CASHMIRROR

March 2002

Volume 13, Issue 5

The monthly magazine devoted to cashmere goats and their fiber

Volume 13, Issue 5, March 2002

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C A S H M I R R O R

ISSN 1090-736X

Tedious (Yet Important) Technical Information

This magazine is published each and every month by:

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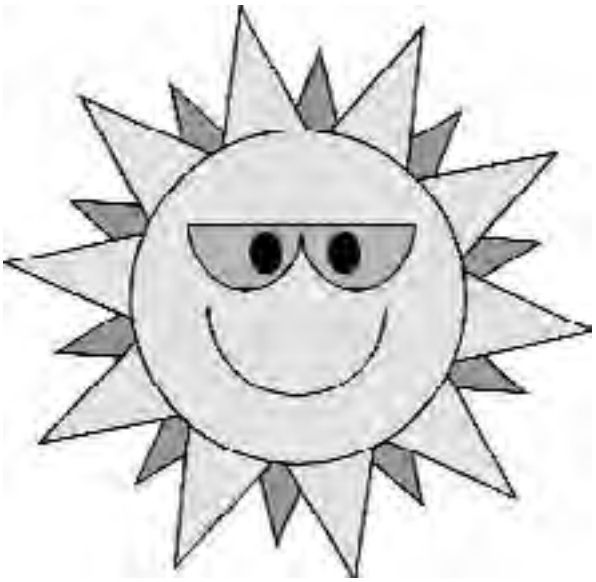
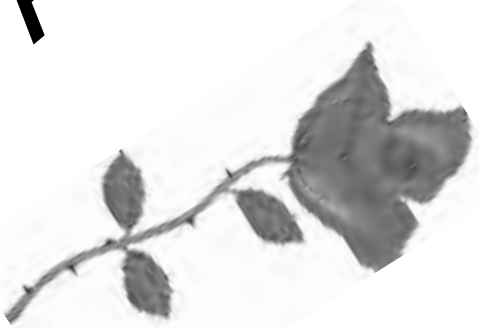
No responsibility will be taken for material while in transit or in this office, although we will certainly be real careful.

Cover photo: Paul Johnson, Goat Knoll
Chocolat and Mocha looking for Starbucks (their brother).

Spring!



At last!



Reflections

by Linda Fox

Sally—That Old Nature vs. Nuture Issue

It's been a while since we had a bummer lamb. We had one this year. Fudge had two ewe lambs, just like last year—one black and one white. She didn't like the black one right from the start. She had them in the center aisle of the barn early morning before we arrived for our morning barn check. Paul had put here there the night before as she was acting "funny" and we knew her lambing date was near.

When we arrived at the scene, both lambs were cleaned, but the little white lamb was plump and content while the dark one was still trying to line up for a drink. We jugged the trio and watched. Fudge had dutifully cared for both of her twins the year before, raising them to weaning without a hitch. In the smaller pen, Fudge herded the favored lamb to a corner of a pen and placed herself between it and the evil farmers, and she tried to flatten the other one against the wall.

Paul held Fudge and I assisted Sally to (eagerly) get her first drink. Afterward, we let them back out to the barn aisle so that Sally would have more room to get away from Fudge if she decided to continue with her un-motherly behavior.

For the next three days, we left the new family in the center aisle and held Fudge several times a day to make sure that Sally was fed. Paul wasn't too fond of the early morning feeding as he felt that while holding Fudge, he was picking up an odor which he carried with him to the office. When we watched them from a distance, we could see that Sally was able to steal an occasional snack, but as soon as Fudge realized it was not her favored child drinking, Sally was quickly booted off. Although Mustang Sally seemed very healthy and the same size as her sister, she was always hungry, following mom around, alternately trying to eat and avoiding the next whack.

On the fourth day, we couldn't stand the lamb abuse any longer, and not knowing any good sheep family counselors, bought a bag of lamb milk replacer. Sally now had routine feedings of an adequate amount of milk and we could let the three sheep back out with the rest of the herd. Even though we were providing Sally's food, we wanted to make sure she learned the other required sheepy behavior things from the sheep.

We always make jokes about how stupid sheep are—when compared to our highly intelligent goats, but as Sally grew, it seemed that she was at the head of the sheep class and showing more signs of intelligence than one would normally expect in a sheep.

During the day, she would roam the pasture with the sheep, but at night, she would quickly slip through the bars in the gate

"Got milk?"

and greet us in the center barn aisle for her bottle and pats. She played with the goat kids on and underneath the milking stands, shared grain tubs with the kids and climbed on us when we sat down. She loves to be petted and lets you know when she is not getting her fair share. She also seemed to be an attentive listener whenever we talked to her.

We wondered if we had stumbled upon an undiscovered research potential. Are sheep only less intelligent than goats because that is what they are taught by other sheep? Are lambs actually highly intelligent creatures, just limited by an unfortunate birth into a family of sheep? Perhaps the influence of a highly intelligent species (we're talking us here, not the goats...) could make a difference in their lives. We could make the difference in Sally's future. I didn't have high hopes for college or a County Fair road show of performing sheep, but I could see a different future for Sally where she would be able to respond to basic voice commands and maybe think a little bit before she just barges ahead with normal sheepy behavior. Maybe she could even teach her sister Xena an intelligent thing or two. Perhaps she would be able to raise the IQ level of our entire sheep herd by a several points. Our sheep will no longer be stupid!

Yesterday morning I noticed that the flock of sheep had already left the barn and were grazing in the pasture by the house. Normally Sally gets fed in the barn, but I took her bottle to her through the gate by the house, near where they grazed. I called to her; she responded to my voice immediately and started coming my way. She ran on past me, with the rest of the flock at her heels, down the hill to the barn. Yes, Sally is still a sheep!

When Readers Talk...

Open Letter to Friends of CaPrA

Nobody can say we didn't try. Beginning with Bronwyn Scheutze who rustled up grant money to get CaPrA launched, dedicated goat people from coast to coast have labored to make our national organization a valuable resource. Unfortunately through the years CaPrA's organizational mission became more elusive, and the worker pool continued to dwindle. Twice CaPrA's by-laws were restructured, but no rearrangement of the pieces could return North America to those hopeful days when conferences with names like "Ca$h in on Ca$hmere" could draw hundreds of people to Tulsa.

The times had changed, but one thing remained constant. Our faithful Marilyn Burbank was tending the treasury and recording herd codes. Luckily she began considering the ramifications of maintaining the treasury of a comatose 501(c)(3) organization. She spoke with a lawyer and an accountant. Based upon those conversations, she decided she had no choice but to close the CaPrA account and to distribute the funds among ECA, NWCA, and TCA, the three active regionals. These were the facts taken into consideration:

1) The terms of CaPrA's last elected board members expired in 2000 with no call for elections. Technically the organization went inactive when it no longer had a properly elected board of directors.

2) CaPrA was chartered as a not-for-profit educational organization in the State of Montana. The registration expired on December 3, 2001, leaving CaPrA "inactive" in the eyes of the government.

3) The IRS is clear that, upon dissolution, a 501(c)(3) organization is to distribute its treasury among like-minded not-for-profit organizations.

4) The last elected board of directors discussed the dissolution of CaPrA by e-mail and telephone during February and March of 2002. A majority of that last board concurred that the only option was to disband and distribute the treasury among the regional organizations.

And so CaPrA reached the end of its current life. As Bob Stone, one of the last board members commented, cashmere goats do have a role to play, and CaPrA will be needed someday. Meanwhile each of the three active regionals has some extra cash to use for educating the world about our marvelous animals. There isn't enough ink in the world to thank all the people who donated their time to create a national voice for cashmere producers. Nobody has devoted more time than Kris McGuire, the last president and creator of some really great issues of Concerning Cashmere. She and the other past presidents gave more of themselves than anyone will ever appreciate.

The remaining bit of business relates to Marilyn Burbank and the herd codes. Marilyn has graciously recorded the codes for years, and they can be seen on Kris's website www.capcas.com. It doesn't seem fair to ask Marilyn and Kris to be the herd code tenders forever. Casual conversations with ECA members have produced ideas like alternating the responsibility between an ECA and an NWCA member, for unspecified "terms." Sharing jobs among the regionals does seem like a great way to maintain our national identity, as we await the day when we and the goats will once again need CaPrA.

Marilyn Ackley
Past President and Grey Eminence of CaPrA
Buckfield, Maine
March 27, 2002

Readers Talking Back
Continued from previous page

Paul,

Hope all is going well and I wanted to than you for the year's subscription (photo contest prize winner!).

I have a question that I would like to put out there in cashmere land. As CaPrA is no longer, what does everyone think about starting a cashmere registry? I have seen other breeds of animals start up by just having a color or type. I was thinking look out world here I go with another idea. What if we started a registry for casyhmere goats that would be registered by fiber being sent into a fiber source and pictures of goats. Then we could use the money to sponser shows all over the country. I also have had lots of people looking for a registered goat and they are put off that there is no registry for cashmere goats. If this sounds like something other breeders are wanting, I will look into this further. I think that this would help the cashmere goat industry a lot. Other goat breeds register, wo why not cashmere.

Thank you for your input. If anyone would like to e-mail me they will need to do so with cashmere goat as a subject.

Thanks again,

Bob Marshall
Marshall's Organic Acres
Wellington, Colorado
Borganic2@aol.com
January 15, 2002

Re: 2002 Raw Cashmere Buying Prices
California Cashmere Company

In these difficult times of global economic concerns California Cashmere Company is rolling out new program initiatives to support Cashmere of the Americas. We believe these initiatives will deliver tangible benefits, cost savings and revenue opportunity for the industry. First (in spite of the global crises affecting us all) we are holding previous years prices for quality cashmere fiber in the grease. Second, the processing backlog has been eliminated (dehairing turnaround times are very good). Third, Cashmere Fiber Association of the Americas (CFAA) is fully operational. Visit CFAA's website for details: CFAA@CalCashmere.com Four, California Cashmere Company new product offering The "Cashmere Gift Box®" see CalCashmere website: CalCashmere.com for more information.

Buying Prices for the year 2002

White	net/lb.	$35.00
Colors	net/lb.	$33.00

Qualifying cashmere means high desirability and virtually free of contaminants and impurities. Payment based on estimated net pound (dehaired) yield.

Talibah Al-Rafiq
California Cashmere Company
PO Box 1030
San Andreas, CA 95249
Phone: 209-754-5751
Fax: 209-754-1044
Email: tajamu@aol.com
February 19, 2002

Other Cashmere Buyers?

In CashMirror's annual search for wholesale domestic buyers of small lots of raw cashmere, we were unable to find markets other than the one above. The Cashmere America Cooperative did not respond to our request for information.

If readers know of other current markets available, please let us know and we will pass along the information.

CASHMERE 2000, INC. REVERTS TO PMF CASHMERE CO.

By Ann R. Dooling

I am very happy to announce that, while the large corporation of Cashmere 2000, Inc., has ceased operations, Pioneer Mountain Farm, Inc., d/b/a PMF Cashmere Co., continues with the work it started in 1988, with development of superior cashmere genetics in the US. PMF will maintain a doe herd of 200, selected from over 1,000 pedigreed does on hand at the time of dispersal of the C2K herd. Also retained were a sufficient number of the best pedigreed bucks.

The main reason for retaining this livestock is that, of all the things I have done in my life, I have found this cashmere business to be the most interesting. It has brought me all over the world—China several times, Inner Mongolia, Italy twice, Austria, New Zealand, Australia numerous times, and Mongolia twice, not to mention all over the USA.

My work in Mongolia was with their national cashmere breed improvement program. I was asked to consult in several areas: breeding with superior genetics for cashmere production, product development and marketing, fiber classing, a specific animal identification system, and a computer application to manage the ID system. I spoke to several hundred herdsmen and women, along with project managers and veterinarians, about the best way to improve the genetics in a country that has seen Russian domination for 70 years. While the Russians had control of Mongolia, from 1920 to 1990, they introduced their Don Goat, which is much like our angora/mohair goat. Some herds are much more affected than others, but nonetheless, cashmere in Mongolia is and will be in serious trouble without a concerted effort to improve the quality of production.

The Russian goal was quantity and quality had little to do with production. I traveled over 2,000 kms through the Gobi Desert, visiting all the project herds, the villages (soums) and gers (round wool felt tents) of the 12 Mongolians who came to my farm in August of 2000 for nearly a week to study cashmere breeding and production, as well as the value-added business of Montana Knits. It was an incredible journey, and it was mind-boggling to see my picture in nearly all the gers I visited. It was standard in each ger to see a small area on a dresser where the family displayed their sacred items and had pictures of all the meaningful people in their lives—their family, good friends and all. It was during my first trip there, in November and December of 2000—20 and 30 degrees below zero—that I realized how important their trip was to the people who came to visit me. For the first time in their lives, they left their country, flew on a plane, and came to America to visit a goat farm, and see other things here that simply do not exist in Mongolia, not even in the capital city of Ulaanbaatar.

Everywhere I went, I was greeted with joy and acceptance—and gifts. The country people of Mongolia are hungry for knowledge, and very willing to learn what is necessary to make their cashmere more saleable in the world's marketplaces. I gave one and two day seminars, through a translator. We traveled by Russian Jeep, a most marvelous machine that can climb the steepest mountains with the sharpest rocks and never get a flat. Absolutely amazing—no flats—and we did drive over some incredible shale, climbed insurmountable mountains, drove in dried-up river beds that served as roads, drove across ice floes, and tooled across the desert like it was an every-day event. There are no road signs anywhere in the Gobi and it was amazing just

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PMF Cashmere Co.
Continued from previous page

to watch the driver figure out where we were and how to get where we were going. For that matter, there were not many roads. Many places we went were merely tracks.

One of the most remarkable things about the Mongolian countryside is that anyone can simply walk into any ger any time they like without knocking, even if the people inside are strangers, though most everyone knows everyone. People do not lock their gers. A traveler can expect to stay overnight if necessary and be fed anytime and anywhere along the road.

The animals—goats, sheep, yak, camels, cows, horses—roam freely. They bed down around the ger at night and stay there until their herder gets up in the morning and brings them out to graze. There are no fences, so occasionally two herds will get mixed up with each other. We happened upon such a scene one day. The two herders were scurrying around trying to separate the two bunches of goats and sheep. How they knew who was who is a mystery to me. All the goats, and especially the sheep, looked the same, but eventually, they got it straightened out.

There is little vegetation in the Gobi, especially in the wintertime. In late November and December, the animals were still in pretty good shape, but by January and February, many were dying. It is standard for us here to put up hay, or buy hay for winter forage, but the Mongolians are not accustomed to farming and haying. While they had a small amount of hay, it was not enough to sustain the animals throughout the winter. At kidding time, in April and May, I am told the death rate of newborns is around 50%, and many of the adult does also die because the stress of kidding is too much for them in their weakened condition.

While the old standard of wealth in countries such as Mongolia is the number of livestock a herder owns, in these days, we are trying to encourage them to cull their herds a great deal before winter sets in to allow the best of their genetics to survive. They are beginning to understand the concept that fewer good animals surviving is better than a lot of so-so animals dying.

My second trip, in January and February of 2001, was spent in the city of UB—Ulaanbaatar. Everyone from the countryside came into the city to take classes that I taught every day for a week straight. (My other weeks there were spent doing other jobs related to my teaching week.) Among other things, I taught an animal identification system wherein they could number their animals (there were 6,000 does in the project at that time—more have been added since), each with a different number, and with the added ability to tell which herd a goat came from as well, without ever having the same two numbers. This ID system, at a glance, gave such information on an ear tag as generation progression, year of birth, family, birth status such as twin or single, or twin of a twin, and the age of the mother when the kid was born. It is a complicated system, but very logical, and most of the students caught on well. The translator I had for that trip was excellent, and able to convey difficult concepts to them.

I also taught a comprehensive class on fiber classing and was delighted to see the classers from Mon-Amicale, Mon-Forte and the Research Institute in my class. People from the Ministry of Agriculture also came to several of my classes during those several weeks. I was interested to see that what they call white is what we would call gray. One day I wore one of my own Montana Knits natural white sweaters and was able to show the differences in both whites, explaining that the white in America is whiter than the white in Mongolia by quite a margin.

One day during some of the classes, a TV team came and took footage of my class and it was on the local news. I tried to, but missed seeing it and was told by others that it was a good show.

The work on the cashmere breed improvement in Mongolia continues, and Dr. Yondon Zagdsuren, better known as Dr. Z, is coming here to my farm in mid-March for two+ weeks for shearing, along with two or three other Mongolians. I am delighted to have him here, for he is very knowledgeable about cashmere and is very interested in what I am doing with these genetics. It's an honor to have him here.

Another reason why I will keep cashmere goats as long as possible during my lifetime is that I love cashmere. Since 1992, when Montana Knits was incorporated, I have learned so much about the knitting business—using these complicated machines, designing garments, writing patterns of all sizes and shapes, washing, dyeing and finishing of garments, marketing from coast to coast, as well as the business aspect of organizing shipping, dehairing, and spinning of hair, all kinds of spinning counts and what works best with the machines I have, teaching employees how to read my patterns and knit with my machines, managing employees and all that goes with it such as payroll, state and government requirements, FTC rules and regulations for labeling and marketing garments commercially, and managing production, both in time and materials.

It has been an incredible learning journey. In particular, dyeing is amazing. I learned that every color in the world is a combination of just three colors—red, blue and yellow. (I always knew that but to actually see it in action was fascinating.) I currently dye about 60 colors, but have formulas for over 1,000. The chemistry of dyeing is very interesting. I will tell you, however, that the first time I boiled a cashmere sweater, it was with a great deal of trepidation!

On one of my trips to Italy, I got to spend several days with the ladies in a well-known knitting company and learned a wonderful assortment of interesting knitting techniques that

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I was then able to incorporate into my designs. We shared information and it was as if we had known each other forever. I will never forget those ladies.

Soon, Montana Knits will have a new website— www.montanaknits.com It is being constructed at the moment (February). There are about 110 garments in my current line, for infants, toddlers, children, women and men. I have enjoyed designing and knitting every one of them. The first time I wrote a pattern—and to some extent even today—it was a mystery to see if the finished form would actually be what I intended it to be. It is a pleasure when it is.

Because of Montana Knits, I was able to travel to New York City twice a year to do the International Kids Fashion Show at the Javits Center. I did other shows around the country as well, but the show in NY was the most fun. It became a game to see how long it would take to get from 114th Street to the Javits Center on 8th. Sometimes it actually took more than an hour to get there—only going less than 5 miles. Here in Montana, five miles can be traversed in less than 5 minutes. Everything is relative, I guess.

To get back to the story of the goats, I am delighted to be able to remain in this industry in this country. It would be nice to have some large corporation take an interest in American cashmere, but I suspect that will happen after the rest of the world's production of cashmere is compromised in one way or another. Mongolia is having trouble with their quality; China is facing a crunch as the numbers of goat herders are getting older and dying. With the one-child policy instituted in China in 1972, nearly all of these single children are being well educated and going off into the world of business, technology, science, and such, and are not interested in tending goats on a hillside. Afghanistan has incredible political and agricultural problems, and the rest of the world produces a bit here and a bit there.

The potential for production in America is incredible with the vastness of land available west of the Mississippi. Even though the average herd of goats in China numbers only 150, they are the largest producer of cashmere in the world. It is possible for America to enjoy that honor in the years to come, even if we have some herds of 20 and 30 goats, because the potential to have herds numbering in the hundreds in many of our western states is real.

I will, for the foreseeable future at any rate, be continuing with genetic development of my herd. I will have goats for sale every year. I expect to produce about 200 kids every spring, and will be retaining only about 55 of them (50 doelings, 5 bucklings), and selling the rest. The genetic progression will turn over every year, as the oldest 55 will also be sold, keeping the doe herd at 200 maximum. I would like to see everyone who loves their goats—and I suspect all of us do or we wouldn't be doing this—to hang in there and keep the industry going. One day, our genetics will become very valuable on the world marketplace. It would be a shame not to be ready when the bell chimes.

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Dooling bucks—they're still in business (and they're glad).

PMF Cashmere Co.

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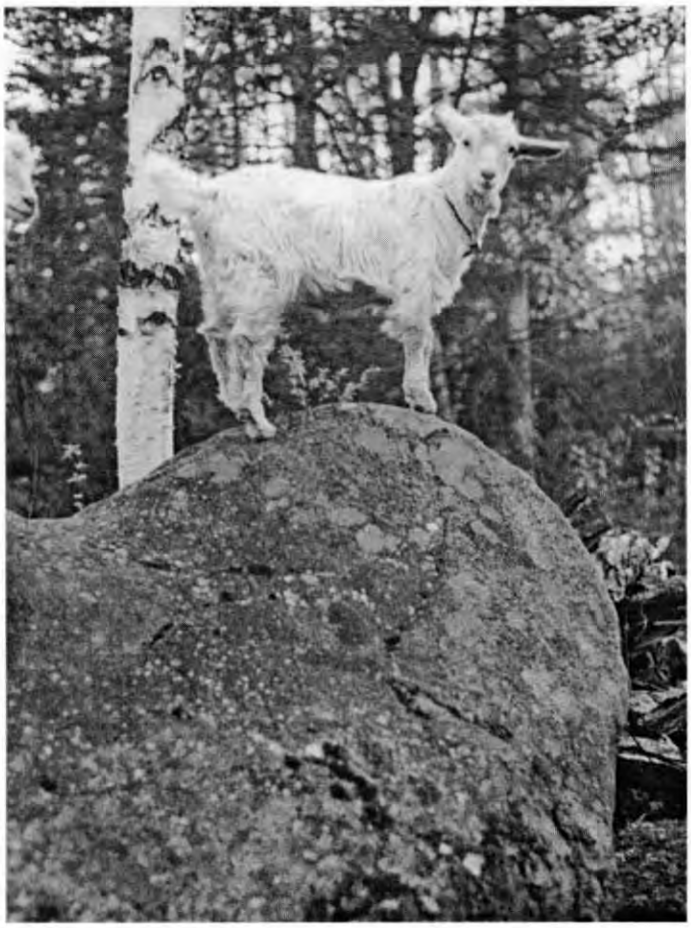
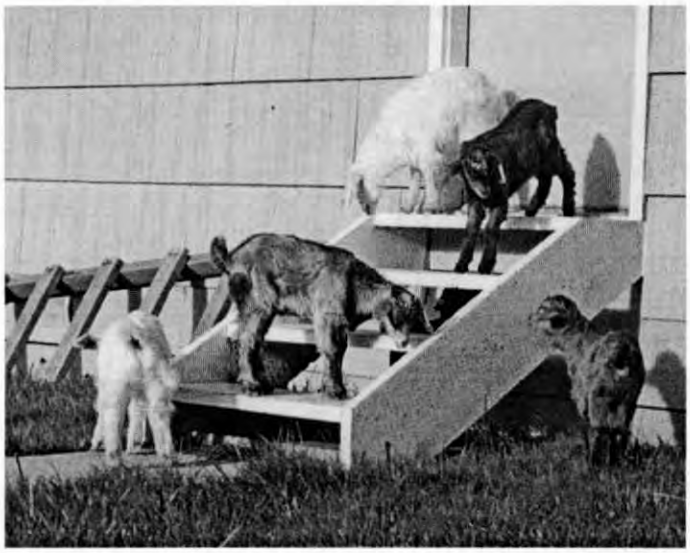
Ann in the door of the PMF Cashmere Co. office.

Kids at the bar. Photo by Doug and Roberta Maier, Breezy Meadow Cashmere Farm, Bellingham, Washington.



**Helen surveys the world from a mossy boulder at—
Mossy Boulder Farm, Union, Maine.
Photo by Marcia Fortune.**



Kids on the steps of the *CashMirror* print shop. The brown (70% grayscale for you guys) buckling on the top step is Starbucks. If he'd only stayed with his sisters, he could have been on the cover.

Dr. Z Visits Montana Cashmere Ranch

By Elaine Spicer

Lots of peering at fleece strands and talk of numbers happened during shearing at Pioneer Mountain Farms recently. The cashmere producing outfit had two visitors from Mongolia here to discuss breed improvement. Dr. Zagdsuren Yonden, (affectionately called "Dr. Z" at the farm) Cashmere Breed Improvement Project Director, and Bayartsogt Davaanyam, Agricultural Consultant, spent time during a working vacation with Ann Dooling of Pioneer Mountain Farms to talk about cashmere and the improvement of fleece.

"Dr. Z is Mongolia's cashmere expert," said Dooling. "What's been happening here is that I've been evaluating these goats as they come in on different values." Dooling, a certified cashmere classer, explained that there are three ways in which the fibers are classified. These are mean, or average, fiber diameter in microns, style (or crimp) of the fiber, and yield, or how much of that fleece is cashmere.

"Goats have only been developed for fleece for about 25 years in Australia and New Zealand," Dooling explained, "their genetic development worldwide is very young compared to that of sheep." Dooling said that having Dr. Z here for shearing was "very cool" and added that the fact that they could agree on the evaluation of the fibers was also very cool.

Bayartsogt's main purpose here was to help in translation for the two cashmere experts. "I think Dr. Z wanted to see how do we do cashmere in America. One of the things he was looking at was that the European Union is going to expand cashmere production." He was getting to know a little bit about how cashmere is raised in America. She said that she was very honored that Dr. Z took the time to visit her during shearing, which he had never seen before.

In Mongolia, goats are combed, not sheared, Dooling explained, as they are throughout China. "They don't have the manpower, Dooling explained, it's also very stressful for the goats, and by the end of winter there, they're so thin."

"There are hundreds and hundreds of cashmere researchers in China, and less than 20 in Mongolia, said Dooling. Dr. Z is 'the number one guy' in Mongolian cashmere research."

"He wanted to see how we do it here. This is the way it's done in other places, like Australia and the UK," she said.

Dooling said she has been invited to visit Mongolia this summer, a trip she's made twice already. "The most important thing to me," she said, "was the honor it was for me to have them here because of Dr. Z's stature and the fact that he didn't go anywhere else. He came all the way to America and mine was the only place he visited. He believes we have the best genetics of goats here in the U.S." Dooling explained.

Ann Dooling and Dr. Z inspect fiber during shearing at Pioneer Mountain Farm, March 2002. ***Photo by Elaine Spicer.***

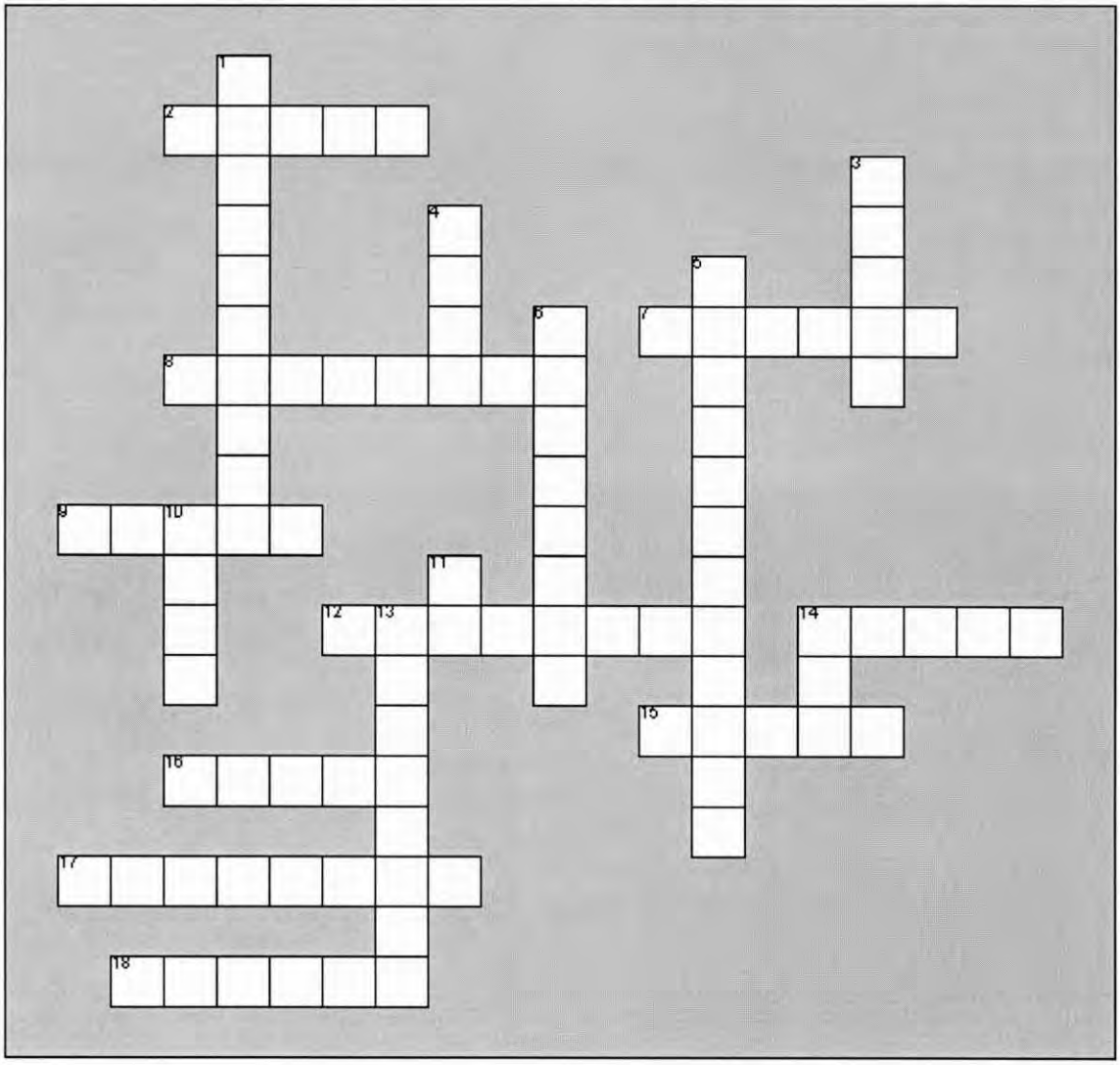
Dooling, who has run the local cashmere operation since 1988, said she started out with a huge genetic pool of eight sire lines and over 2,400 doe lines. "With that kind of genetics to start out with, I ended up with something else, which is long hair and fine cashmere." Dooling added.

"It's been very interesting to see this process. When I started out, I didn't know what I was doing. After I went to China the first time, I completely changed my breeding strategy. Since 1994, in my sire line, I'm there. I've got a long way to go in my doe line."

"I'm excited about seeing the changes that are possible." Dooling finished, "It's all possible with natural selection. I'm just a simple country farmer. It's possible to come up with what you're looking for."

Elaine Spicer, a local reporter in Montana, visited Pioneer Mountain Cashmere in March 2002 to cover the Mongolian's visit and to observe cashmere shearing.

Paul's (first) Crossword Puzzle



Across

2. Research facilities in Scotland with cashmere herd
7. paratuberculosis is also called _____ disease
8. another word for cashmere
9. How the rest of the world spells fiber
12. in many states goats require this mineral as a supplement
14. Another Spanish name for goat
15. number of chromosomes that a goat has
16. Name for goats used in Mexico
17. Name of goats found only in the arid steppes of some counties of China
18. Last name of famous fiber (fibre) researcher

Down

1. used to castrate very young bucklings
3. Black goat found in former part of USSR
4. Breed of cashmere goat found in North Gansu, China
5. bane of many goat farmers
6. Goat found in mountains of Xinjiang in China
10. injection given to kids at birth in many parts of country
11. initials for chronic contagious disease affecting goats
13. _____ Fine Fibre Network (Europe)
14. Annual goat injection

Sorry. No answers until next issue. We know we're being cruel. We thought that, just maybe, some of you would peek at the answers without really working at this. We're just protecting you from yourselves.

Chansons de Toile
(Songs of Work)

Per Joyce Todd, a musician, Chansons de Toile were songs of (women's) work in the 13th century. They are often called spinning songs in reference to the activity which occupied women most of the year. Women spun yarn for weaving, and probably in the leisure time left to them after spinning, they wove. Many of these old songs were from the North (of France) and were romantic narratives which told stories of female protagonists, who were usually of noble origins. These "songs" survived to present day, as poems primarily, their original tunes lost. Artists, including Ms. Todd have chosen tunes of similar times to accompany these early poems and has recorded them.

You may be thinking, this is sort of interesting, but what does it have to do with goats. Well, nothing exactly. However, on the web site with the information about the songs, is an awesome reproduction of an old painting (c. 1625) with some great old goats. Hint: if you access the photograph on the web site, you can download it and use it for a background on your computer. If you can, access it to view it in color. http://music.acu.edu/www/iawm/pages/toile.html

Medieval pastoral scene: Landscape with Shepherdess Singing and Shepherd Playing a Flute by Paulus Potter, b. 1625.

Modern pastoral scene at Black Locust Farm, Washington, Maine. The elegant white goat in the front is Shatoosh. She is 11 years old and was named before all the hoopla around shatoosh and pashmina, per Yvonne. Photo by Elisabeth Ross.

Management Of Hill-Lands In Appalachia For Sustainable Forage And Livestock Production

Project Number: 1932-31630-001-00
Start Date: Jun 17, 1998
End Date: Dec 31, 2002

Objective: Develop forage and livestock management strategies that increase livestock performance by increasing forage availability and quality over extended grazing seasons and maintain water quality and soil resources.

Approach: Plant resource sequences and plant communities are characterized and adaptations developed to meet the nutritional requirements of grazing livestock. Field and controlled environment experiments identify compatible species of grasses, legumes and forbs, and forage plant production sequences in traditional pasture and silvo-pastoral situations to improve season herbage distribution. The influence of soil and plant resources on grazing activity in topographically complex situations, including karst and steep slopes, and that of grazing behavior on nutrient distribution, soil physical condition and water quality are investigated. The influence of livestock manure on soil features will be investigated to develop guidelines for nutrient management and forage and livestock production in pasture systems. Results will identify features associated with soil quality in pastures; the role of forage resources and grazing management in optimizing pasture productivity and livestock performance; and maintaining environmental and water quality.

2001 Annual Report of Progress

1. What major problem or issue is being resolved and how are you resolving it ? The small size of Appalachian farms and the soil and topographic limitations characteristic of the region present physical and economic challenges. Producers are interested in diversifying farm income for improved economic viability. Meat-type goat production has been used to provide a high dollar niche market opportunity while improving pasture and woodlot management. Other producers raise hair sheep to eliminate the cost associated with shearing. There is lack of understanding and knowledge of forage systems for continued success of a meat-goat or other specialty small ruminant (hair sheep) enterprises. Forage-based grazing systems for finishing meat goats or hair sheep are being developed to improve forage nutrient utilization, optimize performance, and provide niche-product revenue options for the Appalachian farmer.

2. How serious is the problem? Why does it matter ? The productivity and survival of small farm enterprises is threatened by lack of technology for optimal hill-land pasture and woodlot resources management and utilization. The small size of Appalachian farms and the soil and topographic limitations characteristic of the region present physical and economic challenges. Better understanding of resource limitations and management options will help to refine production goals for optimal use of small farm resources to improve economic benefits from small-scale niche product enterprises.

3. How does it relate to the National Program(s) and National Component(s)? The enhancement of current hill-land resource management practices and development of new management options for pasture-based small farming systems in the Appalachian region is an integral component of the NP 205 (Rangeland, Pastures, and Forages) and NP 207 (Integrated Agricultural Systems).

4. What were the most significant accomplishments this past year? A. Single Most Significant Accomplishment during FY 2001 year: Some forages contain compounds that deter feeding by livestock. Sesquiterpene lactone composition among forage chicory cultivars were evaluated. Parallels between concentrations of lactucin and lactucopicrin in chicory and avoidance feeding behavior of wild and domestic ruminants in Appalachian highlands were observed. Information can be used to improve livestock feeding and grazing programs to link palatability, feeding behavior, and intake to performance.

B. Other Significant Accomplishment(s), if any: Nitrogen-use efficiency in ruminants is low, and addition of tannin to livestock diets can improve nitrogen-use. Supplemental commercial tannin to high protein forage-based diets was shown to improve overall nitrogen- use as monitored by lowered blood urea nitrogen concentrations in goats and sheep. Information will help optimize nutrient use in small ruminants and help refine livestock feeding and grazing management practices in the Appalachian hill lands to reduce nitrate leaching from pastures.

C. Significant Accomplishments/Acitivities that Support Special Target Populations: A one-day workshop on Meat Goat and Hair Sheep Niche Marketing was co- sponsored with Virginia State University at Petersburg, VA. A one-day Mid- Atlantic Meat Goat Symposium was sponsored with Virginia Cooperative Extension, Surry, VA. Three short courses were conducted for meat goat producers in southern West Virginia to provide opportunity to better understand meat goat nutrient requirements, predator control, and research needs of small farmers in southern West Virginia. An exhibit site with display in the Goat Arena at the West Virginia State Fair was staffed to discuss our research program and accomplishments with livestock producers from small farms in the area.

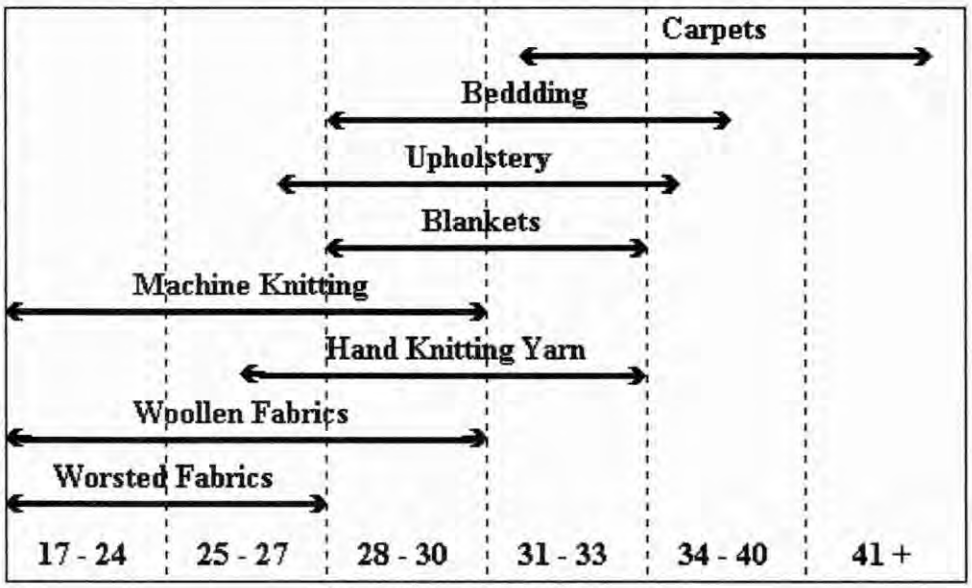
5. Describe the major accomplishments over the life of the project including their predicted or actual impact. A specific cooperative agreement for meat goat collaborative research was extended with Virginia State University, Petersburg. This agreement covers our research efforts in forage utilization and nitrogen-use efficiency to be conducted with meat goats and

Continued on page 28

What's in a Micron?

Our friend the micron is only a millionth of a meter, or a thousandth of a millimeter. In case that doesn't exactly help you put it into perspective—25,400 of them placed side to side would be an inch. They're small. Cashmere, as you know, is measured in microns, in ranges of 14 - 19, or so. If you had mid-range cashmere of about 17 microns, you would need about 1,500 of them placed side by side to make an inch. It would, of course, be difficult to lay them side by side to test this, because of all those little crimps, but perhaps you could iron them first.

The chart at right contains a visual view of what size (in microns) fibers are normally used for various textile purposes.



Above:
Table of relative fineness of fiber products used in various textile processes.

Different animals produce different thicknesses of fiber, and they are used for textile purposes for which they are suited.

For comparison, various other natural fibers, including the average fiber length, are as follows:

Fiber	**Diameter (μ)**	**Length**
Silk (degummed)	12	
Cashmere	*13 - 19*	*1 - 3*
Vicuna	12 - 14	1-1/2 - 3
Cotton (pima)	16	1 - 1-1/4
Cotton (upland)	19	1 - 1-1/8
Camel	20	1 - 5
Llama (adult)	28 - 30	10 -12
Silk (tussah)	30	
Alpaca	26 - 27	4 - 12
Rabbit	12 - 15	
Mohair (kid)	25 - 26	4 - 6
Mohair (adult)	30 - 55	to 10
Human hair	15 - 110	
Sheep:		
Merino	18 - 27	1-1/2 - 3-1/2
Fine cross-breed	28 - 31	2 - 4
Medium cross-breed	32 - 29	4 - 8
Coarse	40 - 44	to 12

Rebekah Cranor (left) and Hannah Cranor

Alisha Ayers

Kristina Merrifield

The Code of the Goa

G oodness for myself and others

O ne for all and all for one

A ttitude of gratitude

The Get Your Goat 4-H Club Mo

By Ann Be

Spin a Yarn with Gunnison 4H Club

Story and photos submitted by Susanne Roth, Guffey, CO

It was 1997. Five Gunnison 4-H members arrived at Ann Bertschy's home to participate in a vet science project. The 4-Hers took one look at Ann's cashmere goats, and "Get your Goat" 4-H Club of Gunnison was on its way to becoming a reality. Kim Falrizius, Gunnison County Extension agent, developed a lease a goat program. For one dollar a year, each young person can lease and care for one to three goats from Bertschy's herd. Club membership has increased to 23 boys and girls.

The Get our Goat Club focuses on following blood lines to determine physical and personality characteristics, general health and care, kidding and showmanship. All this information is recorded in 4-H record books. The Club has expanded these goals to learning about cashmere fiber. During a weekend in February, Bertschy provided a program to teach the 23 members how to spin. Divided into four, four-hour session, the 4-Hers learned the basic skills of spinning on spinning wheels that were graciously provided by Sherri Redden of Gunnison, Heather Hubberd, Green Valley Weavers, and Pikes Peak Weavers Guild, all of Colorado Springs.

The classes were team taught by Sherri Redden and Susanne Roth. "The boys and girls were a fantastic group to teach," according to Sheri and Susanne. "Most were spinning fiber into yarn, within the first hour."

"This is so relaxing," commented Katlyn Chambliss.

Nichole Kunze, President of the Get Your Goat 4-H Club said, "This was a lucky experience because not many people have thyis opportunity.

Deven Mills, Vice President , exclaimed, "I want a spinning wheel for my birthday."

Kevein Ellis said, "Spinning is really fun and relaxing."

The group is in process of organizing and sponsoring the first Get Your Goat Multi-breed Fiber Show. Cashmere goats, sheep, angora rabbits, llamas and alpacas will be represented. This event will be held the weekend of April 27th and 28th at the Gunnison County Fairgrounds. Spinners are welcome to bring their wheels, spin and meet other fiber enthusiasts. Vendor craft booths are available for rent.

For information about this event and animal registration, contact the Gunnison County Extension office: 970-641-1260.

Left to right: Ann Bertschy, Scott Redden, Sherri Redden, Susanne Roth.

Goat Farmers Could Profit From Peanuts

ARS News Service Agricultural Research Service, USDA

Southern farmers who produce forage peanuts might see their profits grow with goats, thanks to an increasingly diverse U.S. population with a taste for goat meat. The forage peanuts that readily grow in Florida and the southern parts of the Gulf States also make great goat food, according to new agricultural research.

The U.S. Department of Agriculture teamed up with Fort Valley State University at Fort Valley, Ga., to find out if goats can be raised on different kinds of forages. The project is part of Fort Valley's comprehensive program to develop profitable year-round grazing systems for goats. Scientists with USDA's Agricultural Research Service assisted Ft. Valley in nutritional analysis, using near infra-red spectrometry. They found no significant difference in nutritional value between alfalfa, the usual goat forage, and the leafy peanut plants.

Forage peanuts don't produce nuts like the kind people eat, so most of their nutritional value is in the leaves. Scientists at Fort Valley, who conceived the goat-peanut idea, kept live herds to see how the practice worked outside the laboratory. They found the goats may prefer peanut plants over alfalfa in the fall breeding season. These results suggest setting aside some peanuts for pasture might be a profitable option. Goats are a low environmental impact livestock.

A recent study done for USDA's Agricultural Marketing Service shows goat meat will gain markets because of the United States' increasing cultural diversity. Caribbean and West African cuisines use mature goat meat for jerks and barbecues. Muslims enjoy kid goat meat as part of their festive meal, id-al-Fitr, which is the break from Ramadan fasting. Greek, Italian and other European cultures also make goat part of their holiday fare. Latino cuisine favors Cabrito, or meat from a kid goat weighing less than 20 pounds.

But it isn't just new immigrants who want goat. Restaurants featuring international cuisine are adding to the number of consumers craving goat—not only in the South, but nationwide.

Scientific contacts: William Windham, ARS Richard B. Russell Agricultural Research Center, Athens, Ga., phone (706) 546-3513, fax (706) 546-3607, bobw@athens.net; Tom Terrill, Animal Science Department, Fort Valley State University, Fort Valley, Ga., phone (912) 825-6814, fax (912) 825-6376, terrillt@mail.fvsu.edu.

Kansas Cattle Negative for FMD

March 13, 2002

From the U.S. Department of Agriculture's Press Secretary, Alisa Harrison

Samples from cattle from Kansas were tested tonight at U.S. Department of Agriculture's Foreign Animal Disease Laboratory at Plum Island, New York. Tests were negative for the Foot and Mouth Disease virus.

As part of USDA's monitoring and surveillance program, we routinely investigate reported cases of animal conditions for foreign animal diseases. In 2001, we investigated and tested approximately 800 cases. All were negative. Today's test was part of our ongoing surveillance activities.

USDA and state animal health personnel are in the fields and port-of-entry every day monitoring for foreign animal diseases. The United States has not had a case of FMD since 1929.

Pennsylvania Researchers Study Goat's Milk Cheese

Researchers Van Hekken, Tunick and Park, are studying monterey jack cheeses made from goat's milk. Specialty cheeses made from goat's milk have a very devoted and growing customer base in the US. The majority of the goat milk cheeses produced in the US are made by small farmstead operations and the cheesemaking steps can vary from farm to farm. Very little research has been conducted on goat's milk cheeses and, because there are differences between goat and cow milks, not all of the information collected on cow milk cheeses can be applied to goat milk cheeses. In order to establish more uniform production and quality standards for goat milk cheeses, basic information on these cheeses when they are first made and as they age must be collected. In this study, quantitative information on the composition, meltability, and textural properties of goat's milk Monterey Jack cheeses over a 6 month aging period was obtained. Significant changes in the properties of the cheese showed a minimum of 8 weeks of aging was required to obtain uniform texture in goat's milk Monterey Jack cheese. This study starts the collection of measured quality traits for goat's milk Monterey Jack cheese that can be used in future quality, processing and aging studies to set up standards, make a more uniform product, and expand the specialty goat's milk cheese industry in the US.

Keeping Cashmere Goats

By Jerry Laker, MLURI, Scotland
Revised by John Barker, Project Management Services

General Management and Husbandry

Although very similar to sheep in most respects, the foraging habits of goats differ in that they are browsers rather than grazers, preferring more variety in their diet. Goats will eat many plants in a pasture which sheep will leave untouched, and many farmers have seen a marked improvement in pasture quality since the introduction of goats. Fencing of goats is not as difficult as many people imagine. In many situations standard sheep fencing will suffice. If not, a single strand electric wire running parallel to the fence should act as a sufficient deterrent. Goats do not like wet conditions and require some form of shelter when kept outside if no natural shelter exists. These shelters can be rudimentary so long as they keep the rain off their backs, and some farmers prefer moveable ones to reduce poaching of the ground. Existing under-utilised buildings can also be easily adapted for goats.

The breeding cycle and general husbandry of goats are very similar to sheep. Gestation period is 152 days, and goats can produce one or two kids (occasionally three) which are generally weaned at about four months old. Female kids can be kept or sold as breeding stock, castrated males are sold for meat preferably after their first fibre harvest in the spring. General health and parasite control can be carried out using products licensed for use with sheep, although Benzimadazole wormers require 50% higher dosing rates, and Levamisole-based wormers are not recommended.

Feeding practices vary according to land available and other considerations. If enough forage is available goats should not need much feeding apart from prior to mating and kidding unless they are to be shorn, after which housing and extra feeding will be required. Hay, silage, cereals and proprietary sheep mixes are all suitable depending on quality and the animal's requirements.

Goats can be graded to judge their body condition and feed requirements much like sheep, by feeling the amount of fat cover over the backbone behind the ribs. But it must be remembered that they store more of their fat internally than sheep, so a condition score of half a unit less than looked for in sheep will be acceptable.

Fibre Harvesting

Cashmere is the fine down undercoat grown by all types of goat (except Angora) during late summer and autumn, and is shed naturally in the spring. The fibre can be harvested by combing or shearing. Shearing is done with standard sheep shears, and has the advantage that all animals can be shorn

Continued on next page

Photographs compliments of Cashmere Breeders Limited.

Keeping Cashmere Goats
Continued from previous page

at the same time. However this must be done in February or March to avoid loss of down by animals which moult early, and the goats must be housed afterwards until they have grown a new coat of outer guard hair. This method suits farmers with available housing and who prefer to spend money on extra feeding rather than more time in combing their goats. Combing can be done with a pet comb such as used on dogs, and must be repeated once or twice to ensure that all down is harvested. Although more labour intensive than shearing, the goats do not require special housing or extra feeding, and many producers find this a preferable option.

Fibre Marketing

The amount of fibre produced by an individual farmer is likely to be too small to be marketable direct to the textile industry. Producers can send their crop to a fibre pool operated by the Scottish Cashmere Producers Association annually. Highly trained graders sort the fibre according to quality (hosiery or weaving), colour (white, off-white or coloured), and yield of cashmere in the fleece. The results of the grading, together with helpful comments, are sent to the producer. The total "pool" is then marketed by SCPA, either direct to a textile mill or made into garments carrying the SCPA label.

The Origin of the Scottish Cashmere Goat

The Scottish Cashmere Goat has been developed by scientists at the Macaulay Land Use Research Institute and the Roslin Institute (Edinburgh) from the world's most widely based fibre goat genepool.

The Scottish cashmere goat has been selected for cashmere quality and hardiness from a base population created in a structured cross-breeding programme involving: Scottish Feral goats renowned for their hardiness and exceptionally fine (less than 14 micron) cashmere. Icelandic goats also contributing hardiness and low fibre diameter. Australasian cashmere goats from top herds in Tasmania and New Zealand noted for their high levels of production and white fibre. Gorno Altai cashmere goats from Southern Siberia, near the borders of China and Outer Mongolia, with exceptionally high fleece weights.

The CBL Elite Herd

Cashmere Breeders Ltd's Elite Herd of 450 breeding Scottish Cashmere does—the largest herd

Cashmere Breeders Limited

of cashmere goats in Eu- rope—is noted for its production of high quality cashmere and its hardy, healthy stock. The does are run throughout the year on a hard hill farm in the Scottish Borders and all kids are born outdoors.

All Elite Herd stock are fibre tested. Top bucks and does produce more than 300 grams of Hosiery Quality (less than 16.5 microns) cashmere noted for its length, style and handle. CBL animals have been awarded the following First Prizes in the annual Scottish Cashmere Producers Association Fleece Competition in recent years: Best Kid fleece1993, 1994, 1995, 1996 Best Hosiery doe fleece1993, 1994, 1995, 1996 Best Hosiery buck fleece1993, 1994, 1996 Overall Best fleece 1993, 1994, 1995, 1996.

In addition to sales within the UK, CBL has exported genetic material to Belgium, the Czech Republic, the Falkland Islands, Italy and Spain. For information on prices and availability contact e-mail: cblrhu@aol.com or e-mail: ajfrussel@aol.com or tel/fax: +44 (0)1721 720583

Fiber Identification by Burning

You can identify fibers by burning them. This may not work well for man-made fibers and blends, but natural fibers can be identified by burning a thread of the fiber (safely of course) and observing.

Wool yarn and fibers will smell like burning feathers. When removed from the flame, it gradually stops burning and a brittle, black bead forms.

Silk burns easier than wool, with similar smell, but the ash drops off in brittle beads and is grayer and softer than wool ash.

Cotton burns quickly, smelling like wood fire and leaving a fragile black ash.

Linen burns quickly, with similar smell, but little ash.

Acetate yarn burns quickly, throwing off black beads which can be easily crushed and it smells of acetic acid. Nylon and polyester do not burn, but shrink from the flame, forming a hard black residue.

Question: How many kids fit under a grooming stand?
Answer: As many as you have.

Photograph by Diana Mullins, Still Waters Cashmere, Twisp, Washington.

Uses for Fleece Rejects

Ideas from Mabel Ross's
Encyclopedia of Hand Spinning (1989)

It is good to use fleece rejected for usual purposes before the moths get to it. All good spinners tend to accumulate quite a stash of spinnable fleece—estimated to be on the order of 2 - 3 closets-full per spinning year. If you let it "spoil", someone in your household may accuse you of waste and think you should stop accumulating. If you happen to find you have accidentally acquired fleece that you are unlikely to get to (ever) you may want to consider using it for something else:

Fine wool with good crimp can always be felted.

Fleece which is cut short makes good stuffing for pillows, cushions and quilts. It will stay puffy indefinitely, unlike man-made materials which will break down into powder in a relatively short period of time.

You can always card the rejected fleece and use it as is—twisted into thick rovings for weft filling for futons or rugs or knotted with Ghiordes knots as pile.

You can use "French knitting" to make a long knitted tube which can be stuffed with fleece to make a solid thick rope to be sewn into rounds to make a floor rug.

Or, you can always save it for moth food. Moths have to eat too.

Rebuilding Afghanistan's Agriculture

ALEPPO, SYRIA and WASHINGTON, D.C., 14 February 2002—Scientists from one of the world's leading agricultural research centers announced today the creation of a global consortium of research institutes, relief and development organizations, universities, and aid agencies to undertake a multi-million dollar effort to rebuild Afghanistan's agriculture. War conditions coupled with the region's worst drought in at least 40 years have devastated Afghanistan's food-production capabilities and depleted critical seed stocks, leaving the nation heavily dependent upon food aid from international donors. Consortium members say that by harnessing the best of agricultural research, Afghanistan will be able to revive its once-thriving farming sector and move toward food self-sufficiency by 2007.

"Agriculture in Afghanistan is going to need a lot of help," says Adel El-Beltagy, PhD, director general of the International Center for Research in the Dry Areas (ICARDA). A Future Harvest Center based in Aleppo, Syria, ICARDA is the lead organization in this new initiative, known as the Future Harvest Consortium to Rebuild Agriculture in Afghanistan. "Our mission is to ensure that agricultural reconstruction efforts are based on the best practices science has to offer," El-Beltagy says.

Agriculture is the largest and most important sector of the economy in Afghanistan, a country of about 22 million people. The Future Harvest Consortium, which has the potential to be the largest-ever seed recovery effort of its kind, will work to replenish damaged seed and irrigation systems to restore critical farming activities, both for near-term requirements and long-term sustainability. The Consortium will provide farmers with seeds to plant for the upcoming spring and fall growing seasons and vaccines to prevent disease in Afghan livestock. The consortium will also focus on the once-prosperous livestock and horticultural (fruits and vegetables) sectors, as well as land and water management. The nation's important crops include wheat, maize (corn), barley, chickpeas, lentils, carrots, potatoes, melons, apples, and pistachios. According to the Food and Agriculture Organization of the United Nations (FAO), there are 65 million hectares of land in Afghanistan. Of this, about 30 millions hectares are rangeland for livestock and 8 million hectares are cultivated.

Scientists, development experts, and representatives of U.S. universities recently met in Tashkent, Uzbekistan to initiate the consortium and develop plans for the recovery effort. In addition to ICARDA, initial consortium members include FAO, CARE International, the International Maize and Wheat Improvement Center (CIMMYT), the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Future Harvest, and the U.S. Agency for International Development, and the Canadian-based International Development Research Center. The consortium expects to add new members in the coming weeks.

Incorporating Science into Humanitarian Aid Efforts In order to provide immediate relief, both ICARDA and CIMMYT will supply much-needed seeds for farmers to plant crops for the approaching spring and autumn growing seasons. Approximately 3,500 metric tons of seed will be made available in the spring and about another 10,000 metric tons in the autumn.

North Afghan shepherds

"There is an urgent need to focus not only on the long-term rebuilding process, but also on the near-term requirements of farmers for basic food consumption and nutrition," says El-Beltagy.

The consortium seeks to ensure that Afghan farmers receive the appropriate seeds and tools for their specific farming needs, something recovery efforts often overlook when responding to emergency situations. In addition, all aspects of the consortium's efforts will involve teams of experts with extensive experience working in Central Asia.

"What is unique about the consortium is that members are committed to ensuring that science is placed up front in the recovery effort," says Avtar Kaul, PhD, senior technical advisor of agriculture and natural resources with CARE. "All too often, well-meaning development agencies have intervened only to find out that what they're doing is technically inappropriate under local circumstances. We need to make sure that recovery efforts are based on a real understanding of Afghan agriculture so that they meet the real needs of affected communities. Science-led recovery efforts, supported by grass-roots level interventions, will rapidly put the country's agriculture on the road to recovery."

The consortium will send teams into Afghanistan to visit farms and villages to gather information and evaluate the current situation in order to develop the best course of action for long-term sustainability. The first team is expected to visit Afghanistan in March, with other teams to follow during the next six months.

The first priority of the consortium will be to focus on seed systems. This includes providing foundation seed-which is used to produce seed that will be planted by farmers-for replenishing the country's seed stocks that are important for domestic food security and market development. The consortium will not only reintroduce traditional wheat, maize, barley, chickpeas, lentils, and other seeds that have been used by Afghan farmers for centuries, but also introduce seeds that have been improved through breeding to be more productive and disease tolerant, as well as new seed varieties that have been bred to grow in

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Afghanistan Agriculture
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conditions similar to those in Afghanistan, helping to introduce crop diversification.

"Right now the seed situation in Afghanistan is critical," says El-Beltagy. "We believe the majority of the country's seed was lost when farmers planted the 2001 crop. When the rains failed for a third year in a row, it put an end to their ability to stay on the land. Restoring the nation's seed supply is crucial because it forms the foundation for all farming activities. We urgently need to multiply seed supply to replenish these depleted seed stocks and meet the needs of the farmers-both men and women-displaced by war and drought. Our highest priority will be to revitalize wheat, which makes up 80 percent of the nation's grain production."

The consortium's goal is to create the critical mass of seed needed for Afghan farmers to be able to produce enough of their own seed to achieve food security and eliminate the need for food aid. The goal for replenishment is 125,000 tons of seed, which experts expect to reach in three years. FAO and international aid organizations have already begun this process of producing seed in Afghanistan.

"What we plan to do," says John Dodds, PhD, a Washington-based representative of ICARDA, "is provide the necessary scientific support needed to produce quality seed of adapted varieties inside Afghanistan.

Dodds notes that if the focus is kept on seed production, then food aid programs can gradually phase out their operations over the next few years. It will be essential to phase out food aid while farming activities increase so that markets are not distorted by aid supplies, according to Dodds.

Abdul Rahman Manan, former director of Afghanistan's national agricultural research service now working on Afghan issues with FAO in Pakistan, says Afghanistan's agriculture is experiencing an unprecedented challenge from the aftermath of the war and three years of extreme drought. "It is not just a matter of repatriating traditional food crops or providing fertilizers and other agricultural inputs," Manan says. "The country's entire agricultural production system has been disrupted. But with the consortium's collective scientific expertise and available resources, we can bring significant progress to Afghanistan more quickly."

Agriculture in Afghanistan: Combining Tradition with Scientific Development Manan says that Afghanistan once had a strong agricultural research and extension service and was agriculturally self-sufficient until the Soviet Union invaded in 1978. "Agriculture is at the heart of our culture and our history," he says. "Over the centuries, Afghan farmers domesticated 18 important food and horticultural crops, including wheat, peas, carrots, melons, apples, and pistachios." Afghanistan used to have its own seed and agricultural credit system and a reputation in neighboring countries for superior fruit.

In 1992, Afghanistan's national agricultural genebank-a facility used to safely store seeds and other plant material-was destroyed during the civil war. Many believed that much of Afghanistan's agricultural heritage might have been lost. However, samples of many, if not most, of the seeds and other plant genetic resources were collected in the early 1970s by scientists in Afghanistan and are safeguarded in genebanks maintained at ICARDA, CIMMYT, and other Future Harvest Centers, principally in India, Mexico, and Syria. All of these plant materials will be available for repatriation to Afghanistan.

Because restoring seed supply is so critical and provides the foundation for other rebuilding efforts, about 75 percent of the consortium's resources will be targeted in 2002 to seed initiatives. The consortium will focus remaining resources on improving livestock numbers and health, restoring soil and water management, and reintroducing the country's native fruit and vegetable crops.

Scientists estimate that almost half of the nation's livestock-mainly goats and sheep-have been lost. Historically, livestock provided 40 percent of all export earnings. The consortium will look to revitalize this once-thriving livestock sector. But an immediate goal, El Beltagy says, is to help farmers keep their remaining animals alive to regain the desired animal population and provide milk and other basic animal products for immediate domestic consumption and trade by Afghan families. In addition, the consortium will supply vaccines for cattle, sheep, and goats to prevent diseases such as rinderpest, anthrax, and sheep pox.

Another priority will be land and water management in areas of the country most affected by the drought, particularly the northern and western provinces. Consortium irrigation experts agree that much of the country's irrigation infrastructure will need reconstruction.

In addition, the new Afghan government is committed to eradicating poppy cultivation that keeps the illegal drug trade thriving. But, says Dodds, it will have a hard time achieving that goal unless it can provide alternatives to help farmers earn cash. In addition to its notoriety in poppy farming, Afghanistan is widely known for its fruits, nuts, and vegetables, many of which have been replaced by poppies.

"Afghanistan will need to move quickly to provide farmers sound alternatives to displace poppies. Fast-growing fruits and vegetables, like carrots and melons, are a good way to do that because they can be grown quickly and command a higher return than most other food crops," says Dodds.

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Afghanistan Agriculture
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"If Afghanistan is going to get back on its feet, and if we are going to diminish dependency on food aid programs, development programs are going to have to make sure that they provide Afghan farmers with appropriate technology and policies," says El-Beltagy. "That means putting science at the head of the line."

The Future Harvest Consortium to Rebuild Agriculture in Afghanistan has received US$12 million dollars in funding from the United States Agency for International Development (USAID) and the Canadian-based International Development Research Center. Other donors have also expressed an interest in the consortium, which hopes to obtain additional funds for the program's efforts.

Future Harvest, which builds public understanding of the role of agriculture in international issues, will begin posting information on this effort on its Web site www.futureharvest.org in the coming months.

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ICARDA's www.icarda.org mission is to improve the welfare of people and alleviate poverty through research and training in dry areas of the developing world by increasing production, productivity, and nutritional quality of food, while preserving and enhancing the natural resource base. ICARDA is a Future Harvest Center.

Future Harvest www.futureharvest.org is a global nonprofit organization that builds awareness and support for food and environmental research for a world with less poverty, a healthier human family, well-nourished children, and a better environment. Future Harvest supports research, promotes partnerships, and sponsors projects that bring the results of research to rural communities, farmers, and families in Africa, Latin America, and Asia. Future Harvest supports the 16 food and environmental research centers that are primarily funded through the Consultative Group on International Agricultural Research www.cgiar.org.

The CGIAR Family Created in 1971, the Consultative Group on International Agricultural Research (CGIAR) is an association of public and private members supporting a system of 16 Future Harvest Centers that work in more than 100 countries to mobilize cutting-edge science to reduce hunger and poverty, improve human nutrition and health, and protect the environment.

The CGIAR partnership includes 22 developing and 21industrialized countries, 3 private foundations, and 12 regional and international organizations that provide financing, technical support, and strategic direction. The Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD), the United Nations Development Programme (UNDP), and the World Bank serve as cosponsors.

GSF Bing (merely a yearling) asks, "If I stand real still, can I catch one?" Photo by Pat Fuhr, Giant Stride Farm, Onoway, Alberta, Canada.

Calendar of Events

April 27-28, 2002
Multibreed Fiber Animal Show, Gunnison, Colorado, sponsored by Get Your Goat 4-H Club. 4-H and open divisions for goats, alpacas, llamas, rabbits, sheep. Cashmere Goat Show (April 28th), Bronwyn Schuetze, Judge. Showmanship clinic, vendors, spinning competitions. For more info: Gunnison County Extension, 970-641-1260.

May 4 - 5, 2002
Maryland Sheep and Wool Festival, Howard County Fairgrounds, Baltimore, Maryland. For information: PO Box 99, Glenwood, MD 21738, 410-531-3647, email: info@sheepandwool.org

May 4 - 5, 2002
Tennessee Animal/Pet Exp & Sale, Nashville, Tennessee. Horses, miniature horses, miniature donkeys, miniature cattle, zebras, camels, llamas, goats, sheep, rabbits birds, poultry, reptiles, puppies, kittens, pocket pets, and exotics. Info: Doris or Ron Williams 615-449-6827, http://www.lucky11farm.com

June 1 - 2, 2002
Southwest Montana Flock and Fiber Festival, Dillon Montana. Farm management and fiber arts workshops, wool and commercial sheep show, mohair and cashmere goat show, fleece show and sale, vendor booths, demonstrations, children's events, farm photo contest. For more information: www.gjfarm.com/Festival.html or contact: Drin Becker, phone: 406-834-3444.

June 13 - 16, 2002
Estes Park Wool Market events and workshops, Estes Park, Colorado. Workshops, livestock exhibits, vendors, cashmere goat show (June 15th), other animal shows, handspun skeing competition. For a detailed schedule, see their website: http://www.estesnet.com/

June 21 - 23, 2002
Black Sheep Gathering, Lane County Fairgrounds, Eugene, Oregon.

September 17 - 20, 2002
Third National Small Farm Conference, Albuquerque, New Mexico. Training for specialists, technicians, farm advocates/entities. For info: Denis Ebodaghe, USDA, email debodaghe@reeusda.gov, phone: 202-401-4385.

Association Contacts

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Marti Wall (Washington) 360-424-7935

Colorado Cashmere and Angora Goat Association (CCAGA)
Carol Kromer, Club Contact, 719-347-2329

Eastern Cashmere Association (ECA)
Ann Wood, President
937-568-4994, tamarack@iapdatacom.net

North West Cashmere Association (NWCA)
Website: http://www.nwcacashmere.org, Paul Johnson, President, 503-623-5194, paul@cashmirror.com
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Texas Cashmere Association (TCA)
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"Have your heard the rumor about the sky falling?"
Photograph by Marilyn Ackley.

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

Management of Hill Lands—Appalachia

Continued from page 14

hair sheep. An abandoned farm site on a sandstone ridge was secured for research plots and samples collected from invasive shrubs throughout the growing season. Procedures for extraction and analysis of polyphenols (phenylpropanoids, flavenoids, and tannins) and polyamines were refined and were applied to obtain qualitative and quantitative information about the chemical composition and nutritive value of shrub and forage samples. Nutritive value, mineral, and polyphenols found in invasive shrubs can help to understand nutrient utilization and weight gain by meat goats. Our project also seeks to help identify parameters that provide a better understanding of the impact of grazing livestock on soil nutrients and uptake by plants. Information will help refine grazing practices options for hill-land pastures. Gypsum and dolomitic limestone increased productivity in acidic grassland pastures under renovation. Limestone surface applied to abandoned pasture early in the renovation process increased ammonia generation from urine patches, but should reduce nitrogen pollution potential of ground water. In woodlot management, research initiated on growth and quality of specialty mushrooms and medicinal herbs can be used to develop improved guidelines for woodland production and microenterprise budgets for small-scale farm systems. Ultimately, results will help small farmers in Appalachia better utilize farm resources, especially hill-land pastures and woodlots, containing weeds and brush for optimal meat goat production and provide options for other specialty crops for small farm producers to enhance economic returns.

6. What do you expect to accomplish, year by year, over the next 3 years? 2002: Continued research on growth and quality of the medicinal herb goldenseal. Continue on-farm experiment with specialty mushrooms. Implement grazing experiment on established finishing systems using established pastures to evaluate the impact of tannin in forage on nitrogen-use efficiency in meat goats and hair sheep. Evaluate fate of goat urinary nitrogen and fecal nitrogen in soils via a laboratory and greenhouse experiment. 2003: Continued evaluation of forage finishing systems for meat goats and hair sheep. Continued collection of soil, plant, and animal data from various experiments. Chemical evaluation of soils in the nutrient uptake experiment. 2004: Define the impact of tannins on nitrogen-use in meat goats. Refine forage-based grazing management systems for improved meat goat and hair sheep production. Define fate of manure nitrogen in hill-land soils.

7. What science and/or technologies have been transferred and to whom? When is the science and/or technology likely to become available to the end user (industry, farmer, other scientists)? What are the constraints if known, to the adoption & durability of the technology product? A workshop was conducted to update West Virginia University Cooperative Extension Service personnel on our underutilized hill-land research efforts. Two workshops and three short courses were conducted for meat goat and hair sheep producers to provide opportunities to better understand production, management and marketing. A display site in the goat arena at the West Virginia State Fair was staffed for three days to discuss our research program and accomplishments with livestock producers and others interested in agricultural systems for small hill-land farms. USDA-NRCS has provided a staff member from the Grazing Lands Initiative to assist with research and technology transfer activities.

8. List your most important publications in the popular press (no abstracts) and presentations to non-scientific organizations and articles written about your work. Barbery, T. Research center heads meat goat farming experimentation. Bluefield Daily Telegraph. October 1, 2000. p. B-7.

Boys will be boys (at a very young age).

Six Years of Cashmere Business Conferences! A Comprehensive Reference for Cashmere Goats PCMA Proceedings Books For Sale—While They Last

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

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

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

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

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Practical Systems for Goat Management (Dooling, T.)
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General Health Management of Goats (Hawkins)
Fence your Goats or: How to Hotwire a Goat (Zweede-Tucker)
Guardian Animals (Becker)
Cashmere Goat Nutrition (Hachenberger, D.)

Miscellaneous
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How to Get Your Goat (Johnson, P.)

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CashMirror Back issues, $3 each or a dozen for $30. 10/89 - 2/02. About half of old issues still available. Index available. Order specific issues or give us subjects you need and we'll peruse our computer-sortable index and select back issues for you. Great reference material. Order from CashMirror Publications. Price includes shipping.

Children's Book: Buster the Cashmere Goat, Children's book by Paul G. Johnson, CM Ace Reporter. 66 pages, includes photographs. Good goat fun. Suitable for reading aloud for young children, 4th grade readers, or for brightening lives of bored adults. Happy endings only. $7.50. Order from CashMirror Publications. http://buster.cashmeregoat.net

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