids, and kids from does that kid more than once per year. Selection of bucks should emphasize growth rate and muscling, while does should emphasize reproductive traits more. Replacement does should weigh at least 50 to 60 pounds before they are bred. If does are run year-round with the bucks, they will often breed at seven to nine months. If these female kids are bred, they should be fed a supplement for proper growth. Does that do not kid by two years of age should be culled.

Marketing and Economics

The economic value of meat goats cannot be denied. They are able to use marginal land and complement grazing of other species to efficiently produce a marketable product. One great need of the meat goat industry, however, is a production target on which to focus. Production goals need to be set. Currently there is a high demand:supply ratio if a market can be found, but there are few consumer signals as to quality, fabrication, and packaging. Unlike other meats, most of the goat meat produced never enters a formal production chain (feeder, packer, and retailer).

In this absence of consumer input, production schemes must be based on production efficiency and cost of production. Selection of the type of goats to raise is important. It is essential to choose breeds or combinations of breeds that can efficiently utilize your resources to meet the specific production goals you select. A list of important characteristics of five major meat goat breeds is shown in Table 1 (next page).

The major constraint in non-traditional production areas appears to be market outlets for live goats and efficient methods of

slaughter, processing, and transporting goat meat to consumer markets. It is difficult in many areas to find slaughterhouses that will process goats. The highest demand for goats is by ethnic populations around large cities and by rural residents; therefore, the facilities and market demand around these areas are better established.

There are five common outlets for marketing meat directly to the public or to specialty markets: freezer market, ethnic/religious market, gourmet market, retail grocery stores, and restaurant market. An important marketing aspect of goat meat is that it is low in sodium and saturated fat (but not cholesterol). These are valuable aspects to advertise to today's health-conscious public.

Of the several strategies for marketing goats, the most common avenues are to sell directly to final consumers or dealers at the farm or livestock market. While direct sales generally earn \$5 to \$10 more per head than at auction, the disadvantage comes in the inconvenience and limited number of people seeking a live animal for slaughter. Direct sales can be increased by running advertisements in newspapers and on the radio and having animals ready for slaughter at major holidays such as Easter, Fourth of July, Thanksgiving, and Christmas. Public relations and advertising as well as encouraging repeat customers by providing greater services can increase your direct sales clientele. An arrangement with a custom slaughterhouse can also expand your sales by making the product more convenient for the client.

One of the greatest challenges to the meat goat industry is reaching mainstream consumers rather than only ethnic groups. There are few places where goat is sold wholesale or retail. Because of a lack of familiarity, goat is difficult to sell through supermarkets because consumers would not know how to prepare it. A promising strategy to implement is to target the foodservice sector (restaurants). If this is to be done, it is imperative to ensure a constant, high quality supply at a stable price. Besides the initial market of the restaurant, this could encourage consumers to purchase goat for home preparation.

Although the introduction of the Boer goat should improve rate of gain and dressing percentage of meat goats, currently the average yield is 48-50 percent. This means that a 40 to 50 pound goat (average weight of young goat) yields a 19 to 23 pound carcass. As in the cattle industry, secondary products are also valuable to the producer. Shearing goats for mohair, as well as selling the skins after slaughter, provide two additional sources of income.

Another marketing improvement needed by the industry is a set of grading standards for slaughter. Currently the standards of slaughter goats are not established. While a USDA quality grading system does not exist, the Wholesome Meat Act of

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Calendar of Events

Association Contacts

January 12, 2002

Oregon 8th annual Pygora Goat Show and Fiber Frenzy, Washington County Fair Complex, Main Exhibit Hall, South Hillsboro, Oregon, 10 am - 4 PM. Come see goats in full fleece! Vendor booths, demonstrations, goat show. Contact: Lisa Roskopf - phone: 503-985-3331, email: lisa@hmrpygoras.com website: www.hmrpygoras.com/fiberfrenzy.html

March 22 - 24, 2002

Fibers Through Time 2002, Central Arizona College, Coolidge, Arizona. A conference sponsored by the Arizona Federation of Weavers and Spinners Guilds. Contact: Patricia Springer, 21609 N. 145th Dr., Sun City West, AZ 85375, 623-546-1691, rjsaz@worldnet.att.net

May 4 - 5, 2002

Maryland Sheep and Wool Festival, Howard County Fairgrounds, Baltimore, Maryland. For information: PO Box 99, Glenwood, MD 21738, 410-531-3647, email: info@sheepand-wool.org

June 1 - 2, 2002

Southwest Montana Flock and Fiber Festival, Dillon Montana. Farm management and fiber arts workshops, wool and commercial sheep show, mohair and cashmere goat show, fleece show and sale, vendor booths, demonstrations, children's events, farm photo contest. For more information: www.gjfarm.com/Festival.html or contact: Drin Becker, phone: 406-834-3444.

June 13 - 16, 2002

Estes Park Wool Market events and workshops, Estes Park, Colorado. Workshops, livestock exhibits, vendors, cashmere goat show (June 15th), other animal shows, handspun skeing competition. For a detailed schedule, see their website: <http://www.estesnet.com/>

June 21 - 23, 2002

Black Sheep Gathering, Lane County Fairgrounds, Eugene, Oregon.

September 2004

8th International Conference on Goats, Pretoria, South Africa. For information, contact Dr. Norman Casey, University of Pretoria, Department of Animal and Wildlife Sciences, Pretoria 0002, Republic of South Africa, fax: 27-12-420-3290 email: nhcasey@postino.up.ac.za

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Eastern Cashmere Association (ECA)

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937-568-4994, tamarack@voyager.net

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pgroves@ccwebster.net

DUKES VALLEY FIBER FARM
Fran and Joe Mazzara
4207 Sylvester Drive
Hood River, OR 97031
541-354-6186
FMAZZARA@gorge.net

FOXMOOR FARM
Carol and Carrie Spencer
1178 N.E. Victor Point Road

Silverton, OR 97381
Phone: 503-873-5474
Message: 503-873-5430
foxmoorfarm@goldcom.com

GOAT KNOLL
Paul Johnson/Linda Fox
2280 S. Church Rd.
Dallas, OR 97338
503-623-5194
goatknol@teleport.com

HARVEST MOON FARM
Guy and Karen Triplett
63311 Abbey Road
Bend, OR 97701-9743
541-388-8992
harvest@empnet.com

HAWKS MOUNTAIN PYGORA'S
Lisa Roskopf & George DeGeer
51920 SW Dundee Rd.
Gaston, OR 97119
503-985-3331
Fax: 503-985-3321
lisa@hmrpygoras.com

HIDDEN MEADOW FARM PYGORAS
Susan J. Precht
23471 Cedar Grove Rd.
Clatskanie, OR 97016
503-728-4157
pygora@clatskanie.com

MCTIMMONDS VALLEY FARM
Janet and Joe Hanus
11440 Kings Valley Hwy.
Monmouth, OR 97361
503-838-4113
janhanus@open.org

ROARING CREEK FARMS
Arlen and Cathy Emmert
27652 Fern Ridge Road

Sweet Home, OR 97386
503-367-6698
cashmere@proaxis.com

T & T CASHMERE
Trycia and Tom Smith
PO Box 488
Turner, OR 97392-0488
503-743-2536
TryciaSmith@msn.com

WILD FLOWER FARM
Michele and Perry Lowe
4295 Perrydale Rd.
Dallas, OR 97338
503-831-3732
pmlowe@teleport.com

PENNSYLVANIA

SANDRA ROSE CASHMERES
Jim & Sandra Rebman
8001 Colebrook Rd.
Palmyra, PA 17078
717-964-3052

TEXAS

4-B RANCH
William G. Nagel
4625 Sandy Fork
Harwood, TX 78632-9999
830-540-4601
fax: 830-540-4707
bnagel@gvvc.com

BAR-Y
James Barton
PO Box 915
Sonora, TX 76950
915-387-5284
bar-y@sonoratx.net

BESCO RANCH
Robert and Ethel Stone
7220 CR 261
Zephyr, TX 76890
915-739-3733
bobstone@bwoodtx.com

FOSSIL CREEK FARM
Norman and Carol Self
1077 Cardinal Drive
Bartonville, TX 76226-2620
940-240-0520

J 'N' S RANCH
James and Sylvia Stalnaker
Route 1, Box 206
Burlington, TX 76519
254-605-0299
jnsranch@hotmail.net

VIRGINIA

SILVER BRANCH FARM
Chuck and Lisa Vailes
1506 Sangers Lane
Staunton, VA 24401
540-885-1261
crvailes@cfw.com

STONEY CREST FARM
Anne and Roy Repaske
570 Paddy's Cove Lane
Star Tannery, VA 22654
Phone/fax: 540-436-3546
cashmere@shentel.net

WASHINGTON

BREEZY MEADOW CASHMERE FARM
Douglas and Roberta Maier
810 Van Wyck Rd.
Bellingham, WA 98226
360-733-6742
fibergoat@earthlink.net

BROOKFIELD FARM
Ian Balsillie/Karen Bean
PO Box 443
Maple Falls, WA 98266
360-599-1469 or
360-715-1604
brookfarm@earthlink.net

LIBERTY FARM (NLF)
Cliff and Mickey Nielsen
5252 Hwy 12
Yakima, WA 98908
509-965-3708
Cnielnlf@aol.com

SHEA LORE RANCH
Jeremiah and Nancy Shea
4652 S. Palouse River Rd.

Continued on next page

CASHMIRROR

Breeders Directory
Continued

Georgia Goat Production
Continued from page 24

MORE WASHINGTON

Colfax, WA 99111-8768
Phone: 509-397-2804

STILL WATERS

CASHMERE

Moon and Diana Mullins
PO Box 1265
Twisp, WA 98856
509-997-2204
509-429-0778
dmullins@methow.com

WALLFLOWER FARM

Dan and Marti Wall
16663 Beaver Marsh Road
Mt. Vernon, WA 98273
360-424-7935
Fax: 360-428-4946
cashmere@sos.net

CANADA

GIANT STRIDE FARM

Pat Fuhr
RR #3
Onoway, Alberta, Canada,
TOE IVO
403-967-4843
giantstride@compuserve.com

**Internet listing of these
breeders and a link to
their email addresses and
homepages, if they have one,
can be found on the net at:
[http://www.cashmirror.com/
breeders.htm](http://www.cashmirror.com/breeders.htm)**

1967 does regulate the slaughter and inspection of all meat.

Most producers market their kids at four to five months of age or before weaning. There is some demand for milk-fed cabrito that is less than five weeks old. While there seems to be a growing demand for goat meat, marketing is more difficult than other species due to the aforementioned lack of an organized marketing and grading system, as well as differences in seasonal demand and seasonal product availability.



Continued on next page

Georgia Goat Production
Continued from previous page

Table 1. Relative Production Characteristics of Five Major Types or Breeds of Meat Goats in Georgia

Characteristics	GA Native	Spanish	Angora	Dairy	Boer
Longevity	+++	+++	++	+	?
Thriftiness	++++	++++	+	+	?
Frame Size	+	++	++	++++	+++
Muscle	+	++	++	++	++++
Milk	+	+	++	++++	+++
Udder conformation	+++	+++	+++	+	+++
Disposition	++	+	+++	++++	++++
Appetite	++	+	+	+++	++++
Nutrient Requirements	+	+	+++	++++	?



Capricorn Cashmere Herd Sold

Kris McGuire, owner of Capricorn Cashmere in Wyoming announced that she has sold her cashmere business to Kathryn and Christopher Cooper, in Ohio.

In addition to cashmere goats, the Coopers grow organic Black Cohosh, Goldenseal and Ginseng in the woods.

Kris reports that she travelled 1,400 miles from her house to



Ohio farm home of Christopher and Kathryn Cooper and the new home of Capricorn Cashmere goats. Photograph by Kris McGuire.

Hot Computer Tip

Never copy a DLL file into the system directory as so many applications do—unless you also smoke cigarettes, drink heavily, eat peas with a knife, maltreat your dogs and believe they speak Latin in Latin America.

Paul Lutus

http://www.arachnoid.com/lutus/dll_article.html



Ho-Ho-Ho! It's over!

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Children's Book: Buster the Cashmere Goat, Children's book by Paul G. Johnson, CM Ace Reporter. 66 pages, includes photographs. Good goat fun. Suitable for reading aloud for young

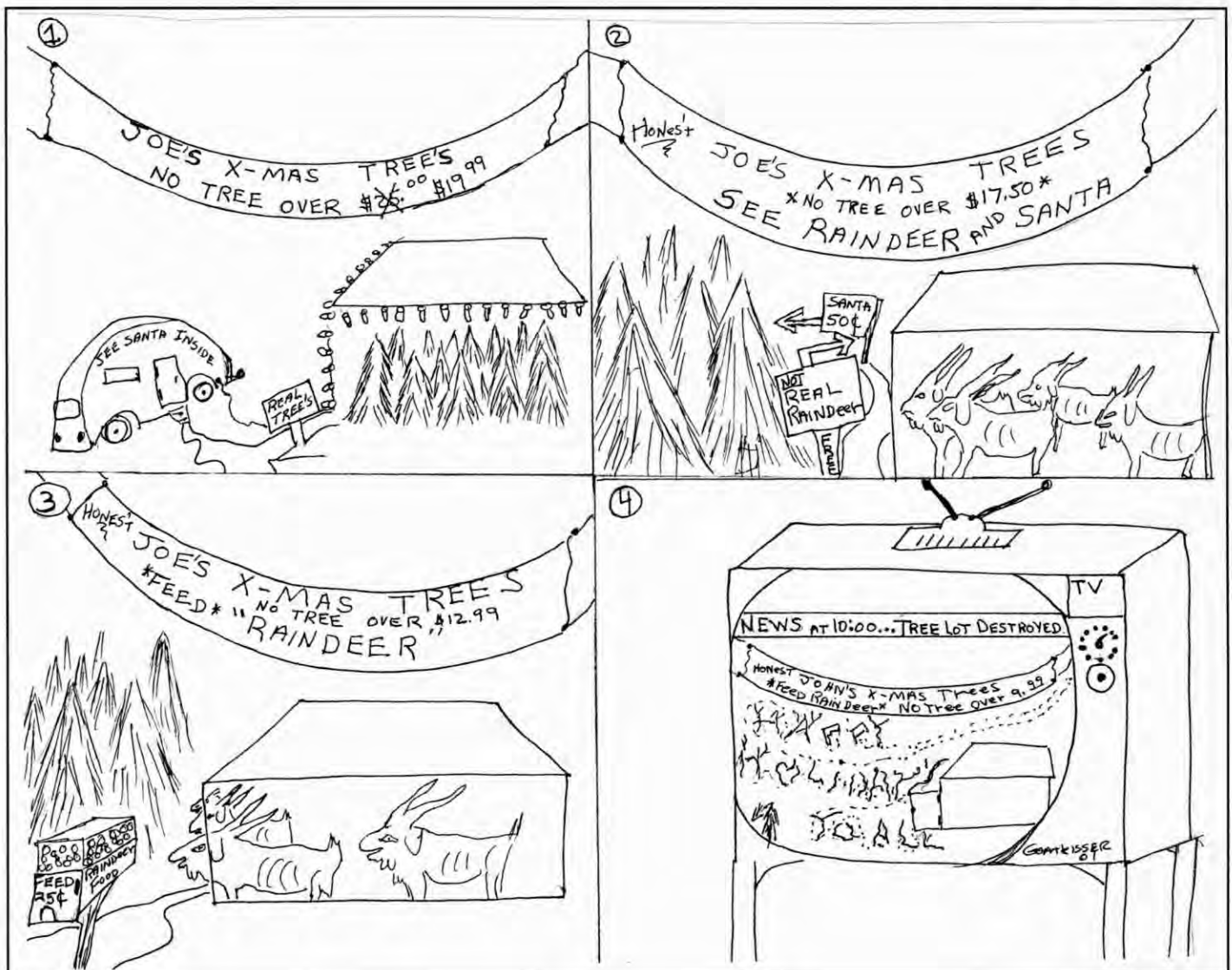
children, 4th grade readers, or for brightening lives of bored adults. Happy endings only. \$7.50. Order from CashMirror Publications. <http://buster.cashmeregoat.net>

Maremma Sheepdog Club of America, Maremma Livestock Guarding dogs, PO Box 546, Lake Odessa, MI 48849, 616-374-7209. Free information and Breeder Directory.

Shearing Stands for Cashmere Goats. 360-733-6742.

T-Shirts: CashMirror and Mild Goat Men, Heavy-duty cotton, available in Large and XL sizes. Suitable for "downtown" wear, yet sturdy enough for barn chores. CashMirror's are a classy natural-color. MGM's are in mild-mild red or gentle-green. \$17.50@. Prices include shipping. Order from CashMirror.

Yocom-McColl Testing Laboratories, Inc. for individual animal and core testing. Ph: (303) 294-0582, Fax (303) 295-6944, Email: ymcoll@ix.netcom.com Website: <http://www.ymcoll.com>



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Notable Quotes

"If you happen to have a cashmere doe with only one working teat, which of your does do you suppose will have triplets?"

...Diana Mullins, Twisp, Washington

"While goats are highly sensitive to water quality, they also are extremely efficient in water use. Goats approach the camel in the low rate of turnover per unit weight."

...Calvin Alford, et. al, "Meat Goat Production in Georgia"

"If all economists were laid end to end, they would not reach a conclusion. "

...George Bernard Shaw

"Beware while reading health books; you might die of a misprint."

...Mark Twain

The Deadlines:

Articles, photographs, advertising and other information submitted must be received by the 25th of the month prior to magazine issue date.

If you need assistance designing or laying out a display ad, or fine-tuning an article, earlier is appreciated.

*Breeders of Cashmere
Producing Goats*

Guy & Karen Triplett

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