CASHMIRROR

October 2003

Volume 14, Issue 9

The monthly magazine devoted to cashmere goats and their fiber

Volume 14, Issue 9, October 2003

Table of Contents

C A S H M I R R O R

ISSN 1090-736X

Just the Facts

CashMirror Magazine is published monthly by:

CashMirror Publications
2280 S. Church Rd.
Dallas, Oregon 97338
503-623-5194

E-Mail:
editor@cashmirror.com
Internet:
http://www.cashmirror.com

Publisher and Ace Reporter:
Paul Johnson
paul@cashmirror.com
Editor: Linda Fox

Opinions expressed in this magazine are not necessarily those of the publisher or of the attractive staff, although some of them might be.

CashMirror limits (as much as possible) its liability for errors, inaccuracies or misprints in advertisements, opinion papers and letters to the editor. Advertisers assume liability for the content of their advertising and assume responsibility for claims made in connection with their advertising. In case of error, the publisher is responsible only for costs associated with the space occupied by the error.

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

The *CashMirror* welcomes contributions of articles and photographs and even ideas for our pursuit. 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 photo:
Lisa Vailes
Silver Branch Farm, Staunton, Virginia
"Beethoven bundles up for winter"

Hunks with Goats!

What do you think?

We are trying to come up with a theme for the 2004 CashMirror calendar and we're tossing this one around.

To test the popularity of this idea, we are soliciting photographs from readers (that would be you!) for the annual calendar. Like last year, the 2004 calendar would substitute for the December CashMirror issue. We would select from the photographs submitted, 12 photos of "hunks with goats" to illustrate the months. We're not doing a Chippendale's thing here—all men should be properly clad; only the goats may be nude (or not).

We can receive photographs by email or regular mail and people submitting photographs which end up in the calendar will get extra calendars in time for Christmas gift dispersal.

We also intend to print major upcoming Fiber Events on the little square days like last year.

So...send us your hunks...we mean photos of your hunks (with goats). We will need all prospects by November 15th. We will then decide if we have enough hunks to proceed—or need to come up with another theme. Questions? Contact us!

Ladies...

Go forth and

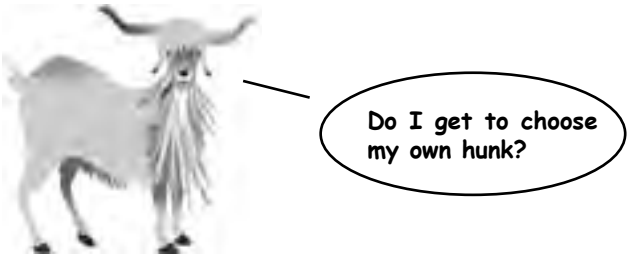
Photograph!

About the Cover

Information from Lisa Vailes
Silver Branch Farm, Virginia

Foal blankets work great on goats. They can be adjusted by overlapping velcro pieces in the front and stay secure by an additional belly and tail strap. The best part is they only cost about $30—even less in some catalogues. They can be sprayed with waterproofing material (camp dry, scotchguard) so that the goat can be left in the field.

Beethoven was very pleased! He's an old guy with only a little cashmere cover for the winter. It helped keep his weight on during this extremely cold past winter.



Goat Knoll's resident hunk and his second favorite goat.

Reflections

by Linda Fox

Felting Cashmere

If you were a CashMirror subscriber in April 1999, you may remember my Book Report on Gossamer Webs, the classic book by the Galina Khmeleva and Carol Noble about creating Orenburg shawls. As part of the book review and in preparation for making Orenburg-type shawls, I spun fine cashmere yarn, plied it with silk, and knit the little sample shawl illustrated in the book.

Since then, I've shown my little sample (at right) to anyone who would look at it. It has been a good piece to take to shows—like OFFF—to show people interested in cashmere what can be done with my goats' coats. In between events, I hang it proudly on my display rack in the hallway.

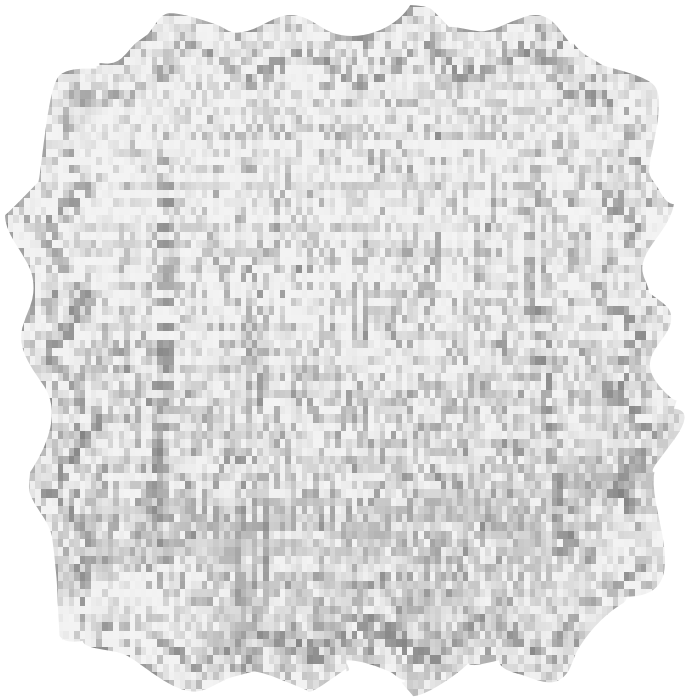
I took my little sample to OFFF along with other samples of yarn and completed projects. On the return from OFFF, at the end of a long exhausting weekend, we hurriedly stowed our show goodies in the truck to concentrate on getting the goats loaded and settled back at home.

The next day, when removing clothing from the clothes dryer, I found a small (clean) densely packed knitted cashmere sample which was now half the size of the original. Now I have a good example of how cashmere will felt. The attractive lacy pattern in the border and around the center section is gone. It is still very soft.

This experience inspired us to find a couple articles about felting for this issue. As you probably know, cashmere felts easily. It is easier to wash after it has been spun into yarn, if you can wait. Washing raw cashmere fiber must be done with extreme care, being careful not to agitate the fibers when they are wet. And, as you can see, even after it is spun into yarn and knitted up, you still must be very careful—at least careful enough to avoid throwing it in with a regular load of wash. I assume the damage was done by the time it left the washer, but probably the dryer also did it no good.

Cashmere products clean beautifully when they are washed properly—how I do it is noted at the right.

Now, the question is, do I make more of these little felted cashmere coasters so I have a complete set or just keep this one around as a reminder to be more careful?



Mini cashmere and silk Orenburg-style shawl, about 10" square. It *was* a beautiful sample, useful to illustrate a good use for cashmere.

A nicely felted cashmere piece, about 5" square—now useful only as a classy coaster. It will look nice under a coffee mug.

How I Wash Cashmere Yarn or Garments

To wash finished articles or yarn, I soak it in very warm water which contains a Tablespoon or so of dishwashing soap (I use Dawn) for about 15 minutes. I then gently squeeze out this water and rinse the garment in two successive rinses of clean water which is about the same temperature as the wash water had cooled to. I then rinse with water which contains a little white vinegar (about 1/4 cup for a kitchen sinkfull). I then rinse again with clean water. I gently squeeze the water out of the piece and then if I want to get even more water out, I roll it in a towel and squeeze more. Skeins of yarn can be hung to dry. Garments should be dried flat or blocked if you have a lacy pattern you want to emphasize.

When Readers

The McNab Family Goats

Above: a couple of the old bucks from the McNab Family goat herd—two of the last few descendants of a goat herd established in the 1800's. Thanks to efforts of concerned people like Lorie, this breed will not die out as they have girlfriends arriving soon.

Linda,

You are wonderful. We had a message on our answering machine tonight when we got home. We have goats already. I am going to eat dinner and then email you some of the pictures I got the other night that I have been telling you of. Wow.

Maybe you could make a story of the arrival of the new ladies here, etc. and make some money for your magazine. Thanks again.

Lorie Egerer
Ukia, California
October 14, 2003

Photographs by Lorie Egerer

The photos are recently taken and the two at right are of the old boys where they like to hang out—a spot where an airtanker crashed two years ago fighting a fire up here. It was a midair collision. It seems that the goats and other wildlife like to spend time here. Lorie reports that there is a lot of "poops" there and that it is not uncommon to see deer bedded down here catching the sun.

Continued on next page

...More Readers Talking Back

Dear Paul and Linda,

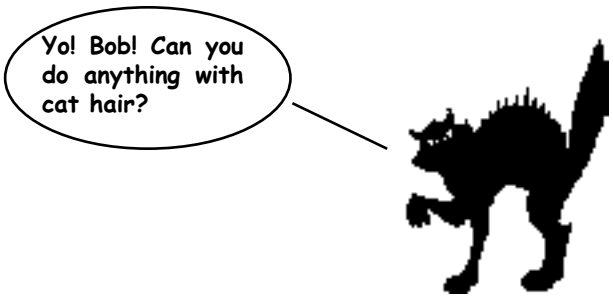
I had a thought I would put out there. I have been invited to some of the Alpaca vendor shows to see if I can sell some of our fiber. I have been going to the area shows for about 4 years now to see how the Alpaca breeders are promoting their fiber related articles. And I was wondering how this would work for the cashmere breeders. For one thing, there are a lot more Alpaca breeders then there are Cashmere breeders in this state. I am seeing that they are getting their fiber processed into sellable items—scarves, sweaters, vests, hats, socks, and a lot of woven shawls. Does anyone know how to get cashmere processed into sellable items as I am not a weaver or knitter?

Since I have been going to some of the Alpaca vendor shows I have had some people interested in our cashmere finished into some sort of clothing. I am able to sell some of my clean spinable cashmere but most interested purchasers would like a finished product. If anyone has any information on this please email me at Borganic2@aol.com. (Phone number: 970-568-0264)

Also if anyone would like me to see if I can sell any of their yarns or other products I would be interested in selling on a consignment basis.

Thank you in advance and keep up the good work. Take care and maybe we can get out your way to a cashmere show next year.

Bob Marshall
Marshall's Organic Acres
Wellington, Colorado
September 19, 2003



Garment Shrinkage Problems and How to Handle Them
By Dennis Lodge, UK drycleaning manager at ICI
http://www.alexreid.com/alexreid/advice2.htm

Editor's Note: This article is intended for dry cleaners, but there are useful facts for us as well.

I'm sure you have all seen the woolen jumper accidentally cleaned in a domestic washing machine. As well as the severe change in size, the material is also badly felted. Felting shrinkage is also common to cashmere, mohair and angora. In fact, these fibres are more susceptible to shrinkage.

To understand what actually causes wool and other fibres to shrink, we must first examine a fibre, a wool fibre for example, under a high power microscope. The examination under the microscope reveals that the fibre has scales (similar to fish scales) on its surface, which lift in the presence of moisture. If the fabric or garment is subjected to mechanical action when the scales are in the raised state, the scales on the fibres interact with each other resulting in a "ratchet action". This ratchet action occurs in one direction only. Therefore, the shrinkage that occurs is permanent.

Because shrinkage depends upon fibres moving and sliding against each other, tighter material such as suiting are less prone to shrinkage. However, given enough moisture even these materials can still shrink!

As a rule, knitted garments are most at risk from felting shrinkage. The effect which we call felting is also referred to as milling and this effect is also used in order to enhance the appearance of a material or garment. There are typical examples where this is apparent—in knitted woolens, blazer fabric, ladies suiting and winter coats. These garments, or the fabric from which they have been manufactured, are often processed in industrial drycleaning machines or washing machines using controlled amounts of moisture and/or mechanical action in order to produce the felted effect. Garments that incorporate a felted appearance are far less prone to additional felting/shrinkage in drycleaning, unless severe levels of moisture are encountered.

It is always important, particularly with knitted woolens to clean as a woolen load only. Often the so called woolen load contains acrylics and any moisture in the load is preferentially taken up by the woolens present. This can result in shrinkage occurring when the woolens are in a minority, therefore, try where possible to clean all woolens together or avoid moisture altogether. Fibres such as wool and mohair naturally contain moisture. This is called "regain" and it can be as much as 16 per cent by weight. Regain depends upon the relative humidity and storage conditions. Sometimes, the more sensitive fabrics like cashmere, mohair and angora can shrink in a standard drycleaning process because they contain sufficient natural moisture within themselves. If a garment feels damp or wet when you receive it, ensure that it is thoroughly dry before processing.

Also, it is not only wool and its associates that suffer felting. Mixtures of wool with nylon, for example, can often

Feeding your Buck

By Miriam Jeswine

Reprinted from CashMirror, December 1989 (Vol 1, Issue 3)

Now that Mr. Buck is in his perfumed glory, it is both more difficult and more important to keep him healthy and productive. If he gets sick, he will lose his desire to breed, and a big part of the breeding season may pass without his services. Your efforts to keep him healthy will be focused mostly on providing the nutrition he needs to be able to maintain and repair his body. Your job is complicated, of course, by the fact that he is easily distracted from food this time of year. It really helps to have a companion with him to compete for food, a bred doe, a wether, or another buck about the same size. Of course, you will have dewormed him before the beginning of breeding season.

Fertility is your chief concern during the breeding season. For this reason, the buck must have adequate protein for tissue repair and maintenance, but not so much as to stress his liver and kidneys, bucks being prone to kidney stones. If his hay is mainly grass, the grain can be fairly high protein. If his hay is mainly legumes, such as clover or alfalfa, then the grain should be lower protein so that the total ration is an average of 12 to 14%. The higher percent would be best for young bucks who also still need to grow.

Hay will vary greatly in protein content depending on plant variety and the time it was cut. For maximum protein, the hay should be cut just before bloom. The later the cut, the lower the protein. Grass hays will run between 7% or less and 15% protein. Average is about 8%. Alfalfa can vary between 8% and 24% or more, with an average of about 16%. Let us assume, though, that he is eating 4 lbs. of 8% protein grass hay. It take 2 lbs of 16% protein grain to bring the average up to 12% overall. If the hay is good alfalfa of 18% protein, then 2 lbs. rolled oats, or COB, (corn, oats, barley) will give an average of about 14%.

The concern with alfalfa is that the buck may develop kidney stones, because alfalfa is extremely high in calcium but very low in phosphorus and magnesium. The balance of calcium to phosphorus should be no more than 2 parts of one to one part of the other, but alfalfa may be as much as 16 to 1. Grains and high phos mineral mixes such as Manna Pro makes can help correct the balance. Ample fresh water, warmed in cold weather, helps prevent kidney stones. Vitamin D is also essential for appropriate calcium uses in the body.

Two other nutrients important for fertility are selenium and zinc, both of which the body uses in making seminal fluid. Most mineral mixes have zinc, but the selenium content is so restricted that frequent small shots of Se or top-dressing with supplemental Se are essential during breeding season in deficient areas of the country. A monthly shot of 1 cc of MuSe will give 166 micrograms daily supply, but only about 2 units of E. Research at Oregon State University suggests that selenium is either used or secreted in about 3 to 4 weeks after an injection. Absolute daily requirements have not been established, but it looks like 200 to 300 mcgs. of Se per day and 45 or more units of E per day would be desirable. Toxicity level is about 1 mg. (1000 mcgs) per 100 lbs. body weight. Selenium also is important in making glutathione peroxidase, a huge factor in the ability to repair damage to tissue from all sources, whether disease, injury, or radiation. White muscle disease is caused by selenium deficiency which also may contribute to sudden heart failures. Another kind of failure, of interest in does, may be blamed on mineral deficiency.

Without zinc, the buck loses his libido, so of course it is essential to fertility. Zinc is also an important component of T cells which fight viruses. Zinc deficiency shows in lowered resistance to disease, slow healing, and poor skin and hair quality. The buck will be more likely to get pneumonia, arthritis, parasites and foot rot if he is deficient in zinc or in Vitamin A.

Vitamins A, D and E are essential to the buck's disease resistance and they will be in short supply in poor quality hay. A cc per month of injectable would do the buck some good with 500,000 units of A, 75,000 units of D, but unfortunately only 5 units of E. This is well below toxicity levels. The result of too little A shows up in eye problems, dull coarse hair, skin diseases, poor disease resistance, and hoof rot. Too little D shows in bone malformations, weak or short, thick bones, and kidney problems. During winter the need for these vitamins is particularly great.

Vitamin E deficiency is a problem but hard to identify. I had a friend lose several kids to white muscle disease, but blood tests showed adequate selenium. Vitamin E seemed to be the culprit. The body does not store E, but uses or secretes it in about 3 days. Overdoses are almost unheard of. Heat destroys E and the common practice of milling and pelleting feeds burns off the E in the grains and vitamin mixes so that even if the feed tag says E was added, it may get demolished. A good source of E would be raw wheat germ top dressed in the grain.

If, despite your best efforts, the buck does fall ill, there are nutrients which help him recover more quickly. These include vitamin C, which is available in powder form to mix with water in a drench, and B complex, either by injection or by mouth. These are powerful stress fighters, and during illness, the need for them rises just as the ability to get them from food drops. Franklin's Ave solution is a good item to keep on hand. It contains essential amino acids (proteins), B vitamins and electrolytes. If you poke that boy full of goat builders, he might just muster up the resources to get well without much else.

Remember that good nutrition is simply a matter of providing the raw materials to maintain the body in good, or preferable, in optimum health. That healthy animal probably will not get sick, or if he does, he won't get very sick. After all, the agents

Continued on next page

Feeding your Buck
Continued from previous page

of disease are all around. They only take over when the animal is weakened by poor nutrition, some external stress, or excessive parasites. Feed the buck and starve the disease bugs. Then you might have a buck which lives to a valuable and respected old age.

"Did I hear someone mention more food?"

Eastern Cashmere Association
2003 Virginia State Fair
Fleece Competition Results

Date: September 30, 2003
Judge: Kris McGuire

BEST COMBED CASHMERE GOAT
Lars BLF, Yvonne Taylor, Black Locust Farm, Washington, ME

BEST SHORN CASHMERE GOAT
Haiku BPC 149, Wes Ackley, Bessey Place Cashmere, Buckfield, ME

DOE COMBED KID ('02 DOB)
18 in Class
1st E.T. RSC, Diane Thompson , Riversong Farms, Quesnel, BC, Canada
2nd Doe SF-R22, Roy Repaske, Stoneycrest Farm, Star Tannery, VA
3rd Mattie THV-R9, Lisa Vailes, Staunton, VA
4th Emmanuel RSC, Diane Thompson, Riversong Farms
5th Enya RSC, Diane Thompson, Riversong Farms
6th Stella WV-R8, Michael O'Connor, Madison, VA
7th Frieda HPF, Pamela Haendle, Hermit Pond Farm, Edmeston, NY
8th Doe SF- R24, Roy Repaske, Stoneycrest Farm
9th Concertina SF-R16, Roy Repaske, Stoneycrest Farm
10th Celeste WV-R13, Michael O'Connor

DOE COMBED 2ND-3RD FLEECE ('01 &'00 DOB)
25 in Class
1st Kilowatt BPC, Sonia Jones, Milo, ME
2nd Kittery BPC 200, Wes Ackley, Bessey Place Cashmere
3rd Monica BBS 002, Jeanne Austin, Blackberry Slump Cashmere, Augusta, NJ
4th Lieselotte BLF, Yvonne Taylor, Black Locust Farm, Washington, ME
5th Aphrodite STC, Sonia Jones
6th Tink THV-N6, Gloria Rubino, Toad Haven, Saylorsburg
7th Clover JAB 26, Susanne Roth
8th Esmerelda HPF, Pamela Haendle
9th Cosmo RSC, Diane Thompson, Riversong Farms
10th Daisy RSC, Diane Thompson, Riversong Farms

DOE COMBED 4TH - 7TH FLEECE ('99-'96 DOB)
19 in class
1st Giselle BPC 124, Wes Ackley, Bessey Place Cashmere
2nd Bodoccia RSC, Diane Thompson, Riversong Farms
3rd Chloe HPF, Pamela Haendle, Hermit Pond Farm
4th Belinda BLF, Yvonne Taylor, Black Locust Farm
5th (tie) Majic FXMF, Carol Spencer, Foxmoor Farm, Silverton, OR

Continued on next page

ECA VA Fleece Competition Results

Continued from previous page

5th (tie) Ruth BBS 962, Jeanne Austin, Blackberry Slump Cashmere
6th Anika RSC, Diane Thompson, Riversong Farms
7th Bijou RSC, Diane Thompson, Riversong Farms
8th Verdandil BLF, Yvonne Taylor, Black Locust Farm
9th Clara SF-K12, Roy Repaske, Stoneycrest Farm
10th Mocha THV-L1, Gloria Rubino, Toad Haven

DOE COMBED SENIOR ('95 DOB or before)
9 in class

1st Sweetie LCB OR434, Wes Ackley, Bessey Place Cashmere
2nd Kimberleys TCF CE1, Roy Repaske, Stoneycrest Farm
3rd Bouchaine BLF, Yvonne Taylor, Black Locust Farm
4th Elvira BBS 936, Jeanne Austin, Blackberry Slump
5th Blanche CCB 138, Jeanne Austin, Blackberry Slump
6th Black Opal BLF, Yvonne Taylor, Black Locust Farm
7th Heidrum BLF, Yvonne Taylor, Black Locust Farm
8th Corelli SF-H2, Roy Repaske, Stoneycrest Farm
9th Cherbini SF-H1, Roy Repaske, Stoneycrest Farm

BUCK COMBED KID ('00 DOB)
13 in class

1st Hjort BLF, Yvonne Taylor, Black Locust Farm,
2nd Eric RSC, Diane Thompson, Riversong Farms
3rd Valani BLF, Yvonne Taylor, Black Locust Farm
4th Gato Negro BLF, Yvonne Taylor, Black Locust Farm
5th Black Jack Frost JAB44, Susanne Roth
6th Emilio THV-R13, Gloria Rubino, Toad Haven
7th Buck SF-R23, Roy Repaske, Stoneycrest Farm
8th Fritz HPF, Pamela Haendle, Hermit Pond Farm
9th Ralph THV R-11, Gloria Rubino, Toad Haven
10th Jack SGF-1, Jane McKinney

BUCK COMBED 2ND - 3RD FLEECE ('01 & '00 DOB)
8 in class

1st Lars BLF, Yvonne Taylor, Black Locust Farm
2nd Duddley RSC, Diane Thompson, Riversong Farms
3rd Sgt. Pepper BLF, Yvonne Taylor, Black Locust Farm
4th Monteverdi SF-P16, Jane McKinney
5th Presto SF-P4, Roy Repaske, Stoneycrest Farm
6th Palomides BLF, Yvonne Taylor, Black Locust Farm
7th Boogie P6-01A, Michael Koelzer
8th Greybeard SF-N6, Roy Repaske, Stoneycrest Farm

BUCK COMBED 4TH - 7TH FLEECE ('99 -'96)
and SENIORS ('95 or before) 4 in class

1st Hermes BPC, Yvonne Taylor, Black Locust Farm
2nd Cruz ASB, Yvonne Taylor, Black Locust Farm
3rd Mick BGS, Yvonne Taylor, Black Locust Farm
4th Chance Wayne RU414, Jeanne Austin, Blackberry Slump

ALL WETHERS 6 in class

1st Charlie BBS 961, Jeanne Austin, Blackberry Slump
2nd Star WV P8, Michael O'Connor, Madison, VA
3rd Buffy JAB 43, Susanne Roth

4th Do Right TCF CL12, Amy Hoscher
5th Walter THV -N5, Gloria Rubino, Toad Gaveb
6th Duke BBS 011, Jeanne Austin, Blackberry Slump Cashmere

DOE SHORN KID ('02 DOB)
3 in class

1st Margie THV-R10, Gloria Rubino, Toadhaven
2nd Morganne THV-R12, Gloria Rubino, Toad Haven
3rd Doe #512, Diana Mullins, Still Waters Cashmere, Twisp, WA

DOE SHORN 2ND and 3RD ('01 & '00 DOB)
5 in class

1st Kalliste BPC 205, Wes Ackley, Bessey Place Cashmere
2nd Kalypso BPC 219, Wes Ackley, Bessey Place Cashmere
3rd Domino THV-N7, Gloria Rubino, Toadhaven
4th Nalla SBF-0211, Lisa Vailes
5th Doe#326, Diana Mullins, Still Waters Cashmere

DOE SHORN 4th-7th ('99-'96 DOB)
and Senior ('95 or before DOB) 9 in class

1st Haiku BPC 149, Wes Ackley, Bessey Place Cashmere
2nd Holly BPC 152, Wes Ackley, Bessey Place Cashmere
3rd Feather BPC 93, Wes Ackley, Bessey Place Cashmere
4th Carla HPF, Pamela Haendle, Hermit Pond Farm
5th Dejeuner BPC, Pamela Haendle, Hermit Pond Farm
6th Freckles, Douglas Maier, Breezy Meadow Cashmere Farm, Bellingham, WA
7th Spring Y0022 BMCF, Douglas Maier, Breezy Meadow Cashmere Farm
8th Y34 BMCF, Douglas Maier, Breezy Meadow Cashmere Farm
9th Brandy X0015 BMCF, Douglas Maier, Breezy Meadow Cashmere Farm

BUCK SHORN KID ('02 DOB)
and 2nd and 3rd ('01 and '00 DOB) 4 in class

1st (tie) Lafayette BPC 224, Wes Ackley, Bessey Place Cashmere, Buckfield, ME
1st (tie) G0067, Douglas Maier, Breezy Meadow Cashmere Farm
2nd G0066, Douglas Maier, Breezy Meadow Cashmere Farm
3rd Black Jack R26 BMCF, Douglas Maier, Breezy Meadow Cashmere Farm

IS IT HOT IN HERE, OR IS IT JUST EWE?

Colorado State Research Points to Sheep as Perfect Model to Study Effects of Menopause

July 24, 2003, Fort Collins—Colorado State University research points to the use of sheep—instead of laboratory rats—to more accurately study the effects of menopause after several research projects verify that under induced menopause the animal experiences similar symptoms and conditions as do women.

Older ewes—female sheep—experience hot flashes, eye trouble, bone density loss and other symptoms of menopause when their ovaries are removed, which means that research that would benefit menopausal and post-menopausal women, such as research about estrogen replacement therapy, osteoporosis treatments, and prevention of arthritis and sight-inhibiting changes can be conducted on ewes. For example, one Colorado State study that measured hot flashes with tiny embedded temperature loggers in ewes and showed that estrogen replacement results in milder and less frequent hot flashes, a phenomenon previously unreported in other animals with the exception of laboratory rats with their ovaries removed or in research monkeys.

"The accepted animal model to study menopausal symptoms and the occurrence of menopause is a laboratory rat with its ovaries removed, because only humans and primates go into menopause," said Dr. A. Simon Turner, a Colorado State researcher and professor of Veterinary Medicine. "We've proven with multiple research projects that sheep can mimic many aspects of menopause in women once their ovaries are removed, which mimics a surgical menopause. The introduction of a large animal model to study body temperature changes and other effects of menopause may prove to be invaluable."

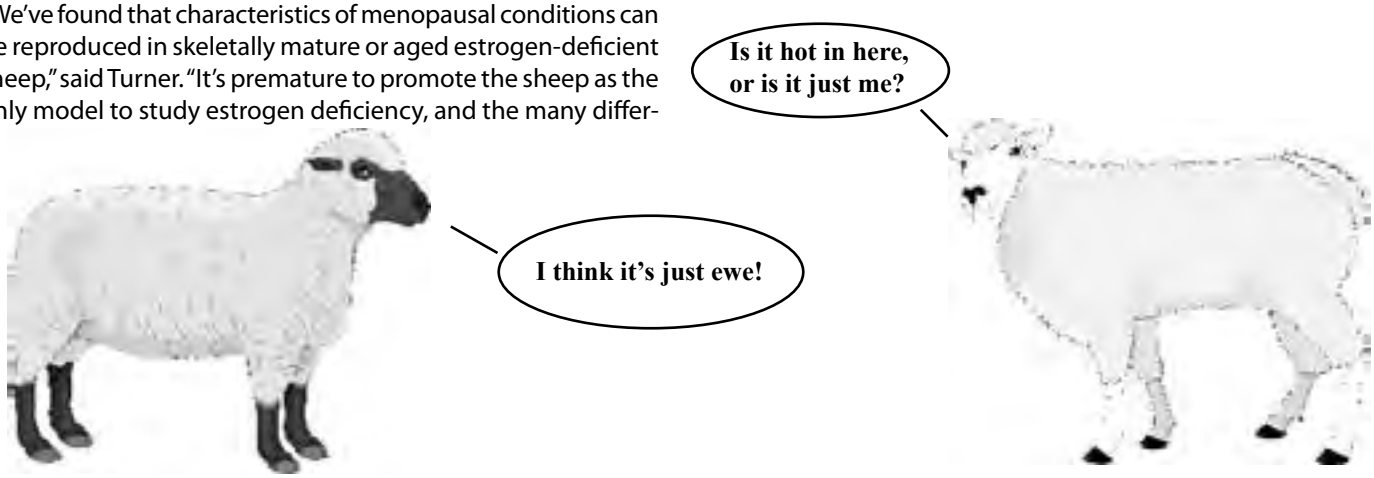
Turner and his colleagues have conducted research on sheep that supports data in human experiments related to menopause. In four separate studies, the group logged hot flashes in ewes, documented the effects of estrogen replacement therapy protecting against eye cataracts, and noted the onset of osteoporosis and changes in cartilage and the occurrence of hormone-caused dry-eye in studies.

"We've found that characteristics of menopausal conditions can be reproduced in skeletally mature or aged estrogen-deficient sheep," said Turner. "It's premature to promote the sheep as the only model to study estrogen deficiency, and the many differences from small animals and non-human primates need to be overcome. This model, however, offers the opportunity to study postmenopausal conditions and the safety and efficacy of new therapeutic agents with some confidence and in an economical way."

Turner has studied osteoporosis and bone density loss in sheep with their ovaries removed and found that the symptoms were very similar to those shown by postmenopausal women. In 1997, in collaboration with Dr. Clint Rubin, State University of New York, Stony Brook, Turner's research results gained international attention by showing that the bone density in female sheep's hind legs increased when they were regularly exposed to a metal plate emitting a subtle but high-frequency vibration..

Osteoporosis, bone density loss and bone fractures are common among the elderly—experienced by about 20 percent of people older than 70. These fractures are common in hips and are painful and can cause deformity. They're commonly treated with a combination of medications and supplements including calcium carbonate and estrogen, but treatments usually aren't preventative.

Hot flashes affect 50 to 80 percent of menopausal women. The incidence of cataracts increases in women as they age, and dramatically so after menopause. Dry-eye, which also effects eye sight, occurs in about 40 percent of menopausal women.



Metabolic and Nutritional Diseases

D. R. Nelson; U. of Illinois, Urbana
USDA Extension Goat Handbook

Pregnancy Toxemia

Also known as pregnancy disease, ketosis or twin lamb disease. Pregnancy toxemia is a metabolic disease of goats and sheep in late pregnancy. Factors important in the development of the disease are: (1) Presence of two or more fetuses; (2) Undernourishment during late pregnancy when the fetuses have the most rapid growth; (3) Addition of stress such as severe weather, sudden changes in feed, other disease or transportation upon the previous factors. The disease usually appears in the last 30 days of pregnancy and is more common after the first pregnancy. The does show signs of ketonemia, ketonuria, acidosis and central nervous system involvement. The mortality rate is high in affected animals. Most information available is the result of studies in sheep.

Cause—As pregnancy progresses, an increasing demand is on the available blood glucose supply of the doe or ewe because of fetal development. The principal source of energy to the fetus is glucose and utilization by the fetus occurs at the detriment of the mother. Glucose requirements during late pregnancy are increased 70-80% over the nonpregnant state since 80% of fetal growth occurs during the last 40 days of pregnancy. Blood sugar levels decrease as pregnancy progresses (hypoglycemia) from a normal 35-45 mg per 100 ml blood to 20-25 mg per 100 ml blood in late pregnancy. Pregnancy toxemia may develop when levels decrease to about 18 mg per 100 ml blood. The severity of hypoglycemia will be directly affected by undernourishment of the mother or by increased requirements of the fetus(es).

As the glucose supply diminishes from increasing fetal demands and decreased glucose production due to undernourishment, energy requirements are furnished by other metabolic pathways, i.e. from free fatty acids and amino acids. Breakdown of the free fatty acids results in increased production of ketones, acetoacetate and B-hydroxybutyrate. As hypoglycemia becomes more severe, the ketone level in the blood increases (ketonemia) and ketosis occurs.

As ketosis increases, the bicarbonate level in the blood decreases and acidosis may result. When the bicarbonate level declines sufficiently, the animal will become comatose. During the later stages of pregnancy toxemia, water consumption decreases, urine output is decreased and kidney function is impaired. The blood sugar level may increase severely (hyperglycemia) during the late stages of the disease as a result of the response of the adrenal glands to stress.

Circumstances which cause severe hypoglycemia will usually result in pregnancy toxemia. Under-nourishment of the doe may not meet the demands for glucose production. The level of nutrition should be increasing as pregnancy progresses so that the doe will be able to provide fetal requirements. The doe should be gaining weight during pregnancy. As previously mentioned, multiple fetuses greatly increase the glucose requirements. A gradual onset of undernourishment, as would be seen if the feed intake was not increased during pregnancy, may be tolerated by the doe and toxemia may not develop. However, if the animal is starved for several days, pregnancy toxemia may develop readily. Sudden changes in weather, infections or transport may result in periods of inappetence and may trigger pregnancy toxemia. Excessively fat animals may develop periods of poor appetite under stressful situations.

Clinical Signs—Clinical signs are those observed with involvement of the central nervous system. Initially, the animal tends to separate from others. There is mild depression. Evidence of blindness develops, the animal runs into objects, shows little or no reaction when approached, and wanders aimlessly. Dullness and depression become progressively severe. There is reluctance to move. Eventually they go down in sternal or lateral recumbency and show little or no response to their environment. The does become comatose and eventually die.

Occasionally, animals may show a short period or intermittent periods of hypersensitivity. There may be quivering, twitching of the ears, muzzle or eyelids or spasms of certain muscles. Incoordination may be evident. Recumbent animals may have convulsive paddling movements.

Chewing, teeth grinding or vigorous licking movements may be seen. Mild scouring may be present. A snuffling respiration due to excessive nasal secretion may be common. Drooling of saliva is also seen.

Temperature and pulse are within normal limits. Respiration is usually normal until the later stages when it may become labored. The appetite is poor or absent. Ketones may be de-

Continued on next page

Metabolic – nice word
What does it mean?

Metabolic
Pertaining to metabolism (great help there!)

Metabolism
The sum of the processes concerned in the building up (anabolism) of protoplasm and its destruction (catabolism) incidental to life; the chemical changes in living cells, by which the energy is provided for the vital processes and activites, and new material is assimilated to repair the waste.

Metabolic Diseases

Continued from previous page

tected in the urine.

Post Mortem Findings—The liver is enlarged and has a pale yellow to orange coloration. The adrenal glands may be enlarged. The uterus contains two or more fetuses.

Treatment—Oral administration of glycerol or propylene glycol or intravenous administration of glucose may be effective in the early stages of the disease. Insulin may be used with these treatments for better utilization of glucose. During the late stages of the disease, glucose administration may be ineffective or detrimental because the blood glucose levels may be very high.

During the later stages of the disease, acidosis and dehydration may be important factors. Intravenous administration of large volumes of electrolyte solutions with sodium bicarbonate may be important. Corticosteroids may not be effective in the later stages unless given at dosages utilized to combat endotoxic shock.

Cesarean section or other methods of terminating pregnancy may be effective in some cases.

Prevention—An adequate nutritional level throughout the pregnancy will prevent pregnancy toxemia. Protein and energy levels during the last 30-40 days of pregnancy should meet the doe's maintenance requirements as well as the growth requirements of the fetuses. Allowing the animal to become excessively fat should be avoided.

Management during late pregnancy should be directed at avoiding appetite problems in the animals. Avoid sudden feed changes, diminish stresses of severe weather, delay or avoid transportation and prevent concurrent disease problems.

Parturient Hypocalcemia
Also known as milk fever. Parturient hypocalcemia is a metabolic disease in does following kidding characterized by poor milk production, poor appetite, lethargy and low blood calcium levels. A hyperirritability characterized by tetany may occasionally occur.

Cause—Much research has been done on hypocalcemia in dairy cows but knowledge is still incomplete.

Following kidding, most does may have a lowered calcium level in the blood (hypocalcemia). This is partially due to the drain on available calcium by the production of colostrum. (Colostrum contains twice as much calcium as milk). Calcium is supplied from two sources: 1) dietary; 2) mobilization of calcium from the bone. Normally, calcium requirements following kidding are provided primarily from the diet since mobilization of calcium from the bone does not provide significant amounts until about 10 days after parturition. A loss of gastrointestinal function for any reason, before or at parturition, may cause a severe drop in the blood calcium level. Signs of hypocalcemia may develop. Since older animals have more digestive upsets at parturition, they have more problems with hypocalcemia.

A high level of calcium in the ration during gestation places almost complete reliance on the dietary source of calcium. If the prepartum diet is low in calcium, calcium mobilization from the bone is instituted to meet the calcium needs. If a gastrointestinal dysfunction occurs at parturition, the effects are not severe since part of the calcium requirements is supplied by mobilization from the bone.

Clinical Signs—Usually high producing older does are affected shortly after kidding. The does show lethargy, poor appetite and poor milk production. Occasionally, hypocalcemia tetany may be observed. The doe is hyperirritable and may show muscle twitching of the lips, eyelids and ears. Trembling or twitching of other muscles of the body may also occur. Convulsions may develop.

Blood calcium levels may be 5-7 mg per 100 ml blood. The response to calcium therapy may be diagnostic.

Treatment— administration of calcium preparations, intravenously or subcutaneously, will provide dramatic relief of clinical signs. Lethargic does may begin eating and become more active and alert within 12 hours. Tetany usually subsides in 30-60 minutes after treatment.

Prevention—The problem often involves many does in the milking herd. Usually, there is excessive calcium in the gestation diet from a mineral source and/or high quality legume hay. Correction of the calcium imbalance is necessary. A low calcium level during late pregnancy will help to control the problem.

Polioencephalomalacia
Also known as cerebrocortical necrosis. Polioencephalomalacia (PEM) is a disease of ruminant animals characterized by derangement of the central nervous system due to necrosis of the cerebral cortex of the brain.

Cause—The cause and development of the disease have not been entirely elucidated. Thiamine is produced in the rumen. In PEM, thiaminase, an enzyme that destroys thiamine, is thought to be produced by certain bacteria within the rumen and thiamine deficiency develops. A thiamine - analogue is also produced within the rumen which may replace thiamine in important metabolic reactions in the brain. Necrosis of the brain occurs.

Clinical Signs—Young animals on high grain diets are affected more often. Older animals and pastured animals may be oc-

Continued on next page

Metabolic Diseases
Continued from previous page

casionally involved.

The onset is often sudden with blindness and disorientation. The head may be elevated. Excitement may be seen but is usually replaced with dullness. The animal may go down on its side with its head thrown back. The legs may be rigidly extended. Convulsions may occur. If untreated, death usually occurs within a few days.

The appetite is lost and the animal does not drink. Temperature and respiratory rate are usually normal but the heart rate may be depressed.

Treatment—Administration of large doses of thiamine intravenously and/or intramuscularly early in the disease will usually produce a dramatic improvement within a few hours. In the later stages of the disease, the brain necrosis may be too severe for the animal to recover.

Prevention—Until further elucidation of the cause and development of the disease, little can be done to economically prevent the disease. If a case of PEM is diagnosed in a group of animals, it is advisable to inject the remaining animals with thiamine to prevent further cases.

Calculosis

Also known as urinary calculi, urolithiasis, kidney/bladder stones or waterbelly. Calculosis is a metabolic disease of male ruminants characterized by formation of concretions within the urinary tract with obstruction to the outflow of urine. This often results in rupture of the bladder or the urethra.

Cause—The disease occurs in animals on a high concentrate diet with a mineral imbalance resulting in excessive phosphorus intake. A high phosphorus level develops in the blood and in the urine. Magnesium and ammonium phosphate precipitate to form a concretion or calculus. The size may vary from sand-like particles to as much as 5-10 mm.

In the female ruminants, the calculi are passed easily through the short expandable urethra. In the male ruminant, the urethra is long and does not expand easily. The calculus must pass around three curves in the urethra. In sheep and goats, the urethral process is a short (2-3 cm) extension of the urethra beyond the tip of the penis. The diameter of the urethral process is slightly smaller than the remaining urethra. Calculi have a tendency to lodge at the lower curve of the penis or at the urethral process.

Once calculi have lodged, the wall of the urethra is damaged. Urine flow is obstructed and pressure may build up in the bladder until the bladder ruptures. If severe damage occurs to the wall of the urethra, it may rupture and urine may flow into surrounding tissues.

Urinary calculi problems are seen most frequently during the winter or periods of very warm weather when water consumption may be reduced.

Clinical Signs—Signs do not develop until there is partial or complete obstruction of the urethra. Uneasiness, frequent attempts to urinate and straining are seen early. Crystal deposits may collect on the preputial hairs. The animals may refuse food, isolate from the group and kick at the abdomen. If the bladder ruptures, the abdomen may enlarge. If the urethra ruptures, the lower abdominal wall may become thickened from urine infiltration. If the bladder or urethra rupture, the animals may show temporary improvement. However, as time progresses, the animal becomes depressed and death eventually results.

Treatment—Once clinical signs develop, damage to the urethra may be severe and while the animal's life may be saved, its reproductive capabilities may be lost. Since the calculi may frequently lodge in the urethral process, this may be easily removed and may eliminate the obstruction. Removal of the urethral process has no effect on the reproductive abilities of the buck.

Prevention—The calcium-phosphorus ratio should be 1.5-2:1. Often in breeding males, it is advisable to decrease the grain and increase the roughage. Adequate clean water should be available. Prevent freezing of the drinking water in the winter.

Continued on next page

Metabolic Diseases
Continued from previous page

Clinical Signs—Signs do not develop until there is partial or complete obstruction of the urethra. Uneasiness, frequent attempts to urinate and straining are seen early. Crystal deposits may collect on the preputial hairs. The animals may refuse food, isolate from the group and kick at the abdomen. If the bladder ruptures, the abdomen may enlarge. If the urethra ruptures, the lower abdominal wall may become thickened from urine infiltration. If the bladder or urethra rupture, the animals may show temporary improvement. However, as time progresses, the animal becomes depressed and death eventually results.

Treatment—Once clinical signs develop, damage to the urethra may be severe and while the animal's life may be saved, its reproductive capabilities may be lost. Since the calculi may frequently lodge in the urethral process, this may be easily removed and may eliminate the obstruction. Removal of the urethral process has no effect on the reproductive abilities of the buck.

Prevention—The calcium-phosphorus ratio should be 1.5-2:1. Often in breeding males, it is advisable to decrease the grain and increase the roughage. Adequate clean water should be available. Prevent freezing of the drinking water in the winter.

Horror Stories from Computer Tech Support
A Few Things to NOT Do with Your Computer!

Attempt to use the mouse as a footpedal.

Hold a document up to the screen, thinking the monitor will somehow scan and fax it.

Attach floppy diskettes to the side of a metal filing cabinet with magnets.

Use the CD-ROM drive as a cupholder.

Don't search for a key labelled "any" key when instructions call for "strike any key."

Pick up the mouse, point it at the screen, and click it as if it were a remote control.

Photocopy a diskette when asked to make a copy.

Unplug something vital to the computer's operation to free an outlet for a tea kettle or toaster.

New Zealand Cashmere Socks

(From Portland, Oregon)

You'll have to check out this website:
http://fetishize-me.com/cashmere.html

It's part of the internet site for Sock Dreams, a retail, internet only sock store located in Portland, Oregon. The site above is for their cashmere socks and their information on cashmere is as follows:

Why New Zealand cashmere?
Our supplier chooses New Zealand's cashmere because of the thick, luxurious fibers that the cashmere goats produce in that country. The goats are allowed to feed freely from the rich fertile Eco-friendly land of New Zealand. As with humans, the goat's diet reflects the health & quality of their hair.

The goats' superior diet enables New Zealand to produce about 150 tons of cashmere from just over 300,000 goats. By contrast, the average Mongolian goat produces 75 to 100 grams of usable fiber per year.

Why $45 - $60 for a pair of socks?
Our supplier uses 4-ply yarn to knit our socks for thickness & comfort. Ordinarily, the dress socks you see in your local luxury stores are 1-ply or 2-ply. We believe that if you are buying cashmere for warmth as well for the soft texture, then you should take full advantage of everything that cashmere has to offer & let them be thick!

A pair of our socks contains 200 grams of cashmere. It takes one goat over a year to produce enough of the high quality fiber shorn from the throat & belly that we use in one pair of socks.

United States Animal Identification Plan (USAIP)

News Release 8-6-03
EXECUTIVE SUMMARY
Protecting American animal agriculture by safeguarding animal health is vital to the wellbeing of all U. S. citizens. It promotes human health; provides wholesome, reliable, and secure food resources; mitigates national economic threats; and enhances a sustainable environment. Essential to achieving this goal is an efficient and effective animal identification program. Building upon previously established and successful animal health and animal identification programs involving many animal industries, an industry-state-federal partnership, aided by the National Institute for Animal Agriculture (NIAA), was formed in 2002 to more uniformly coordinate a national animal identification plan. This resulting plan, requested by the United States Animal Health Association (USAHA) and facilitated by USDA's Animal and Plant Health Inspection Service (APHIS), was formulated in 2003 for presentation at the October, 2003 annual meeting of the USAHA. More than 100 animal industry and state-federal government professionals representing more than 70 allied associations/organizations collectively assessed and suggested workable improvements to the plan to meet future U. S. animal identification needs.

Fundamental to controlling any disease threat, foreign or domestic, to the nation's animal resources is to have a system that can identify individual animals or groups, the premises where they are located, and the date of entry to that premises. Further, in order to achieve optimal success in controlling or eradicating an animal health threat, the ability to retrieve that information within 48 hours of confirmation of a disease outbreak and to implement intervention strategies is necessary. The USAIP is focused on utilizing state-of-the-art national and international standards with the best available and practical technologies. It is dynamic and flexible, and will incorporate new and proven technologies as they become available. States' needs in implementing animal identification will receive priority within the uniformity provided by federal oversight.

The USAIP currently supports the following species and/or industries: bison, beef cattle, dairy cattle, swine, sheep, goats, camelids (alpacas and llamas), horses, cervids (deer and elk), poultry (eight species including game birds), and aquaculture (eleven species). Implementation will be in three phases: Phase I involves premises identification; Phase II involves individual or group/lot identification for interstate and intrastate commerce; and Phase III involves retrofitting remaining processing plants and markets and other industry segments with appropriate technology that will enhance our ability to track animals throughout the livestock marketing chain to protect and improve the health of the national herd. Initial implementation will focus on the cattle, swine, and small ruminant industries. In transition, the USAIP recommends that: all states have a premises identification system in place by July, 2004; unique, individual or group/lot numbers be available for issuance by February, 2005; all cattle, swine, and small ruminants possess individual or group/lot identification for interstate movement by July, 2005; all animals of the remaining species/industries identified above be in similar compliance by July, 2006.

These standards will apply to all animals within the represented industries regardless of their intended use as seedstock, commercial, pets or other personal uses.
It is well acknowledged that costs associated with the USAIP will be substantial and that a public/private funding plan is justified. Significant state and federal costs will be incurred in overseeing, maintaining, updating, and improving necessary infrastructure. Continued efforts will be required to seek federal and state financial support for this integral component of safeguarding animal health in protecting American animal agriculture.

A national animal identification plan is being developed to help protect American animal agriculture. State animal health officials, livestock industry groups and the federal government are working together to finalize the plan. They hope to have Phase One of the plan, Premises ID, in place by July 2004. This phase would require that standardized premises identification numbers be established for all production operations, markets, assembly points, exhibitions and processing plants.

Once the Premises ID systems are in place, the plan will proceed to Phase Two, which calls for individual identification for cattle in commerce.

Phase two would require all other food animal and livestock species that enter commerce to be identified through individual or group/lot identification. Phase Two would be in place by the beginning of 2006. The goal is to develop a national standardized program that has the capability to identify all premises and animals that had direct contact with a foreign animal disease within 48 hours of its discovery. This goal may require that certain data be housed in a central database.

States, industry and the USDA have been working in partnership on the plan through the National Animal Identification Development Team. The team, which includes a steering committee and five working groups, has produced a draft plan with the working name of the U.S. Animal Identification Plan (USAIP). It carries the tagline "Protecting American Animal Agriculture."

"The development of a national identification plan has been worked on for several years, but the recent BSE experience in Canada has reinforced the need for the U.S. to introduce a national plan as soon as practicably possible," said Neil Hammerschmidt, Chief Operating Officer of the Wisconsin Livestock Identification Consortium and co-chair of the development team's steering committee.

"A national plan which IDs all food animals and livestock will allow the U.S. to identify any animals exposed to disease and

Continued on next page

National Animal Identification Plan
Continued from previous page

will facilitate stopping the spread of that disease," said Glenn Slack, president and CEO of the National Institute for Animal Agriculture (NIAA). "This will help protect American animal agriculture from the devastating effects that might occur in the event of a case of BSE, foot and mouth disease or other deleterious diseases ever being discovered in the U.S."

The draft plan draws on existing voluntary and compulsory animal identification programs currently in place in the U.S. and coordinates these into a truly national program for the first time. Details are still to be finalized, but the development team expects to complete its work within the next 60 days. It is expected that the plan will then be open to review and comment by industry stakeholders.

"Maintaining the health of the U.S. animal herd is the most urgent issue for the industry and is the focus of the draft plan," said Hammerschmidt. "The benefits of a national animal health identification system include enhanced disease control and eradication capabilities, rapid containment of foreign animal disease outbreaks and enhanced ability to respond to threats to biosecurity."

"A national system would also provide benefits to industry in terms of market access and consumer demands," said Slack. "Source and process verification are gaining consumer momentum, providing producers with an added value opportunity. Also, livestock and animal products from the U.S. are highly marketable worldwide. Assuring animal traceability through animal identification adds value to the product."

"Furthermore, as more retailers and consumers demand source-verified systems, the ability of producers to sell their products to these markets might depend on the ability to trace animals to the farm of origin," said Slack. "Other countries have already developed systems that are being used as technical barriers to trade. These systems are rapidly becoming the world standard. The U.S needs to be consistent with the animal tracking systems of its international trading partners to avoid the loss of international markets."

"As recently as 1995, nearly nine million calves were identified with orange brucellosis vaccination ear tags," said Hammerschmidt. "That number represented slightly less than one fourth of all the newborn calves or about 45 percent of all female calves (only females are vaccinated). Today, fewer than four million calves are vaccinated (10 percent of total calves, 20 percent of females). The U.S. is very close to declaring itself free from brucellosis. The level of vaccination will continue to decrease, if not cease entirely. The identification of calves to the farm of origin will be minimal in two to three years."

"Without identification, our livestock industries would be vulnerable to any disease situation that required rapid tracking of animal movement," said Hammerschmidt.

The draft plan follows 18 months of intensive work by states, industry and USDA. In early 2002, NIAA's Animal Identification and Information System Committee organized an NIAA task force comprised of approximately 100 representatives of more than 30 stakeholder groups. After months of work, the task force produced the National Identification Work Plan (NIWP). That plan was presented at the NIAA ID/INFO EXPO in Chicago in July 2002. The final draft of the NIWP was then presented to the U.S. Animal Health Association (USAHA) at its annual meeting in October 2002.

The USAHA accepted the plan with a resolution calling for USDA, APHIS, VS, to establish a National Animal Identification Team composed of state, industry and federal partners to further develop a national plan, using the NIWP as a guide." With this charge, APHIS, VS identified key industry leaders to serve as the team's Steering Committee. These steering committee members then selected members of five working groups, including Communication, Transition, Standards, Governance and Information Technology.

An official Website (www.USAIP.info) containing details of the draft plan, background information, Frequently Asked Questions and Answers about the proposed plan and provision for comments about the plan is currently under construction.

For more information, contact: Scott Stuart, USAIP Communication Subcommittee Co-Chair, 719-538-8843, or email at Communication@USAIP.info

Simple Indigestion

J. L. Ayers; Los Olivos, CA
From the Extension Goat Handbook

Simple indigestion is a frequent problem in goats. It is usually brought about by a change of feed or overfeeding or any factor that brings about a minor change of environment of the rumen. Common causes are: kids getting out of their pens or pasture and finding access to new highly palatable feed, sudden access to a lot of palatable feed after prolonged hunger, eating spoiled or frozen feed, sudden introduction of feed containing large amounts of urea, or placenta eating.

Clinical Signs

Discomfort manifested by restlessness or quietly lying down, pathetic, weak crying and moderate depression are usual signs. The temperatures and hematocrit are normal and the mucous membranes are pink. In those conditions associated with overeating, the rumen is full, firm and doughy and has no significant contractions. The feces are usually of normal consistency but decreased volume. Recovery occurs in 24-48 hours.

Diagnosis

Diagnosis is suggested by a history of a change in the nature or amount of diet, the elimination of other more severe possibilities, and the signs. The most important aspect of the diagnosis is to accurately determine that something worse, especially grain overload, has not occurred. As long as the color of the mucous membranes remains a healthy pink and the hematocrit has not increased above 45, the continued diagnosis of simple indigestion is justified.

Prevention and Treatment

Avoid sudden changes in amount and type of diet without a period of gradually increasing the amount. Accidental exposure can only be avoided by having good pens so that the goats cannot escape to "greener pastures". Placentas should be removed as soon as it is passed by the parturient doe.

Once the dietary indiscretion has occurred, remove all sources of feed and allow access to water only if grain overload can be absolutely eliminated as a possible diagnosis. The animal will probably regain health without treatment but if desired, a tablespoon of milk of magnesia, 2 ounces of mineral oil and one crushed aspirin in a pint of warm water can be given by drench or by stomach tube to a small kid. Two to four pints of the above mixture can be given to bigger animals depending on their size.

Copper Deficiency in Goats

Carol Collar—Farm Advisor, UC Cooperative Extension
Dr. Robert Moeller—Veterinary Pathologist, CAHFS Laboratory, University of California, Cooperative Extension

Every year the California Animal Health and Food Safety laboratory (CAHFS) diagnoses copper deficiency in goats from our tri-county area and throughout California. The goats submitted to the lab are usually newborn or young kids. Animals are usually presented alert, yet weak with difficulty moving their hind legs. The clinical term for this condition is enzootic ataxia, but it is sometimes called swayback. Copper is an essential mineral for goats, sheep and cattle. Forages and other feeds contain varying levels of the mineral.

The amount of copper needed is difficult to generalize because certain other minerals, especially molybdenum, sulfur and selenium can affect the requirement. Another challenge in providing this important mineral is that the margin between copper deficiency, adequacy and toxicity is narrow. Sheep are especially sensitive to copper toxicity, much more so than goats or cattle.

Deficiency

A deficiency can be caused by too little copper in the diet, or from the influence of another substance that interferes with copper uptake. Molybdenum is the usual culprit, although there are several others. Excessive levels of molybdenum and/or sulfate in the feed or water can interfere with copper utilization by the goats and a deficiency will result. Other interfering substances include soil ingestion from overgrazing, and excess selenium, cadmium, zinc, iron, or calcium. Infestations of internal parasites can also reduce copper uptake and cause a deficiency by changing conditions in the gut (abomasum and intestines) to make the copper less soluble.

There are various signs of copper deficiency, which can include diarrhea, poor weight gain, light hair coats, anemia and a general unthrifty appearance. The most common symptoms for goats submitted to the CAHFS are weak kids usually 1 to 2 months of age that are uncoordinated, especially in their hind legs. They can still kick their hind legs so they aren't really paralyzed even though they look like they are. Sometimes they drag about in a sitting position. Their appetite often remains unaffected, but since they have trouble standing to nurse or eat, they get progressively weaker. Although the disease most often affects kids and lambs 1 to 2 months of age, it can be seen in some animals at birth or in animals as old as 3 to 4 months of age.

The deficiency usually starts in a doe or ewe that is deficient in liver copper and is unable to give the fetus enough copper to prevent the disease. Although copper can be transferred in the milk (milk is a poor transporter of copper), deficient dams fail to transfer adequate copper to the young growing animal.

Diagnosis

Continued on next page

Copper Deficiency

Continued from previous page

Copper deficiency is diagnosed by measuring copper levels in blood and organ tissues. Liver gives the best indication, but serum copper can also be measured. (Serum is the straw colored fluid from blood after the red cells are removed). Normal values for goats and sheep are contained in the table at right.

Prevention

The best way to prevent copper deficiency in goats is to provide a trace mineral salt block containing copper. Usually the highest level available in commercial mixes is 0.04% copper, which equals about 400 parts per million (ppm). If a trace mineral salt block containing copper does not control copper deficiency, there are other alternatives for supplementation, but since copper can be very toxic, a deficiency must be confirmed before any copper supplementation takes place. It is possible to test feed, soil and water for all the various minerals, but it is more practical to test the goats to determine their copper status and make any necessary changes based on those findings. Your veterinarian can submit blood or tissue samples to the CAHFS lab to determine if a deficiency exists. Some of the other alternative preventative measures for copper deficiency that have been reported include custommade trace mineral salt blocks, oral copper sulfate solution drenches, injectable copper glycinate, and administration of boluses that contain copper.

Toxicity

Remember that a little copper may be good, but too much can be extremely toxic, so consult your veterinarian before attempting a copper supplementation program. Once supplementation is started, take care not to inadvertently provide additional copper through changes in feed—feed for horses, pigs, chickens, or cattle, as well as dog food can contain significant amounts of copper. Excess copper accumulates in the liver and although there are no outward signs, the stored copper can cause death at any time, particularly if the animals are stressed. With your veterinarian you can monitor the copper supplementation program by periodically submitting blood or tissue samples to the lab for analysis to check the copper status of your goats. Don't forget that there are differences among the species with regards to sensitivity to excess copper. Copper supplements intended for cattle may kill sheep and goats. And sheep, being the most sensitive, may be harmed by supplementation intended for goats. In summary, copper nutrition is complicated by a number of factors, but with the help of your veterinarian and analytical tools available through the CAHFS, management to prevent copper deficiency in goats can be relatively straightforward.

About the California Animal Health and Food Safety Laboratory: The CAHFS is a statewide laboratory system with a central reference lab located in Davis, and four branch labs located in Turlock, Fresno, Tulare and San Bernardino. Diagnostic services for goats, sheep and cattle in the southern San Joaquin Valley are provided by the Tulare branch which is located at 18830 Road 112, just east of Highway 99 approximately 4 miles south of Tulare.

Normal Copper Level Values:

	Goats	Sheep
Serum	0.8-1.2 ppm	0.7-2.0 ppm
Liver	25-150 ppm	25-100 ppm

The CAHFSTulare phone number is 559-688-7543. From their website at http://cvdls.ucdavis.edu/ you can access useful information about submitting samples and getting results as well as disease factsheets and other general information.

Speaking of Goat Blood

Did you know that there are five major blood group systems in goats? They have been identified and labeled as: Types A, B, C, M, and J.

To calculate the volume of blood in a goat, multiply their weight (in kg) by 80. This gives the result in ml.

Blood is the only tissue that flows throughout the body. It carries oxygen and nutrients to all parts of the body and carries waste products back to the lungs, kidneys and liver for disposal. It is an essential part of the immune system, and important to fluid and temperature balance. It is a hydraulic fluid for certain body functions and a highway for hormonal messages.

Nomadic Felts of Fethiye (Turkey)

Fethiye is a district of the province of Mugla. The center of the town is situated on the shore where the Mediterranean and Aegean Seas meet. Approximately ninety villages and fields belonging to the district spread out inland. Most of the population in the villages originate from nomadic tribes who have settled here, migrating from surrounding provinces. Outside of a few small tribal families, these people live an entirely different kind of life today.

Description of Felt or "Keçe"

Felt, or "keçe" is a fabric created primarily from sheep's wool. It may also be made from the fibers of hair of the camel, goat, horse, ox or any other animal. Unlike other fabrics, felt is not produced by the interleaving of weft and warp but by the interlocking and fusion of free woollen fibers. Because felt is basically wool, it has an important place among textiles.

This is because felt keeps out the cold and is waterproof. It is a particularly invaluable part of nomadic life. Felt was recognised by the Chinese as "a tribal or barbaric material" because in the old tribes of Central Asia, felt was used for every purpose, from making clothes to coverings. In fact, felt was actually known before cloth. Felt may be called the first textile. The first piece of felt was produced before 600 B.C. Spinning and weaving were later processes. The word "keçe" was used among the Turkmen living in Anatolia and in the western parts of Central Asia. The word is also part of the language of other peoples who have produced and used felt. Names for felt have been created according to the region of production and in regard to size.

History of Felt

Many sources show that the use of felt goes back to before the Bronze Age. Written references trace the use of felt in China back to 2300 B.C. The pieces of felt at the National Museum of Copenhagen have been dated back to the Bronze Age, or 1600 B.C. These pieces were found in North Schleswig and Jutland in Germany. The first samples were found by Russian archaeologists in the digs carried out in the Altai Mountains, and have been dated back to the 5th-3rd centuries B.C. Most of the pieces found there are now in the Eremitage Museum in Leningrad. The largest in the group is 650cmx450cm and was found beneath the ice in the Pazirik region by the Russian archaeologists Rudenko and Grjasnow at Sepulcher No.5. The ice in the base of the uncovered tomb preserved this piece of felt for 2000 years. The second most important felt piece to be found was the one uncovered in Sepulcher No.6 situated 1500m above sea level in northern Mongolia. All of the samples from these digs show that felt production was advanced in technique and design even in the Central Asia of 500 B.C. In spite of this, however, it is still difficult to ascertain where and for what exact purpose felt was first used. Scientists accept that man may have first learned to speak by imitating the sound of animals. In the same way, man can be said to have been influenced by animals in many other aspects such as adopting clothing to keep warm, finding shelter and protection. Producing felt may be an example of this as an attempt to imitate the texture of the wool found close to the skin on a sheep.

Archaeological findings in the Altai Mountains have revealed that the Turks of Central Asia used felt since very early times. The German couple Bidder, who have spent long years of research on this subject, point out that although felt was widely used by the Chinese, it was originally a product of the nomads. Historians have determined that the Turks of Central Asia lived as nomadic tribes. As in other nomadic societies, the Turks adopted felt as an inescapable part of their daily life and used it in many forms. All Asian nomads produced felt, lived in felt houses, wore clothes of felt. In the language of Eastern Turkistan the word "nomad" means "man of felt."

So it was that the warrior Turks of the 7th century A.D. knew and valued only felt as a material. It is also known that the Huns, like other nomadic tribes, had dealings with the Chinese as far back as the 2nd century B.C. and included felt among the valuable gifts they offered in their contacts.

The felt pieces found in the Altai Mountains are varied. The digs have revealed floor and ceiling coverings as well as harnesses, belts, braids, cords and dresses of felt. Faruk Sümer relates what the Islamic geographer Yakubi has written: "The Turks were masters in felt-making. All their clothing was of felt. We also know that the Huns wore clothing of felt and of leather." Thus it can be seen that the early Turks used felt in addition to leather and fur. There are records of the Seljuk Tugrul Bey wearing boots of felt during a battle with the Ghaznavids.

The Turks used felt not only in their clothing but also in the domed one-room structures called "topakev"-"round house" or "yurt"- "home" that they began to use in Central Asia. These tents were wrapped in felt, the material hung on the walls and door and was laid on the ground. In shamanistic rites the totems were affixed on felt. In Central Asia the "topakev" and the "keçe" were inseparable. As another researcher says, "Felt is a very appropriate protection against the dry and cold winters of Central Asia. The Turks brought their tents with them to Anatolia and continued to live in them there. This sort of portable house was very convenient for such a nomadic people. The Turks also used another type of tent, a tunnel-like structure resembling the "topakev", calling it names such as "alaçik", "alaycik" or " alacik". This type of house was also used in the Fethiye region and is still called "alacik". The covering of this tent house was felt as well.

In addition to the tradition of producing and using felt, the Turks also took with them wherever they went a specific terminology for the various types of felt fabric. The Yomud Turkmen called the felt wall covering "durluk", the felt roof covering "üzük". To the Kaz Dagi nomads the same

Continued on next page

Felt

Continued from previous page

objects were "turluk" or "üznüz". The Bekdik's called the latter "üzük". The felt roof covering was called "turluk" among the Fethiye nomads.

Use of Felt

As in Central Asia, felt was put to a variety of uses in many parts of Anatolia in answer to the needs of daily life. It was used and is still being used in the Fethiye region. Naturally, products are created in answer to a specific need. Consequently, something no longer needed ceases to be produced. That is why the production of felt is almost obsolete in the region of Fethiye today. Some people who are now settled in Fethiye were nomads until 40-50 years ago. In the summertime they would settle on the plateaus, spread their "Black Tents" and their mats of horsehair and covers of felt on the earth floor of their tents. Tribes in the plateaus do the same today. Up until 40-50 years ago, many nomads had no permanent winter homes. The winter settlement, or "kislak", was covered with "alacak" and "turluk" type felts.

The nomads use of felt begins in the cradle. Women walking behind their flock of sheep wrap their babies in felt and carry them on their backs. The felt helps to keep the baby from bending and keeps it warm as well. Felt is also used as a covering for horses and donkeys and plays an inevitable role in the making of harnesses, saddles pack-saddls and halters.

Felt is also decorative. Big pieces of felt, decorated in colorful styles, are used to adorn horses, covering the animal from head to tail. The horse carrying the bride after the weddings was traditionally decorated with a harness felt. These harness felts were made by the nomads in the times when brides rode out on horses. Horse-back riding is a thing of the past in Fethiye today so this type of felt covering is no longer produced. Shepherds still use the felt cloak known as "kepenek" however. Besides its use as a covering, many different sizes of felt have been made to be used as guest mats. In the time of the nomads, felt coverings big enough to cover the inside of the tent, guest mats beddings felts, cushion felts and floor mats were the types of felt pieces every girl was required to have in her trousseau. The objects of felt today are remnants of those pieces. Today, very few families produce felt and those who do make only one or two pieces. Many young girls no longer include felt pieces in their trousseaus, choosing to buy them instead when they feel the need.

Today some houses on bases of concrete or stone use felt floor matting, covered with other material. Sometimes felt is used beneath other woven coverings. The type of new felt mat is made in the Afyon and Konya regions and only sold, not produced, in Fethiye and its environs. The people of Fethiye today are farming people who work on the fields and in their green-houses. They have neither the time nor the material with which to make their own felt.

The Making of Felt (Felting)

Felt is made exclusively in Asia and Europe. It is a product of sheep breeders. In societies where agriculture is the main livelihood (such as the Indians, Greeks and Chinese), felt making is a secondary production. Felt-making is carried out using different techniques and under different regional names, in Iran a cylindrical weight is used to roll over the material during the process. Sometimes the material is wrapped on a cylinder and rolled as it is pulled by pack animals. In many parts of Anatolia felt is produced by men stomping on the material or women rolling their elbows over the fibers. The craft is mainly a woman's job in Anatolia. In Iran it is the men who make felt. Among the nomads, every woman would be required to know how to weave and spin. In the Fethiye region, they were also required to be familiar with felting. Every woman, however, cannot be a master of the art. The woman supervising the felting signs her name and sometimes records the date on the piece of felt she is designing. A piece of felt is a work of art. Felts in different regions are called by various names: "Çirpma" (flapped), "Dövme" (beaten), "Tepme" (trampled), "Pisirme" (fused, or "cooked").

In the region of Fethiye, felting is called "pisirme" or "cooking". The best wool for making felt is the wool sheared at the end of August or the beginning of September when the wool fibers are short and thin. Some, however, prefer the wool sheared in the spring months but the usual custom is the use the wool of the fall clipping. The finest and most attractive felt pieces are those made from sheep's wool or from camel's hair. The best type of felt for the covering of the "topakev", and for sturdy goods is the felt made from a mixture of sheep's wool, horse and goat hair. Sometimes felt is also made from mohair or ox hair. The wool to be used for felt is first cleaned and cleared of refuse. In Fethiye the wool is tossed about unwashed with a bow. The tossed and fluffy wool is then carefully and symmetrically laid upon a wet piece of horsecloth under the watchful eye of the expert women. Water is sprinkled over the wool. The nomads differ as to whether hot or cold water should be sprinkled over the wool at this point. Some tribes believe that the material will be sturdier if it is "cooked" (felted) with cold water. Others claim that hot water is necessary to make the felt firmer. It must be mentioned here that the difference in opinion comes from tribes of different nomadic regions. Sources tell us that in Central Asia and Anatolia the felt is usually washed with hot water and even with hot water and soap or soap substitutes in some regions. In the hot water treatment used in Fethiye, if the wool has been washed beforehand, the dirty water is saved and heated to be sprinkled over the wool later. If the wool has not been pre-washed, plain hot water is used. The animal's body oils serve as a natural protection against moths and also help the fibers to fuse together. After the wool is sprinkled with water, it is wrapped up with the horsecloth it lies upon to form a cylinder and rolled. In the rolling process, women

Continued on page 26

ECA 2003 Goat Show

New York Sheep & Wool Festival, Rhinebeck, NY

Judge: Joe David Ross

2003 Grand Champion Doe
BBS Elvira owned by Jeanne Austin

2003 Reserve Champion Doe
BPC Holly owned by Wes & Marilyn Ackley

2003 Reserve Champion Buck
BLF Sgt. Pepper owned by Yvonne Taylor

Best Goat in Show
BBS Elvira owned by Jeanne Austin

Lady Greybeard Award - Best Goat with Long Guard Hair (Cash Prize Awarded by Lance & Yvonne Taylor) STC Lady Miracle, P. Goth & W. Pieh

Outstanding Junior Exhibitors
Diana Holden & Leon Stump

Does Born in 2003 (class of 11)
1st BPC Mia, Wes & Marilyn Ackley
2nd BBS Erica, Jeanne Austin
3rd BPC Mollyocket, Wes & Marilyn Ackley
4th RHF Midnight, Brian & Lynda Bell

Does Born in 2002 (class of 4)
1st HPF Felicia, Pam Haendle
2nd STC Lady Miracle, P. Goth & W. Pieh
3rd BPC LaFleur, Brian & Lynda Bell
4th STC Lily, P. Goth & W. Pieh

Does Born in 2001 (class of 6)
1st BPC Kittery, Wes & Marilyn Ackley
2nd HPF Emma, Pam Haendle
3rd RHF Fairlight, Brian & Lynda Bell
4th STC Rosanna, P. Goth & W. Pieh

Does Born in 2000 (class of 3)
1st BBS Monica, Jeanne Austin
2nd LC1 Anisette, Carole Holder
3rd BPC Jill, Brian & Lynda Bell

Does Born in 1999 and 1998 (class of 4)
1st BPC Holly, Wes & Marilyn Ackley
2nd HPF Chloe, Pam Haendle
3rd LC1 Duchess, Carole Holder
4th LC1 Licorice, Carole Holder

Does Born in 1996 or Before (class of 3)
1st BBS Elvira (1993), Jeanne Austin
2nd GFJ Contessa (1994), Carole Holder
3rd BBS Ruth (1996), Jeanne Austin

Dam and Daughter (class of 7 teams)
1st BBS Elvira & BBS Ruth, Jeanne Austin
2nd BPC Karatunk & BPC Mia, W. & M. Ackley
3rd GFJ Contessa & LC1 Duchess, Carole Holder 4th GBF Schwanlii & RHF Snowhopper, B. & L. Bell

Get of Sire (Three Does Sired by the Same Buck) (class of 3 teams)
1st Daughters of RU Chance Wayne, Jeanne Austin BBS Ruth, HPF Chole, BBS Erica
2nd Daughters of BPC Jupiter, W. & M. Ackley BPC Mollyocket, BPC Moxie, BPC Mia
3rd Daughters of JRW Silver Bart, P. Goth & W. Pieh STC Megan, STC Rosanna, STC Lily

Wethers
1st LC1 R31, Evelyn Barone
2nd RHF Stormy, Brian & Lynda Bell
3rd LC1 R52, Evelyn Barone
4th BBS David, Jeanne Austin

Bucks Born in 2003 (class of 4)
1st STC Mufasa, Andrew Brooks
2nd STC Balder, P. Goth & W. Pieh
3rd THC O'Bourke, Colleen Nihill
4th THC Mad Maxx, Colleen Nihill

Bucks Born in 2002 (class of 5)
1st THV Ralph, Gloria Rubino
2nd THV Emilio, Gloria Rubino
3rd STC Kibuku, P. Goth & W. Pieh
4th BLF Hjort, Yvonne Taylor

Bucks Born in 2001, 2000, and 1999 (class of 4)
1st BLF Sgt. Pepper, Yvonne Taylor
2nd STC Worsley, P. Goth & W. Pieh
3rd RHF Kobuk, Brian & Lynda Bell
4th BLF Palomides, Yvonne Taylor
2003 Grand Champion Buck THV Ralph owned by Gloria Rubino

Junior Exhibitors Under Age 15
1st Leon Stump, Palmyra, PA
2nd Jesse Stump, Palmyra, PA
3rd Joey Barone, Slatington, PA
4th Ben Bell, Keedysville, MD
5th Josh Bell, Keedysville, MD
6th Ethan Bell, Keedysville, MD

Junior Exhibitors 15 and Over
1st Diana Holder, Slatington, PA
2nd Jimmy Barone, Slatington, PA
3rd Andrew Brooks, Bremen, ME
4th Russell Baker, Moodus, CT
5th Andrea Goth, Bremen, ME

Goat People

Karen Bean
Brookfield Farm
Maple Falls, Washington

Harley
Pack Goat in Training!

Yes, it's silly photo time. The goat in these shots is Harley—the up and coming pack goat.

Part of his training is to go walking every morning. As I also walk the dogs around that time, we all go together. Harley may be the only goat to come to the word "walkies." He also does a nice "heel," "stay," and an OK "come."

Photographs by Karen Bean

The cast: Harley, the goat, Nelson, the pit bill, Sam, the pit X lab, and Karen, the human. Per Karen, the lion may not lie down with the lamb at Brookfield Farm, but the goat does cruise with the pit bill!

Below: All are buddies when it comes to browsing time. Front: Nelson and Harley, with Sam back down the trail.

Calendar of Events

October 30 - November 1, 2003
2003 Soar Market, Summit Rooms A & B, Shanty Creek Resort near Travers City, MI

November 2, 2003
Weaving & Spinning Festival, Torrance Cultural Arts Center, 3350 Civic Center Dr., Torrance, CA. Sponsored by Southern California Handweavers' Guild. Information: 310-316-0910. www.schg.org/festival/

November 7 - 8, 2003
Texas Cashmere Association Show & Sale, Boerne, Texas. Judge: James Barton. Information: Bill Nagel 830-540-6041, bnagel@gvtc.com

April 15 - 19, 2004

Association Contacts

Cashmere America Cooperative
Joe David Ross, Manager, 915-387-6052
fax: 915-387-2642, Email: goat@sonoratx.net
Wes Ackley (Maine) 207-336-2948
Marti Wall (Washington) 360-424-7935

Eastern Cashmere Association (ECA)
Ann Wood, President
937-834-1122, tamarackranch@core.com

North West Cashmere Association (NWCA)
Diana Mullins, President,
509-997-2204, 509-429-0778, dmullins@methow.com
Denita Wallace, Membership Coordinator
503-399-7066
akidleativy2@attbi.com
Website: http://www.nwcacashmere.org

Pygora Breeders Association (PBA)
Inga Gonzales, Secretary
PO Box 565, Knightsen, CA 94548, 925-625-7869
email: lgonozo@goldstate.net

Texas Cashmere Association (TCA)
William (Bill) Nagel, President
4625 Sandy Fork Rd., Harwood, TX 78632
830-540-4707, email: bnagel@bvtc.com

Waltz of the Flowers; Dance of the Sugar Plum Fairies; The Fall Buck Rhumba.

Breeders Directory

CALIFORNIA

CAPRETTE CASHMERE
Barbara Fiorica
13059 Cherry Rd.
Wilton, CA 95693
916-687-6406
ROFIORICA@AOL.COM

CONNOR'S RUN FARM
Pete and Charlotte Rhoads
6300 Lofty View Road
Placerville, CA 95667
530-642-9931
fax: 530-642-9936
prhoads@mindspring.com

HENRY LOWMAN
PO Box 2556
El Granada, CA 94018
650-225-1171
hlowman@compuserve.com

COLORADO

CABIN GULCH FARM
Leslie Easter
41115 Valley View Ct
Elizabeth, CO 80107
303-646-5654
leslieheaster@hotmail.com

GOATIQUE
Ann Bertschy
607 County Road 730
Gunnison, CO 81230
970-641-5383
goatique@pcrs.net

JABBERWOCKY FARM
Susanne Roth
408 Cty Rd. 59
Guffey, CO 80820
719-689-9502

K. BULLARD/CHALK
7225 E. County Rd. 18
Loveland, CO 80537
970-667-2999

MARSHALL'S ORGANIC ACRES
9217 N. County Rd. 7
Wellington, CO 80549-1521
970-568-0264
Borganic2@aol.com

MAINE

BESSEY PLACE CASHMERE
Wes and Marilyn Ackley
319 Brock School Road
Buckfield, ME 04220
207-336-2948
ackley@megalink.net

BLACK LOCUST FARM
Yvonne Taylor
PO Box 378
Washington, ME 04574
207-845-2722
yvonne@blacklocust.com

SPRINGTIDE FARM
Peter Goth & Wendy Pieh
PO Box 203
Bremen, ME 04551
207-529-5747
fax: 207-529-5739
wpieh@lincoln.midcoast.com

MARYLAND

MIDDLETOWN FARM
George and Barbara Little
8123 Old Hagerstown Rd.
Middletown, MD 21769
phone & fax: 301-371-8743
glittle640@aol.com

MONTANA

CASTLE CRAGS RANCH
Steve and Diana Hachenberger
894 Pheasant Run
Hamilton, MT 59840
phone & fax:
406-961-3058
cashmere@bitterroot.net

SMOKE RIDGE CASHMERE
Craig Tucker
Yvonne Zweede-Tucker
2870 Eighth Lane NW
Choteau, MT 59422
406-466-5952
fax: 406-466-5951
smokeridge@marsweb.com

WOOLY CRITTERS RANCH
Susan Max
84 Quartz Rd
Superior, MT 59872
406-822-3602

NEVADA

DOUBLE BAR J CASHMERE
Betsy Macfarlan/Jeff Weeks
P.O. Box 150039
Ely, NV 89315
775-742-1189
goatsnsoap@idsely.com

ROYAL CASHMERE
Eileen Cornwell
5455 Reno Highway
Fallon, NV 89406
phone & fax: 775-423-3335
cashmere@phonewave.net

SMITH VALLEY CASHMERE
The Hayes Family
254 Lower Colony Rd
Wellington, NV 89444
775-465-2893

NEW HAMPSHIRE

ROKA Farm
Jefferson, NH
Pat Bacon
97 Success Rd
Milan, NH 03588
603-449-6797
mswhmtns21@hotmail.com

NEW YORK

HERMIT POND FARM
Pamela Haendle
10601 Merrill Road
West Edmeston, NY 13485
315-899-7792
hermit@borg.com

MOO'S MEADOW FARM
Judith E. Paul
Springville, NY 14141
716-941-5826
judithepaul@hotmail.com

NORTH CAROLINA

Flying Fiber Farm
Sandra Basel
941 Vanderpool Road
Vilas, NC 28692
828-297-3046
fax: 866-728-4141
FlyingFiberFarm@aol.com

OHIO

HIGH COUNTRY CASHMERE COMPANY
Chris and Kathryn Cooper
12840 Cowan Road
Athens, OH 45701-9539
740-594-3350
kcooper@eurekanet.com

TAMARACK RANCH
Bob and Ann Wood
12575 Collins-Arbogast Rd.
South Vienna, OH 45369-9514
937-834-1122
tamarackranch@core.com

Internet listing of these breeders and a link to their email addresses and homepages, can be found on the internet at:

http://www.cashmirror.com/breeders.htm

Breeders Directory
Continued from previous page

OKLAHOMA

TEXOMA KIDS & CASHMERE
J. D. and Karen Chandler
Rt 1, Box 37
Mannsville, OK 73447
580-371-3167
fax: 580-371-9589
jkc@flash.net

OREGON

ABORIGINAL FIBRE
razberi kyan (Pat Almond)
PO Box 899
Mulino, OR 97042-0899
503-632-3615
razberi@teleport.com

AYER'S CREEK RANCH
19655 NE Calkins Lane
Newberg, OR 97132
503-554-9260
Linda_Lowell@beavton.k12.or.us

CASHMERE GROVES
Pat Groves
16925 S. Beckman Rd.
Oregon City, OR 97045
503-631-7806
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: 503-873-5511
foxmoorfarm@foxmoorfarm.com

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

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

PENNSYLVANIA

DANCING HEART FARM
Marc & Cindy Briggs
RD 1 Box 1327A
Russell, PA 16345
814-757-8119
mncbriggs@kinzua.net

TENNESSEE

CUDROW CASHMERE
Jim & Cindy Crisp
1936 Calderwood Hwy.
Maryville, TN 37801
865-856-5264
CudRowCashmere@msn.com

CUMBERLAND BLUE FARM
Bob and Rita Russo
607 Old Blue Springs Rd
Smithville, TN 37166
615-215-8837
RRUSSO@DTCCOM.NET

TEXAS

JOE DAVID ROSS
Box 645
Sonora, TX 76950

VERMONT

APPLEWOOD FARM
Barbara & Dick Albertini
Post Office Box 168
Underhill Center, VT 05490
802-899-4294
Fax: 802-899-2583
Ralbert315@AOL.COM

VIRGINIA

FOGGY BOTTOM FARM
John and Marilee Williamson
990 Old Hollow Rd
Buchanan, VA 24066-4938
540-254-1628
mhwabc@juno.com

GREENWOOD CASHMERE GOATS AND HIGHLAND CATTLE
Mary and Douglas Waters
163 Zion Hill Road
Fincastle, VA 24090-3668
dooglecw@aol.com

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

GRIM'S FAERYTALE FARM
Margot Grim
14209 162nd Ave NE
Woodinville, WA 98072
425-485-7227
margotg39@hotmail.com

LIBERTY FARM (NLF)
Cliff and Mickey Nielsen
5252 Hwy 12
Yakima, WA 98908
509-965-3708
mnielsen7@aol.com

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

Felt

Continued from page20

lined up on their knees roll their arms over the cylinder, pressing down from wrist to elbow, back and forth. In this movement, the wrist is first to come into contact with the cylinder and as the elbow is brought down, the cylinder is rolled over. As the elbow is brought back, the cylinder moves back as well. Pressure is applied with the movement and every so often, the cloth is unrolled, sprinkled with hot water, rolled up again and the movement is repeated.

The back and forth movement causes the fibers to interlock and fuse together. The rolling process is carried out lengthwise, widthwise and in all directions. The "cooking" (felting) of the material is complete when the piece of felt is wrinkled and separates from the horsecloth beneath. At this point, the right side of the felt is washed with hot water and soap, beaten with a stick and dried.

Women make felt in the traditional matter.

Forming Patterns on the Felt

The first examples of patterns on felt are ones found in the Pazirik Sepulcher dated to the 5th-3rd centuries B.C. Felt patterns, sometimes depicting various animals and supernatural beings in accordance with religious beliefs, were also inspired by the life of the times. Geometrical designs and spiral figures are predominant. Sometimes geometrical patterns and natural figures were used together.

There are several methods of design:

1)The appliqué method. Slim pieces of felt cut in the desired figures and forms are placed upon the plain felt base, either fused in during felting or sewn onto the material.

2)Petering with patches of wool. During felting, patches of colored wool are arranged on the base of the felt, on top of which is placed the wool that will be forming the background. The fibers fuse together during the felting process.

3)The embroidery method. Patterns are embroidered with fiber or metal thread upon the felted material. This type of design can be seen on the felt retrieved from Noin Ula in Central Asia, which appears to be a work of some 2000 years ago.

4)Patterns painted on the finished product. The coloring is obtained from mineral salts and plants.

5)The mosaic appliqué method. The designs are prepared, in colour and in separate pieces, to fit the whole of the fabric, cut and fixed upon the felt either by pasting or sewing.

The Fethiye region commonly uses the second method. The felt pieces are patterned by attaching colored patches of wool to the original piece by either sewing or pasting. The colored wool to be used in the design is predyed and laid out on the wet horsecloth in the desired pattern. The white unwashed wool to form the background is placed on top of this. During felting, the colored pieces of wool fuse into the white background. If the words and names are arranged from left to right, the felt is read as a mirror reflection.

There are no designs of colored pieces of wool in saddle felts. The decoration used here is the red and white stained tassels attached to the patches of fiber laid out parallel to each other that are pulled out from the longer parts of the wool of the spring gathering. The fibers to be tied to the felt piece are tightly attached to the material. The tassels are first laid out on the horsecloth and then the dangling ends are flattened and pressed in between the fibers of the background wool. After felting, the tassels are untied and the parts to be left white are tied into knots again. The felt is dyed in a cauldron according to the usual recipe. The saddle felt is dyed red in the Fethiye region. When the knots on the tassels are untied, the parts that were tied remain white. This is a kind of tie-dying or batik.

Information Source:
Republic of Turkey Ministry of Foreign Affairs Website
http://www.mfa.gov.tr/grupc/ca/caa/uu/ege/fethiye.htm

Introducing Baby Cashmere

Just when we thought that Pashmina was the ultimate fiber. A company in China, Li Wing, now advertises the "next step up in Pashmina". It is Baby Cashmere. Baby Cashmere is cashmere fiber that comes from baby goats, aged 3-12 months. You will need 15-20 baby goats to produce just one shawl and that is why Baby Cashmere is more "precious" than normal cashmere fiber.

You know, those Americans will believe about anything...

Li Wing
in Hong Kong and China
http:/www.liwing.com.hk/company.htm

Display Advertising Rates:

Ad Size	Price (Issue / 4 mos. / 1 yr.)
Business Card	$25 / 100 / 150
1/4 page	$45 / 165 / 410
1/3 page	$65 / 240 / 600
Half Page	$80 / 300 / 730
Full Page	$150 / 550 / 1,370
Other sizes, options	Ask us

Extensive layout or photo screening may be extra.
Payment must accompany ad order.
Free Breeders' Listing with any annual ad.
Classified ads 50 cents/word.

Notable Quotes

"My problem lies in reconciling my gross habits with my net income."

...Errol Flynn (1909 - 1959)

"An economist is an expert who will know tomorrow why the things he predicted yesterday didn't happen today."

...Laurence J. Peter (1919 - 1988)

"We've proven with multiple research projects that sheep can mimic many aspects of menopause in women...."

...Dr. A. Simon Turner, Colorado State researcher

"Goats or mechanical mowing work on the same principle: removing the leaves so the plant can't turn sunlight into food. The root eventually starves. Both goats and mowers must be brought back often, and both have the same drawback: They also mow down everything else in their path."
...*Statesman Journal*, 10/17/03 (Salem, OR)

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.

CashMirror Subscription Information

To subscribe

Send: Name
Farm Name (if applicable)
Address with zip code

To: CashMirror Publications
2280 S. Church Rd.
Dallas, OR 97338

Annual Subscription is only $25 for 12 monthly issues! ($35 Canada, $40 Mexico, $50 overseas).

Breeders Directory listing for full year $30.

Classified Advertising

Bucks for sale or trade, 2 really fine bucks (one from Pioneer Mountain, one his son from doe with Australian lines) that I must sell/trade. All my does are/will be related to them. Would like to trade, one for unrelated buck kid and the other for at least 2 does. They grow lovely cashmere—even in Florida. Betsy Bloom: BloomNSpot@aol.com 352-591-4407

CashMirror Back issues, $3 each or a dozen for $30. 10/89 - 9/03. About half of old issues still available. Index available. Great reference material. Order from CashMirror Publications. Price includes shipping.

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

Trick-or-Cat!

CASH MIRROR

2280 S. Church Rd.
Dallas, OR 97338

Bulk Rate
U.S. Postage
Paid
Permit #011
Dallas, OR
97338