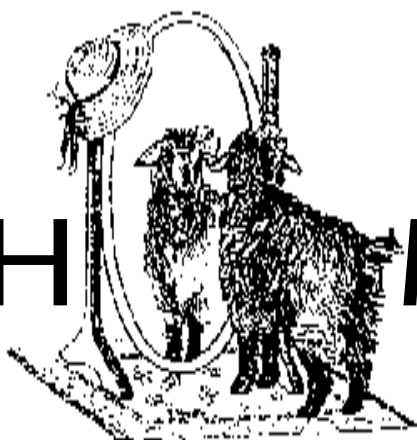


CASHMIR MIRROR



Volume 12, Issue 10

August 2001

The monthly magazine devoted to cashmere goats and their fiber



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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
Dallas, Oregon
"Love is in the air."

September 22, 2001 – NWCA Presents:

A seminar by Christopher J. Lupton, Ph.D.
Professor, Department of Animal Science, Texas A&M University

Chris Lupton is Project Leader for animal fiber research conducted at the Research and Extension Center in San Angelo. He is a member of the Animal Nutrition Section in the Department of Animal Science and of the Graduate Faculty of Texas A&M University, Angelo State University and Texas Tech University. He earned his bachelor's degree and doctorate at the University of Leeds, England, in the field of textile chemistry.

Dr. Lupton plans and conducts a research program dealing with wool, mohair and cashmere that provides information as an aid in improving fiber production, quality, value and marketing. Because the Wool and Mohair Research Laboratory in San Angelo has unique capabilities for evaluating animal fibers, his research addresses areas of high national priority and involves cooperation with USDA and scientists from universities across the United States.

Dr. Lupton will be speaking at the Oregon Flock and Fiber event in September for NWCA. This seminar will focus on fiber analysis (cashmere) as well as the recently concluded Latitude Study, where cashmere and angora goats were divided into three test herds, in Montana, south Texas, and Alaska. The three year project was designed to study the effects of climate differences on fiber growth. The seminar is offered free to NWCA members, \$10 for nonmembers. Mark the date on the calendar – Saturday, September 22nd, 6:30pm - 8:30 pm, basement of Main Pavilion, Clackamas County Fairgrounds, Canby, Oregon.

Important Local Gossip

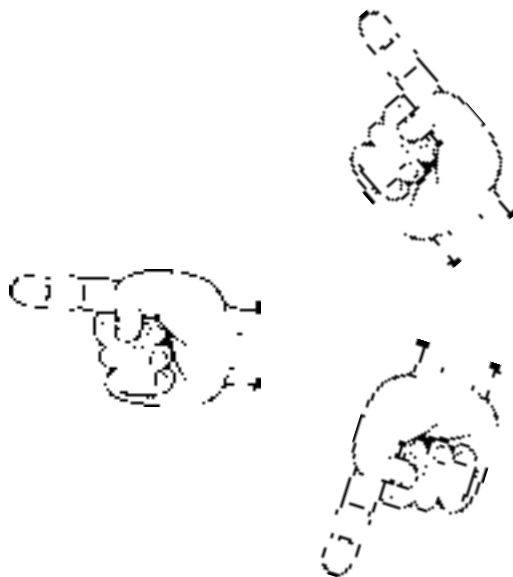
Local rumor has it that in addition to the infamous Dr. Lupton making an appearance at the 2001 Oregon Flock and Fiber Festival (see above) other persons "of interest" to cashmere producers will also be at this year's festival:

Steve Hachenberger, Castle Crags Ranch, Hamilton, Montana, inventor of the DH-2 dehairing machine, cashmere goat producer, founding member of Mild Goat Men, husband of poor Diana Hachenberger and general card.

Ann Dooling, Cashmere 2000, Inc., Dillon, Montana, cashmere producer, cashmere garment designer and manufacturer and one of the most knowledgeable people in the cashmere industry we know.

Adam Varley, Vartest, New York City, owner of a lab which tests blends of cashmere and other fibers. Adam will just be returning from a trip to Mongolia where he is scheduled to tour cashmere dehairing and processing facilities.

If you can get to this year's festival in Canby, Oregon, you will want to look these people up and grill them. We certainly plan on it! Check in at the NWCA Association booth (in the livestock barn) for clues on finding them.



Fleece Evaluation 101 (A Valuable Tool)

An ECA fiber packet designed for assistance in learning how to evaluate cashmere fleeces is now available:

\$10 for Eastern Cashmere Association members
\$15 for non-members

To receive your packet, mail check (payable to Eastern Cashmere Association) to Ann Wood, PO Box 567, South Vienna, Ohio 45369

Reflections

by Linda Fox

The Horrors of Deep Pack Bedding

The deep pack bedding system, as you probably know, is a system of barn management where you cover the barn floor with successive layers of straw or other bedding material during the year. If the floor is dirt, urine soaks through the ground and less bedding is required to keep things tidy. Once a year or so, the accumulated bedding is mucked out to ground level and the process starts anew. The bedding helps keep the animals dry and the quietly decaying urine, feces and bedding materials provide heat for the animals in the cold winter months. The discarded bedding material makes excellent mulch for the garden.

Deep pack bedding is an especially good system for goats as goats spend most of their time indoors when it rains. It rains here a lot, and that means we have goats hanging around the barn eating and pooping a good share of the winter and spring. When the barn floor starts looking wet or dirty, we cover up the mess with a sprinkling of new straw. As well as keeping the place cleaner and healthier for the animals, you can put down a new layer right before you have scheduled barn visitors and impress the heck out of them with how clean your barn looks.

Putting down new layers is an event at our place. The goats love to follow me around as I spread each new layer, darting in to claim the choicest morsels for a snack. It would seem that I could avoid the occasional inadvertent whack by sneakily spreading the straw when they are out grazing, but the goats and I have come to enjoy the bedding refresh routine. Even the shyest goats know that I am so intent on breaking open bales and spreading straw that I won't take time to try and catch them to stuff something nasty-tasting down their throats or poke them with sharp objects. Even the flightiest goats follow me around and do not move when I pass close by with a flake of straw.

The goats eat what they want and the rest of the straw is quickly trampled into the decomposing mass under their feet. We buy oat or wheat straw out of the field around here in the fall when it is just baled and relatively cheap. It is important to use good clean straw without mold as we know the goats will consume part of it. We use straw bedding in all of the goat pens and the kidding stalls. A new layer of straw is put down in the kidding stall after each mother and new kids depart, to freshen things up for the next new arrival.

The horror part comes along when you let the stuff pile up so high that it becomes a major chore to clean it out. We usually try to make a clean sweep once a year. Our goats have plenty of barn space so straw layers are added less frequently than when goats are crowded into less space. A year's layers compact into a foot or less of mulch to be removed. A few days work in the fall with a wheelbarrow, pitchfork and a strong back brings your barn floor back down to its original level.

We usually just spread the loads of mulch out on the pasture near the barn—the heavy loads get dumped close to the barn, the lighter loads get moved further away and when the wheelbarrow tips over, it stays where it lands. When our barn was built, the thin layer of topsoil was scraped off when the area was leveled and we were left with a mess of mud and clay around the barn. After two years of mulch, we have a nice green, grassy area around our barn.

Unfortunately, we have one large section in our barn that now has three years' accumulation of bedding and this is the year it **has** to be cleaned out. In our barn, designed for sheep and goats, we have little excess ceiling height and three feet of raised floor causes the taller person in our household to hit his head on the rafters on a regular basis. In addition to the unsightly lumps on his head, I don't think the swearing is good for the goats.

As the floor grew, we raised feeders and mineral dishes so that they remained goat height or the animals would be practically eating off the floor. We've also had to provide explanations to barn visitors who wanted to know why the goats in that particular area are kept at eye level. We've worried that as the floor got higher, the cleverer goats might realize how easy it would be to jump over into the aisle and fetch their own grain and hay. This is the year! We have to reclaim the floor! Either that or build a new barn.

While I worked on other areas of the barn, Paul cleaned a large trench in the middle of the neglected area, from the outside door across the pen to the center aisle, making a wide path for the wheelbarrow's subsequent trips. The trench looked like a small Grand Canyon and we realized how much more must be taken out of this section. This is going to take some time.

When Paul finished the trench, I wanted to take a photo. We thought that perhaps he could crouch in the trench and I could take a picture at ground level. He decided that he didn't want any pictures of it. It was embarrassing enough that we had let it get this far ahead of us. So, even though I promised him no

When Readers Talk...



Paul,

Now I have a neighbor complaining about my dogs barking. City people who move to the country and rent a house. I guess their idea is to move to the country beside a goat farm and then start complaining about everything. They told me that now that they live in the country they can do what ever they want. Including discharging illegal fireworks and harassing my animals. Of course they don't like my farming operation. Too much smell, noise, dust. They haven't seen anything yet. If I should shoot at a predator, which I have, they call the sheriff and complain.

Farming is such fun. I guess that is why so many people are getting into it. Eventually the city will annex my property. Then the zoning will change from agriculture to industrial. Maybe I can build a nuclear power plant here then. There is a proposal to build a co-generating power facility 1/4 mile south of me which is just inside the city limits. Progress is coming, I think.

Want to buy a farm?

Doug Maier
Breezy Meadow Cashmere Farm
Bellingham, Washington
July 26, 2001

Re: Privatization of Gobi JSC, Mongolia

Dear Editor:

On July 4, 2001, the Government of Mongolia approved the sale of a 70% equity interest (5,460,788 common shares) in Gobi JSC by open competitive tender.

Barents Group of KPMG Consulting, Inc.
has been engaged to act as Advisor to the

State Property Committee-for the privatization of Gobi JSC under a contract signed between the United States Agency for International Development (USAID) and the Government of Mongolia.

I am attaching a copy of the Tender Notice for your review.

In order to receive the Tender Documentation Package, interested parties must submit a formal Application/Expression of Interest to the State Property Committee no later than 18:00 hours (Ulaanbaatar time) on 31 August, 2001. For full details of the required documentation and forms, please visit the State Property Committee's web site at www.spc.gov.mn.

If there is any possibility of covering this, it would be great. Please let me know if you have any questions.

Melissa Dunn, Manager
Barents Group of KPMG Consulting, Inc.
July 13, 2001

G'day Paul, -----

Great to hear from you...Australia has just reported their best prices ever, on the back of our low exchange rate. I am still working for the Warrnambool Standard as their rural editor. But went to a cashmere seminar in Geelong a few months back and will judge the cashmere goats at the Perth Royal Show next month. Still trying to keep my hand in.

The Australians are now selling all their cashmere as dehaired fibre (there is a dehairer at Gellong in Victoria) which has opened up new markets and led to one processor paying good prices. I am sending you an article I did for the Standard which you are welcome to use. (See Page 7, this issue.)

Regards,
Terry Sim
Victoria, Australia
August 22, 2001

Bringing Overgrazed Land Back from the Brink

Reprinted from the *New Agriculturist*, Issue 01/4

On-line at <http://www.new-agri.co.uk/>

Crouch down close to the hot, dry soil and scan the sparse vegetation and a surprising sight meets your eyes. Weaving away to the horizon are narrow tracks filled with indigenous plants that stand taller and thicker than anything around. In an area of severely overgrazed land, something dramatic has been achieved.

"Irreversible degradation is almost upon us," says pasture and rangeland specialist, Mustapha Bounejmate. "What you see here is a real breakthrough."

A breakthrough is needed. The Syrian steppe used to provide up to 60% of the diet for the country's small ruminants. Now, that has fallen to as little as 5%. As in many of the world's drylands, a vicious circle of degradation is in progress as overgrazing and the ploughing up of the best rangeland to grow barley has reduced the natural plant cover. As shortage of grazing pushes up the value of feed barley, the high value of the grain encourages farmers to plant even more barley on marginal soils.

Recognizing the dangers in this increasing encroachment, six years ago the Syrian government banned the cultivation of barley in areas with less than 200mm of annual rainfall. Some badly degraded areas closed to farmers and only open for grazing at certain times were offered to the pasture team of the Natural Resource Management programme of Syrian-based International Centre for Agriculture Research in the Dry Areas (ICARDA). Trials were initiated to find out how to revive such exhausted and over-grazed rangeland.

The technique known as "pit-seeding" may be their best technique yet. "It's one kind of water harvesting" explains Mustapha Bounejmate, kneeling amongst the cluster of new growth in the latest trial in the valley of Khannasser, in northern Syria. "Along the contours, we pull a twin press across the soil making, in a double row, a succession of depressions at the depth we want where seeds from local forage species are dropped in." He points to one of the metre-long, 20cm-wide pits filled with a variety of wild grasses and legumes that thrive in well-managed dry pasture. "Each pit catches any rainfall and it also traps seeds being blown in the wind. From North Africa to China, there's not one government that can afford to use conventional methods to rehabilitate the huge areas of their countries that need it, but this technique is cheap and effective."

To test the method, the team tried pit-seeding in the even drier soils of north west Egypt, where annual rainfall is less than 100mm. Establishment was good.

In another trial area in Syria, animals themselves have been helping to seed denuded land. Having grazed well, sheep are held overnight in a degraded area while the seeds they have eaten are passed in dung scarified by mastication and diges-

tion, coated with fertilizer and ready to germinate. "We named this the sheep shuttle," says Fahim Ghassali, a research assistant with ICARDA. "Eleven species of trifolium have been spread in this way."

But reviving damaged land is not merely a technical problem. Empowerment of the local community is the key point. Unless the best technique is matched with the right policy, land tenure and good management, it has little chance of success.

The steppe is not the only place where ICARDA's pasture team are trying to restore the balance. In the vast sea of continuous barley that edges the rangeland, they are demonstrating a radical integration of grazing plants with grain and success here could mean preventing soil degradation occurring in the first place. Only once every 6-10 years is there is enough rain for the barley, which is grown on the fringe of the steppe, to head and usually the unfulfilled crop is grazed off by sheep. At seven demonstration sites, the pasture team has transplanted protein-rich saltbush (*Atriplex canescens*) in rows 10 metres apart with drilled barley between rows. This improves the overall feed value available for grazing and re-introduces a species better suited to such thin soils. Farmer scepticism—mostly rooted in reluctance to give up 10% of potential arable ground to a grazing plant—is being overcome with evidence that this is more than compensated for by improved yield of barley, which thrives in the favourable microclimate and shelter *Atriplex* provides.

This year, above average rains have helped the rangeland look better than for a decade. But research workers and farmers alike are well aware of the underlying pressure on these dryland areas and the urgent need for reviving the steppe before it's too late. There are millions and millions of hectares that need good management and this work is trying to create sustainability by re-introducing good grazing plants. But everyone knows that a point is fast approaching when, if nothing is done, this vast area will soon be desert.

For further information contact: m.bounejmate@cgiar.org or f.ghassali@cgiar.org or see www.icarda.cgiar.org
International Center for Agricultural Research in the Dry Areas (ICARDA)

Local Dehairing Access Boosts Australian Cashmere Industry

By Terry Sim, Rural Editor, Warrnambool Standard

Australia's cashmere industry is set to bounce back with onshore access to vital processing technology and higher prices from a British buyer.

Raw cashmere production in Australia peaked at about 60 tonnes in the boom 1990's period, slumping to five tonnes as recently as two years ago. About six million kilograms of dehaired cashmere down is produced worldwide.

Up until 1999, the Australian clip was generally marketed raw to the highest tenderer with lines sold to a range of buyers around the world, splitting the clip. It was mostly dehaired offshore and the down blended in with fibre from other countries. Low prices caused by fashion trends, and Chinese control of raw supplies and dehairing have also diminished Australian cashmere herds, while other producers have joined does to meat bucks.

But with Australian raw cashmere production now at 12 tonnes and a dehairing machine at Geelong able to remove the four tonnes of down to world standards, the industry is now better placed to negotiate with buyers and market its clip.

Last year 1999 production was the first national clip to be dehaired by former United Kingdom dehairer operator Avtar Singh at Elite Fibres in Geelong. It was sold to Seal International Ltd. of Bradford, UK, for \$148-\$180 a kilogram, the highest price received since prices bottomed at \$39 a kilogram in 1998. The Australian Cashmere Marketing Corporation, the wholly grower-owned marketing arm of the Australian Cashmere Growers Association sold the 2000 clip for similar prices.

At an ACGA 21st birthday bash and annual meeting in Geelong this month (May this year), association president Charles Esson said the arrangement with Seal International was renewed annually and not contractual. But Seal had offered the highest price and agreed to the up-front deposit terms for the past two years. He hoped to build a long term relationship. "We get a price before we start dehairing."

Mr. Esson said the dehairing capability was something the industry had "really, really needed".

"Effectively what we've done is get the marketing done by the buyer," he said. "All I want to see is the extreme highs and extreme lows disappear."

ACGA vice-president, marketing, Andrew James said the marketing strategy allowed consideration of other buyers, but it was important to establish a continuity of supply to Seal. Veteran industry stalwart Fred Moylan said the ACGA should be completely loyal to Seal International, "otherwise don't get married". "We've got to establish a separate identity for our cashmere and get away from the influence of the Chinese."

Recent research has also quantified the unique qualities of Australian cashmere and breeders believe they have lifted the percentage of profitable animals in herds. The industry's award for the three most valuable fleeces was won by two white and one colored fleece with a combined value of \$183.48.

Seal International Ltd. managing director Andrew Seal told growers at Geelong the purity of the Australian down was a big plus but the clip's size meant it was still blended with fibre from other countries. "But if the volume increases we might be able to use it in its own right." He predicted China would eventually consume all the cashmere it produced with less raw fibre available for sale. Dehaired cashmere would be traded normally within a price range of US\$40-\$50 to \$140 a kilogram at an average of about US\$80, Mr. Seal said, though prices had reached US\$180 a kilogram recently.

Victorian cashmere researcher Dr. Bruce McGregor said dehairing the Australian clip onshore had doubled the number of potential buyers and given more flexibility in how the clip was sold.

"Having a dehairer means now that we completely jump that bottleneck and we're in a position where we can potentially sell to 6,000-10,000 spinners or other textile people who are further down the processing chain."

"The lots they will buy will be half to one tonne lots so the fact that we are only a small producer doesn't matter, it's irrelevant, it actually gives us potential flexibility; we can slip into some markets that might only want one or two tonnes."

"You can always sell raw, but there's got to be more power in selling dehaired; you've gone up the value chain further and you've cut out some of the risks and variation."

Dr. McGregor said he had been able document that Australian cashmere was in the top quartile for length and should be able to rate higher. Australian cashmere is the softest in the world, though mid-range in fibre diameter, but had less contamination, he said.



Technology Strikes Again...

HOOFS?

HOOFS (Hierarchical Object-orientated Foraging simulator) is a computer program designed by researchers at Macaulay Land Use Research Institute, Aberdeen, Scotland, to model the decisions made by free-ranging herbivores foraging in an environment which can be modelled in a spatially-explicit way.

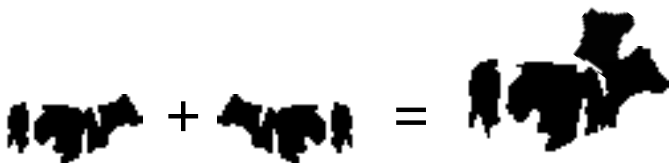
The basic HOOFS model is designed to be adaptable enough to investigate a variety of topics in foraging theory and animal-plant interactions. Its main use is as a scientific tool which will allow the consequences of different models and theories to be examined and compared to data which may be obtained from sources such as GPS measurements and mapping of vegetation utilization. HOOFS has a windows front end for both flexible data input and a range of graphical outputs.

And Again...

New Inbreeding Calculator (for Holsteins Only)

Holstein Association USA, Brattleboro, Vermont, has just introduced a new computer program to help producers evaluate inbreeding percentages of prospective matings for their registered cows.

The lucky Holstein breeder merely hooks up to www.holstein-usa.com on the internet and goes to a section labeled "Free Stuff." From here they can enter the registration number of the bull and cow being considered. The program will calculate the impact of inbreeding of the prospective mating. The calculator is being offered free for an introductory period, but is anticipated to eventually cost about 50 cents per calculation.



Sim Farm anyone?

Goat Gadgets at Still Waters Cashmere Twisp, Washington



A sturdy goat feeder in the corner of the goat shed—built by Moon and Diana Mullins.



Goat amusement device. A ramp (with edges on each side so little feet can't slip off) set on top a wooden spool.



What do you do when you want the goats to come home from the back forty? Herd them in with the car, of course.

Quality Control In Feed Production

By C. Reed Richardson

The Center for Feed Industry Research and Education
Department of Animal Science and Food Technology
Texas Tech University, Lubbock, Texas

Introduction

Quality control in feed production is of utmost importance in the overall success and profitability of animal enterprises. There is no other factor, directly or indirectly related to the proper nutrition and high performance of animals that is more critical than feed quality control and ration consistency. The degree of quality is the consistency in which feed is formulated, processed, mixed and delivered as compared to what is expected. Animals thrive on a routine and respond better if the feed is low in nutrient variation as offered to them; and is similar in moisture content, texture and rate of energy availability.

Quality has been defined as "any of the features that make something what it is" and "the degree of excellence which a thing possesses". Either definition may be acceptable if one recognizes that quality control means knowing the quantitative amounts of all components, good and bad, in a feed. Usually, quality is verified by comparison with a known standard. However, relative values of quality over time is extremely valuable and useful in many situations.

The relationship between feed quality and animal performance is important and encompasses not only the quantitative amounts of all feed components, but also the digestibility and metabolism of those components. Thus, the challenge for nutritionists and others involved in animal feed production is to consistently monitor all aspects of the feed production system being used and measure those variables that are good indicators of quality control.

For the feed industry, a quality control system is the responsibility of management and involves personnel being properly trained to ensure a high level of organization, documentation, and the policing of various procedures and processes necessary to guarantee the basic quality of feedstuffs and feeds.

Determining Quality of Incoming Ingredients and Outgoing Feeds

Quality control of incoming ingredients is crucial to predicting the quality of a complete feed, supplement, premix, etc. An important first step is accurate sampling and complete examination of the ingredient prior to unloading. Sampling and inspection procedures need to be in writing and kept in a Quality Control Procedures Manual. The goal in sampling any lot of ingredients or finished feed is to obtain samples that are representative of the lot in question. A wrong answer—which may arise from incorrect sampling, incorrect handling of samples, analytical error, etc—is worse than no answer. Thus, it is our responsibility to know proper procedures and techniques for sampling to be sure that correct formulations can be made. Below are some suggested sampling procedures for bulk ingre-

dients and mixed feeds, bagged ingredients and mixed feeds, hays, and syrups and fats.

Bulk Ingredients and Mixed Feeds

Take a minimum of three, five pound samples Each five pound sample should be the composite of several cores taken randomly from the delivery truck, bulk storage bin or feed bunk, as applicable. Duplicate determinations are recommended for all variables measured.

Bagged Ingredients and Mixed Feeds

Use slotted feed trier for sampling and take one pound samples. For lots of one to ten bags, sample all bags For lots of eleven or more, sample ten bags. Analyze a minimum of three samples and average the results.

Hays

For chopped hay, take ten samples per lot. For cubes, take forty cubes from a given population. For bales, take one twelve to eighteen inch core from the end of forty bales in a given population.

Syrups and Fats

Use a continuous flour sampling procedure at the point of delivery, or a core liquid sampler. Establishment of a retention schedule is recommended for all ingredient and mixed feed samples. Separate analytical analyses should be routinely performed on samples of the following for quality: Water, grains, roughages, silages, protein supplements, mineral mixtures, vitamin premixes, molasses and fat, specific drugs.

As a starting point for insuring quality in feedlot rations, all incoming feed ingredients should be quality checked for the following; Moisture, color, off odor, presence of foreign material, texture and uniformity, evidence of heating, deterioration due to biotoxins.

More detailed analyses are performed on individual feed ingredients for the purpose of feed formulation, and sometimes

Continued on next page

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Quality Control—Feed Production Continued from previous page

before the purchasing of commodities if this information is not provided by the seller.

Analyses that usually are considered to be routine for the different feed ingredients include:

GRAINS - grade, moisture, protein, ash
GRAIN BY-PRODUCTS - moisture, protein, ash
DRY ROUGHAGES - moisture, protein, ash, acid detergent fiber
SILAGES - moisture, pH, temperature, protein, ash
PROTEIN SUPPLEMENTS - moisture, protein, ash, non protein nitrogen
MINERAL MIXTURES - moisture, specific nutrients
MOLASSES - moisture, ash
FATS - moisture, free fatty acids, impurities, unsaponifiables.

An overall evaluation of feed quality delivered can be derived by determining the variation in the four major areas that affect feed consistency. They are:

Variation of incoming ingredients
Variation in feed mixing efficiency
Variation in efficiency of delivery of mixed feed from mixing point to the animals
Variation in analytical procedures

Use of Current Good Manufacturing Practices in Maintaining Quality Control

The management of a feedmill has an obligation to uphold Current Good Manufacturing Practices. The use and endorsement of appropriate and proper procedures and practices in the production of feeds do not cost the feed industry, they pay dividends. The feedmill manager is a key individual involved in the daily activities associated with the management of people, facilities and resources, that ensure the procedures appropriate for the production of feed in his/her feedmill are enforced. The feedmill manager, and his/her supervisors and the people working under their direction, have an obligation to the animal food industry to maintain high quality standards in the production of feeds for animals—to produce meat, milk, eggs, etc. for the consumer.

Good Manufacturing Practices (GMP's) were published by the Food and Drug Administration (FDA) in the November 30, 1976, Federal Register.

Good Manufacturing Practices deal specifically with the manufacturing of any feed containing one or more drugs. If any feed contains a drug, it is a medicated feed. The feedmill management should have written instructions that cover GMP's and quality assurance programs.

Good Manufacturing Practices cover all areas involved in the

production of feeds including personnel, facilities, feedstuffs, quality assurance checks, inventory control checks, processing methods, mixing procedures, finished feeds, and feed delivery. Although commercial feedmills that produce and sell a complete line of feeds to the general public have a somewhat greater task in assuring quality and prevention of cross contamination of drugs, the obligation and importance in all feedmills are still great. Outlines, checklists and procedures relevant to feedmill operations are presented below.

Personnel training is essential and should be conducted periodically to assure compliance with procedures and insure quality of feed produced. These meetings usually are helpful in establishing and maintaining good morale and teamwork among employees.

The feedmill and adjacent buildings must be of suitable construction to minimize access to rodents, birds, insects and other pests, and located in an area that will allow proper drainage. The building and grounds should be maintained as needed to assure a clean work place for employees and for the production of feeds. Litter, refuse, improperly stored equipment and supplies are hazards and should be removed. The building must also provide sufficient space for facilities and personnel to perform their job properly. Examples for the production of medicated feeds include: Appropriate area for receiving and storing of ingredients and drugs, adequate space for grain processing, etc., appropriate space for feed mixing, reserved area for equipment maintenance.

Equipment must meet safety standards and be properly installed. All scales and metering devices must be tested for accuracy upon installation and at least once per year thereafter. Equipment must be constructed and maintained to prevent lubricants and coolants from contaminating ingredients or feeds. Excessive spills, leaks and dust problems must be prevented.

Ingredients should be systematically monitored for quality factors throughout the entire process of purchasing, receiving, sampling and handling. All ingredients should be inspected for any abnormality that may result in a quality risk when added to the feed, and representative samples taken for assays. During this handling of ingredients, care must be taken to prevent contamination.

Drugs and premixes require special handling and record keeping. Records on drugs received must show the following information: Name of drug, including potency, date received, amount in pounds, supplier's name, supplier's code for drug (if applicable), supplier's lot or code number, return of any damaged or unacceptable drugs.

Other procedures that must be followed in the storage, handling and use of drugs include: Check each drug for identification. Do not accept unless properly identified. Keep all drugs and premixes stored in a neat and orderly manner for easy

Continued on next page

Quality Control—Feed Production

Continued from previous page

identification. It is preferable to store drugs in a separate room. Each bag or drug container must be coded with the supplier or company code for that drug. Packaged drugs in the storage area must be stored in their original closed containers. Check bags for tears and any other abnormalities. Do not accept any drugs that are not in good condition. Drugs in the mixing area must be properly identified, stored, handled and controlled to maintain their integrity and identity. Clean up any spilled drugs immediately, dispose of properly and record in the Drug Inventory Record. Use a separate scoop for handling each drug. Drugs and premixes must be used on a first received basis. A daily inventory of drugs and premixes is required. The Drug Inventory Record should be completed at the end of each 24 hour period. One should check usage of each drug against medicated feeds produced. The drug container should be weighed before it is opened and every pound of drug must be accounted for in usage or adjustment. (If a 50-lb. bag was purchased but the drug amounts to 49 pounds, then list 1.0 adjustment). Other adjustments could be due to improper weighing, spillage, and out of condition.

Cleaning, processing and mixing of feed ingredients require that personnel involved be thoroughly trained and properly supervised. Considerations for proper GMP's include the following:

- Screening of grains and use of magnets
- The grind should be as uniform as possible
- Flaking of grain should be accomplished with proper amount of steam, temperature and roll tolerance
- Mixing directions should be standard for a feedmill. (Certain mixed feeds may require specific directions)
- Prevention of contamination
- Checking for accuracy for all scales used for weighing ingredients (including drugs) at least once per year as required by FDA.

FDA complaint files for medicated feeds must be maintained for FDA inspection and include the following: Date of complaint, complainant's name and address, name of feed, lot or control number or date of manufacture, specific details of the complaint, all correspondence, description of investigation, disposition of complaint.

Conclusions

The production of livestock feeds is big business in the U.S. and deserves careful and professional attention. With this enormous opportunity comes the responsibility to produce quality feeds that are safe to feed and meet nutrient specifications. Following are three checklists that identify some of the areas needing attention by all involved in insuring quality control in feed production.

Checklist for Sources of High or Low Analytical Values

- Formulation error
- Nutrient or drug instability

- Moisture pickup or loss
- Incorrect weights (batching errors)
- Dust losses
- Non-uniformity of ingredient, supplement or premix
- Insufficient mix time
- Residues and cross contamination
- Inadequate sampling methods
- Segregation in transit or of sample
- Analytical errors
- "Masking" effects of certain ingredients

Checklist for Overall System Efficiency

- Selection of intelligent and responsible suppliers
- Selection of intelligent and responsible mill operators
- Selection of adequate mixer
- Adequate mixing times
- Proper ingredient formulation
- Use of appropriate feed binders
- Limit conveying of premix and finished feeds
- Accurate weighing equipment
- Emphasize cleanliness and good housekeeping
- Keep accurate records

Checklist for Performance Evaluation

- Evaluate variation of incoming ingredients
- Evaluate mixer efficiency
- Evaluate efficiency of conveying feed from the mixer to the feed bunk
- Evaluate variation of analytical procedures
- Evaluate system efficiency

References

They are numerous. Contact us if you want the list.—Ed.

Animal Pests

Solutions to Pest Problems

From The Small Farm Resource
<http://www.farminfo.org/pests/animalpests.htm>

How can I get rid of the skunks or raccoons living under my (house, porch, barn)? Suggestion A: Put mothballs under the house. Supposedly, it irritates the heck out of their eyes. After the skunks/raccoons leave, seal up the sides to keep them from



moving in again. Several replies have indicated success with this method.

Suggestion B: Get a small peanut can. Fill it 1/3 full of flowers of sulfur. Light it. Put it under the house. The skunks/raccoons will leave, and the sulfur smell will dissipate

fairly quickly. Then seal up the sides to keep them from moving in again.

How can I get rid of gophers? Suggestion A: Well, my personal choice is "tank and blast". I have a 400 gallon water tank on a trailer which has a 2-1/2" hose out the bottom. I stick the hose down a reasonable hole and "fill 'em up". The little "orchard rats" have a choice of either drowning or running and they generally wind up running. For the runners I like to use shot shells in 38 revolvers. They are good for about 30 feet with very small risk to friends the neighbors. We wound up loading our own with #7 shot as the commercial shells are quite expensive, not reloadable and not as effective as the hand loads. I used to have a bounty on the "rats" but after I started tanking I have to limit the number of "helpers" I have on any given day. And for safety reasons I'm quite picky about who I take out with me and avoid those who suffer from "buck fever". We've been doing this for over ten years now and the worst injury was a sprained ankle from tripping on a burrow while chasing down a rat.



How can I keep birds from roosting in my barn? Suggestion A: Hang silver mylar streamers down from the gutters. The noise or reflections seems to scare them off.

Suggestion B: Try a product called "Hot Foot". Supposedly, it irritates their feet, and it's very sticky stuff so they don't like to land in it. It lasts for ages too. It's made in Australia. The active ingredient is Polybutene.

What is the Extension Service?

From The Small Farm Resource
<http://www.farminfo.org/extension/extension.htm>

Each state has a Land-Grant University, so every state has an Extension system. The Land-Grant University system was created through an Act of Congress, the Morrill Act of 1862. The universities were created as a partnership in agricultural education between the Federal Government (USDA) and the states.

However, it was soon recognized that because Land-Grant Universities had a central location (Columbus in Ohio, West Lafayette in Indiana, Lexington in Kentucky, etc.), they were unable to effectively reach out and provide consistent educational support to individuals throughout the states. For example, people in Franklin County, Ohio benefitted greatly, while people in Hamilton County, Ohio gained little.

So, in 1914 Congress passed the Smith-Lever Act. The act created the Cooperative Extension Service. It was called "Cooperative" because the new entity was a partnership between the federal government (the USDA), the states (the Land-Grant Universities), and the individual counties within the states. It was called "Extension" because the Service was an extension of the Land-Grant University system.

The Act specified teaching methods to be used and people to be served. The educational programs were to be provided "...to persons not attending or resident in said colleges [the Land-Grant Universities]..." Although Extension agents in Ohio are faculty members of The Ohio State University, this statement explains why agents do not teach at the University. Teaching methods specified by the Act included "...demonstrations, publications and otherwise..." OSU Extension has over 600 fact sheets and bulletins and demonstrations remain the mainstay of Extension teaching in Ohio.

The Smith-Lever Act also specified subject matter to be taught: "...subjects relating to agriculture and home economics..." In effect, the Act specified two "doors" (agriculture and home economics) opened to clientele seeking Extension-based answers to their questions. Although not specified by the enabling Act, two additional doors were added in later years: 4-H and Community and Natural Resource Development (CNRD) program areas.



Chronic Wasting Disease

USDA Veterinary Services, May 2001

Chronic wasting disease (CWD) is a transmissible spongiform encephalopathy (TSE) of deer and elk that has occurred only in limited areas in the western United States. First recognized as a clinical syndrome in 1967, it is typified by chronic weight loss leading to death. There is no known relationship between CWD and any other spongiform encephalopathy of animals or people.

CWD has occurred in animals at one captive wildlife research facility in northern Colorado and one in southeastern Wyoming. Although cases of CWD were seen in two zoological parks more than 10 years ago, the affected animals all originated from the research facilities in the above-mentioned areas. Soon after diagnosis of the disease as a TSE, Colorado and Wyoming wildlife management agencies stopped the movement of deer and elk from these facilities. CWD has been confirmed in free-ranging deer and elk in a limited number of counties in northeastern Colorado and southeastern Wyoming. CWD has also been diagnosed in farmed elk herds in South Dakota (7), Nebraska (2), Oklahoma (1), Montana (1), and Colorado (2).

Species that have been affected with CWD include Rocky Mountain elk, mule deer, white-tailed deer, and black-tailed deer. Other ruminant species, including wild ruminants and domestic cattle, sheep, and goats, have been housed in wildlife facilities in direct or indirect contact with CWD-affected deer and elk. No cases of CWD or other TSE's have been detected in these other ruminant species. There is ongoing research to further explore this possibility.

Clinical Signs

Most cases of CWD occur in adult animals. The disease is progressive and always fatal. The most obvious and consistent clinical sign of CWD is weight loss over time. Behavioral changes also occur in the majority of cases, including decreased interactions with other animals in the pen, listlessness, lowering of the head, blank facial expression, and repetitive walking in set patterns within the pen. In elk, behavioral changes may also include hyperexcitability and nervousness. Affected animals continue to eat grain but may show decreased interest in hay. Excessive salivation and grinding of the teeth are seen. Most deer show increased drinking and urination.

Diagnosis

Research is being conducted to develop live-animal diagnostic tests for CWD. Currently, definitive diagnosis is based on necropsy examination and testing. Gross lesions seen at necropsy reflect the clinical signs of CWD, primarily emaciation and aspiration pneumonia, which may be the cause of death. On microscopic examination, lesions of CWD in the central nervous system resemble those of other spongiform encephalopathies. In addition, using a technique called immunohistochemistry, scientists test brain tissues for the presence of the protease-resistant prion protein.

Epidemiology

The origin and mode of transmission of CWD is unknown. Animals born in captivity and those born in the wild have been affected with the disease. Based on epidemiology of the disease, transmission is thought to be lateral and possibly maternal. Transmission by feed is not believed to occur as affected animals have been fed a wide variety of feedstuffs. Colorado and Wyoming wildlife management agencies are continuing to invest resources in CWD research efforts. In addition, the Colorado Division of Wildlife is currently implementing a management plan for CWD in free-ranging cervids. These agencies are committed to limiting the distribution of the disease to the current localized area and decreasing its occurrence in the deer and elk population.

Surveillance

Surveillance for CWD in Colorado and Wyoming has been ongoing since 1983, and to date, has confirmed the limits of the endemic areas in those States. An extensive nationwide surveillance effort was started in 1997-98 to better define the geographic distribution of CWD. This surveillance effort is a two-pronged approach consisting of hunter-harvest cervid surveys conducted in Arizona, Colorado, Idaho, Kansas, Michigan, Montana, Nebraska, Nevada, New Jersey, Ohio, South Dakota, Utah, Wisconsin, and Wyoming, as well as surveillance throughout the entire country targeting deer and elk exhibiting clinical signs suggestive of CWD.

In the free-ranging population, from over 5,000 samples examined, there have been approximately 110 clinically affected deer and elk identified over the last 10 years. The majority of those affected were mule deer. Again, there have been no free-ranging animals found to be positive that did not originate from the endemic areas.

Additional Information

For more information about CWD, contact:

Michael Miller

Colorado Division of Wildlife

317 West Prospect Road, Fort Collins, CO 80526

Telephone: (970) 472-4300

Dr. Tom Thorne

Wyoming Game and Fish Department

5400 Bishop Blvd., Cheyenne, WY 82006

Telephone: (307) 777-4586

Dr. Elizabeth Williams

Department of Veterinary Science University of Wyoming Laramie, WY 83070 Telephone: (307) 742-6638

Plant Health Inspection Service (APHIS) has provided assistance to State officials in diagnosing CWD and in monitoring international and interstate movements of animals to help prevent further spread of CWD. For more information from APHIS, contact: Dr. Lynn Creekmore USDA, APHIS, Veterinary Services National Animal Health Programs 4101 Laporte Avenue Fort Collins, CO 80521 Telephone: (970) 266-6128 Current information on animal diseases and suspected outbreaks is also available on

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The Role of Wildlife in Animal Disease Control

From the ARS Healthy Animals Newsletter, August 2001

While many livestock and poultry diseases can be researched and controlled exclusively by working with the specific animal of concern, others can only be understood by incorporating wildlife into the research and risk assessment.

For example, raccoons serve as a source of rabies infection in the Midwest, while birds play a key role in the transmission of West Nile virus to horses and humans. ARS studies the role of wildlife in several diseases important to agriculture: tuberculosis, brucellosis, Lyme disease, malignant catarrhal fever, transmissible spongiform encephalopathies, pine needle abortion, avian influenza, and Newcastle disease.

In some cases, wild animals serve as a direct reservoir for the infectious agent. Bison and elk in Yellowstone National Park carry the bacterium that causes brucellosis in cattle. In 1956, 124,000 cattle herds tested positive for brucellosis. This year, there are no known cattle herds with brucellosis thanks to a cooperative USDA and state eradication program. But as long as bison and elk serve as havens for the bacteria, there's always potential for the disease spilling back over to cattle.

Other eradication programs, such as for bovine tuberculosis, also suffer from wildlife carriers. The existence of these diseases causes trade barriers. These barriers won't be overcome until the disease is not only eradicated from livestock, but scientists can devise methods to prevent reintroduction from wildlife.

Studying wildlife also helps researchers assess the risk that a disease will spread. Avian viruses such as those that cause influenza, Newcastle disease, and avian pneumovirus can pass back and forth between wild and domestic birds. But only some virus strains cross species. By understanding which viruses are likely to spread with wild birds, researchers can develop strategies to reduce exposure and transmission.

Also, when scientists identify a new virus in poultry, they can look at their data on wild birds to help discover the virus' origin, as well as the likely direction in which it will spread.

And the research may one day help local economies. For example, deer infected with tuberculosis in Michigan and elk with chronic wasting disease in the West create hunting-related restrictions that greatly dampen local economies as well as threaten agriculture. MCF affects many animal species, especially exotic deer and related animals in zoological parks.

Research on chronic wasting disease may help define if and how a prion disease can cross species—key to overcoming trade issues associated with spongiform encephalopathies and helping to ensure that the United States remains BSE-free.

Because wildlife and the diseases they carry do not observe

human boundaries, ARS has a key national research role—along with the USDA's Animal and Plant Health Inspection Service—to help state agricultural agencies manage disease outbreaks. ARS also has the containment facilities that allow them to study infected animals and the disease agents, as well as veterinarians with specific expertise in these diseases.

For more information on ARS wildlife disease research, contact:

Diana Whipple or Keith Murray, (515) 663-7200

Don Knowles, (509) 335-6022

David Swayne, (706) 546-3433

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FERAL GOATS (*Capra hircus*)

**Author: Dennis King, Vertebrate Pest Research Services
Agriculture Western Australia
Bougainvillea Avenue, Forrestfield WA 6058**

Introduction

In Australia, feral goats are descendants of animals which were introduced from many countries for meat, milk or fibre production in the 18th and 19th centuries

Identification

Feral goats have a very distinctive appearance and cannot be easily confused with any other species in Australia. Their coat colour is variable. A high proportion are at least partly white and flocks are readily visible in open country or upon hillsides.

Distribution

Most feral goats in Australia occur in the semi-arid and arid pastoral areas. Their numbers in these areas are unknown but recent estimates range from 250,000 to 2,100,000. Western Australia has the largest population of any state. Estimates of their numbers in Western Australia range from 300,000 to 700,000. Between 1972 and 1986 over 1.5 million were harvested in Western Australia with little if any noticeable change in their numbers or distribution. Large populations occur in the pastoral areas of the Yalgoo, Murchison, Carnarvon and Shark Bay regions. Other areas where goats are abundant are the Meekatharra, Mt. Magnet, Upper Gascoyne, Ashburton and Eastern Goldfields regions. High numbers of feral goats also occur in western New South Wales, Queensland and South Australia. Their density has been estimated to be 4.5-5.0/km² in a semi-arid region of South Australia.

Feral goats do not occur in rainforests, extensive wetlands or deserts but small numbers of feral goats occur in patches of scrub near more populated areas outside the drier regions.

Habitat

The favoured habitat of feral goats is rough, hilly terrain which provides security from predators and from disturbance by man. They are not normally found in flat treeless areas but do occur in flat country with dense shrub cover. Favourable habitat requires availability of shelter and surface water and an abundance of preferred food species. Large numbers of goats do not occur in areas where dingoes are abundant.

Food Habits

Goats are highly selective feeders: they will eat only certain species of shrubs and trees although little use is made of browse when ample amounts of good pasture are available. Goats seem to prefer to eat young forbs (small herbaceous plants) and grass. As pasture quality declines goats tend to eat mainly browse whereas sheep eat mainly forbs. On good pastures there appears to be competition for food between sheep and goats and this may increase during drought. Using goats to clear unpalatable species of shrubs from rangeland does not seem to be a viable proposition because of their selectivity in eating



browse species. Worthwhile reductions of most weed species can only be achieved with very high stocking rates of goats. This requires very good fences and would be very detrimental to palatable species of food plants. Goats need to drink every few days unless abundant lush growth is available.

Reproduction

Conception occurs in feral goats in pastoral areas of New South Wales, South Australia and Western Australia in all months of the year, but the peak rate occurs from late summer to mid winter. Breeding rates are influenced by rainfall, and most kids are produced during cooler times of the year. Females begin breeding at an age of approximately 6 months when they normally weigh 15 kg or more. Males reach sexual maturity at approximately 8 months but competition for access to oestrus females is fierce and it is unlikely that young males are able to mate until they become large, dominant individuals.

The mortality rate of kids is high. They are born in secluded places away from the herd. Young kids are hidden and left by their mothers during the first few days of life while their mothers feed nearby. When they are approximately 5 days old the kids accompany the females as they feed. The females may then remain separate from herds containing adult males for 1-2 months. During their first 5-10 days the kids are at the greatest risk of predation by foxes, dogs, or feral cats. Wedge-tailed eagles may also prey on some kids. However, human hunters kill more goats than all these predators.

Goats continue to breed during droughts but mortality of kids is very high and at the height of a drought no kids or lactating females are found. The growth rate of young goats is related to rainfall. They rapidly increase in size after good rains and males generally grow more quickly than females. Under normal conditions, most females are pregnant or lactating for most of the year. There is a high incidence of multiple births in goats over 14 months old. This combination of an early age of initial breeding, short gestation period (141-156 days), high breeding

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Feral Goats

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rate and a high rate of multiple births, allows goat populations to withstand high juvenile mortality.

Goat populations can rapidly increase after rigorous control programmes. High levels of removal of goats from a population may stimulate breeding and result in a faster than normal rate of increase.

Group Size

Group size within herds of feral goats varies considerably on both a daily and seasonal basis. Much of the seasonal variability seems to be related to the availability and abundance of surface waters, and to a lesser extent, on the presence of preferred food. When water is abundant, groups are generally small and well dispersed. During drier months groups increase in size and consist of males and females of all age classes. During droughts they tend to congregate in large numbers—groups of 500-800 have been reported—and remain near water.

Group composition is very variable. They are continually forming, breaking up and re-amalgamating. Many of the new associations are formed when large congregations disperse from water sources. Often goats which have just watered join others on their way to water and drink again. During the main breeding season most males are found in mixed groups of males and females. In some areas small “bachelor” herds of up to 8 animals occur and solitary males, which are invariably old, sick or injured, are occasionally seen.

When water and food supplies are plentiful, small groups of females and juveniles are common. Most females are, however, found in groups containing both males and females throughout the year. Many of these groups appear to be led by old females.

Home Range

The sizes of home ranges of goats have been determined in a number of studies. They vary in size in Australia, being small in areas where food, water and shelter are freely available and much larger in semi-arid pastoral regions. The boundaries of these areas are not rigidly defined and they are not actively defended to exclude other goats. Herds have an extended home range. The individual ranges of adult males seem to encompass the entire range of a herd and they often venture outside that area. Females are much more restricted in their movements which only encompass a portion of the home range.

A recent two year radiotracking study of goats on Yerilla Station in the pastoral region of Western Australia found that the average size of female home ranges was 50 km², ranging from 14-118 km²; those of males averaged 271 km², ranging from 102-460 km². Movement across station boundaries was common but most movement was local.

Long distance movements of goats have been recorded in

semi-arid regions. One male in western New South Wales moved 87 km in a 10 month period. This degree of mobility makes goat control very difficult as the rate of re-infestation can be very high. It also makes eradication or containment almost impossible in the event of an exotic disease outbreak.

Damage

The cost of damage caused by feral goats is difficult to assess. They eat a wide range of trees, shrubs, forbs and grass and can cause damage to the natural vegetation in the arid and semi-arid pastoral areas. The extent of this damage will depend on the number of goats present, the number and type of other herbivores present and their management. Feral goats are usually outnumbered by sheep in the pastoral areas and station fences are generally able to restrict sheep movements but have no observable effect on the distribution of goats.

Little is known about plant productivity in the pastoral areas of Australia and the effect of herbivores on its diversity, quality or quantity. In some national parks sheep are absent or present only in low numbers and goats there do pose a threat to the vegetation. Goats usually leave areas which are heavily overgrazed, while sheep and rabbits are more restricted in their movements and may cause more damage to the vegetation. When vegetation has been severely damaged, regeneration, particularly of palatable plants, may be suppressed and soil erosion may occur. On islands where goats have been eradicated or had their numbers drastically reduced, the vegetation has shown clear signs of regeneration and plant quantity and diversity has improved.

Goats can also act as a reservoir for and vector of diseases including foot and mouth, rabies, bluetongue and rinderpest. They are thus a concern for animal health authorities because of the role they might play if an exotic disease outbreak should occur.

Damage Prevention and Control Methods Declaration Status. Western Australia is the only state in Australia where feral goats are declared pests (categories A4, A5 and A6). The official policy is to control them. In recent years, sales of feral goats which have been captured in the pastoral areas have provided a large proportion of the income of many stations. Hence managers and owners of these stations may not view a control policy very seriously or with much respect.

Shooting—Ground Based Hunters

Feral goats have been shot for years in many parts of the world by hunters using a wide range of weapons. Success in eradicating goats was apparently achieved on Santa Fe Island (24.1 km²), in the Galapagos. On nearby Pinta Island (59.4 km²), goats have been reported to have been almost shot out. In both cases, intensive hunting over several years was required. On Raoul Island (29.5 km²) in the South Pacific annual hunting expeditions from 1972 until 1983 of 3-6 hunters with dogs

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have almost exterminated the goats. There are many cases of failure to completely exterminate goats in such campaigns on islands, including Bernier Island in Western Australia. No claims of successfully eradicating substantial mainland populations of goats by shooting have been made. Hunting of feral goats is mainly of recreational value.

Shooting from Helicopters

Despite its high cost, shooting goats from helicopters has proved effective for eradicating small numbers remaining after the use of other control methods. A control trial of this nature was conducted in the Flinders Ranges of South Australia. The study site was 130 km² and included areas of plains, rough hills and an inaccessible plateau. Most goats were removed from the area by mustering or trapping. Shooting from helicopters then occurred. The results indicated that eradication was possible but could not be guaranteed when caves or dense scrub provided hiding places. A similar exercise took place on Bernier Island in May 1984. It was successful in eradicating goats from the island. Several earlier attempts to remove them by shooting from the ground had been unsuccessful.

Poisoning

Poisoning is seldom used in attempts to control goats because of their large scale movements and the hazard posed to non-target species. Successful poisoning trials have been done in New Zealand using 1080 suspended in a gel and applied to the leaves of preferred species of food plants. This technique does not appear to be suitable for use in Australia.

Judas Goats

The "Judas" goat technique utilizes radiotracking equipment and goats to locate other feral goats for eradication. The radio equipment is commercially available and consists of small transmitters, directional antennae and hand-held receivers. Tracking is generally done by personnel on foot. Vehicles can be used if suitably spaced access tracks are available; fixed-wing aircraft or helicopters can also be used. The "Judas" goats are fitted with collars, to which radio transmitters are attached, and are then released in the area where feral goats are to be controlled. Within a few days they join feral goat groups. These groups are located by radiotracking and the uncollared individuals are shot by hunters on foot or in helicopters.

A combination of these shooting methods proved to be most successful for total eradication of entire groups of goats in trials in Hawaii between 1983 and 1986. It was also a cost-effective means of locating feral goats compared with searching from helicopters or searching on foot for goat signs. If the "Judas" goat is not shot, it will move away and locate other groups of feral goats. If it is shot, the radio transmitter can be recovered and fitted to another goat which is then released. Both male and female goats have been used successfully as "Judas" goats in Hawaii. Battery life of the transmitters can exceed two years

with a transmission range of approximately 15 km under good conditions.

Trapping

Traps can be constructed at watering points. Where water is scarce and the construction of traps is practicable, there is a possibility of eradicating goats by using them. Traps generally incorporate a ramp that the goats climb. They then jump down from it into a goat proof enclosure. They are expensive to build but can be used over long periods of time and they are particularly effective during periods of drought. The goats which are caught can be marketed.

Mustering

An effective way of reducing numbers of feral goats from flat, relatively open country is to muster them using motorbikes and dogs. The method does not select any particular age or sex group of goats and success is likely to be greatest during dry periods when they congregate in large groups near water.

In hilly country it may be necessary to resort to aerial mustering. It has been estimated that an experienced musterer using a highly skilled pilot can reduce goat numbers in an area of rough hills by 80%. An additional benefit of mustering is the economic return which can be obtained from the sale of the goats.

Summary of Damage Prevention and Control Methods Exclusion

- No guidelines on fencing requirements.

- Very expensive.

Toxicants

- Compound 1080 has been used.

- Not registered for this purpose.

- High risk to non-target species.

Traps

- Permanent traps on watering points are efficient and cost effective.

Shooting

- Ground-based shooting is not effective.

- Shooting from helicopters is effective.

Other Methods

- Mustering on motorbikes with dogs is effective in reducing numbers.

- "Judas" goat method highly effective.

Benefits

Feral goats do provide benefits to pastoralists and some others. They currently provide a source of females suitable for upgrading for cashmere production. Approximately 30% of those mustered have cashmere potential. The remainder of goats mustered are normally slaughtered for domestic consumption or export. These markets may soon be filled by surplus male kid goats produced on cashmere studs in the agricultural

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areas which will result in a decline in the value of feral goats. The future profitability of cashmere production depends on international fashion trends. Many of the early introductions of goats into Western Australia were for the production of other types of fibre. These did not prove to be viable. There must be some doubt as to whether the current market will remain viable.

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In the last couple of issues, we reported that you should send along \$1 per fleece with your entries to the ECA fleece competition to be held October 2nd. In case you dutifully did this, we regret to inform you that you owe them another buck per fleece. They didn't realize that the Virginia State Fair had raised the fees when they sent out the information.

The \$2 per fleece is still a very good deal, as the Fair picks up the cost of return mail on the fleeces. So...if you sent only a buck, don't wait for them to ask—send them another one. They'll appreciate it.

Anthrax

Information from the Texas Animal Health Commission

In response to the large number of callers requesting information about Anthrax, a new, free brochure is being offered by the Texas Animal Health Commission. Below is the text from the flyer.

What is Anthrax? What causes it?

Anthrax is a naturally occurring disease with worldwide distribution. It is caused by *Bacillus anthracis*, a spore-forming bacteria that can remain alive, but dormant in the soil for many years. The bacteria can "bloom" and contaminate surface soil and grass after periods of wet, cool weather, followed by several weeks of hot, dry conditions.

Grazing animals—such as cattle, sheep, goats, exotic and domestic deer, and horses—ingest anthrax bacteria when they consume contaminated grass. By the time an animal displays signs of disease, including staggering, trembling, convulsions, or bleeding from body openings, death usually follows.

Domestic and wild swine are fairly resistant to anthrax and although they may become ill, some of these animals recover fully.

Anthrax outbreaks depend on two factors working together: the presence of the spores in the soil and suitable weather conditions. Outbreaks usually end when cool weather arrives and the bacteria becomes dormant.

An outbreak may occur one year, but not the next. Death loss may occur in one pasture, while animals nearby remain healthy.

Anthrax can occur anywhere, but in Texas, cases most often are confined to a triangular area bounded by the towns of Uvalde, Ozona and Eagle Pass. This area includes portions of Crockett, Val Verde, Sutton, Edwards, Kinney and Maverick Counties. In these counties, many livestock producers routinely vaccinate livestock against the disease.

When anthrax outbreak begins, veterinarians will have the initial cases confirmed through laboratory tests conducted at the Texas Veterinary Medical Diagnostic Laboratory in College Station. Subsequent cases in an outbreak are to be expected and may be diagnosed clinically, based on disease signs and sudden death loss.

Anthrax is a reportable disease, and the Texas Animal Health Commission (TAHC) is to be notified of confirmed and suspected cases. Reports can be made to TAHC area offices, or to the TAHC headquarters at 1-800-550-8242, where a veterinarian is on call 24 hours a day.

The Situation: Summer 2001

By mid-July 2001, seven ranches in Val Verde, Uvalde and Edwards had laboratory confirmed cases of anthrax in deer and livestock. Private veterinary practitioners and ranchers in these counties and Real, Kinney and western Bandera Counties also had reported losses due to the disease. A "significant" white-tailed deer death loss was reported along in southeast Edwards and southwest Real Counties.

During an Outbreak...Protecting Animal Health

An effective anthrax vaccine can be purchased through private veterinary practitioners, feed stores or animal health product distributors. The injection can be administered by private veterinary practitioners or ranchers and is recommended for livestock residing in or near an outbreak and animals that will be moved into the area, such as horses transported to trail rides.

When administering the vaccine, wear a long-sleeved shirt and use latex or work gloves to prevent skin contamination with this "live" vaccine. Consult your physician for treatment if you suffer a "needle stick," splash vaccine in cuts or scratches, or if you develop a sore after handling vaccine or livestock.

During an outbreak, white-tailed deer often suffer the most from the disease, as they cannot be "rounded up" and handled like domestic or farmed exotic livestock. Furthermore, the anthrax vaccine has not been approved for use in deer.

Carcass Disposal

To prevent contaminating the ground with the anthrax spores or organisms, TAHC regulations require that property or livestock owners thoroughly burn carcasses of animals that may have died from anthrax.

Wear long sleeves and protect your hands with gloves, and do not move or open bloated carcasses, as this could release bacteria into the air, causing further disease spread. Do not salvage hides, horns, antlers or any other tissue from the carcasses.

If the animal was housed in a barn, burn the animal's bedding, manure and the surrounding soil. To disinfect panels, trailers or equipment, use an ammonia-based disinfectant, labeled as effective for anthrax. Follow label directions to prevent respiratory irritation! Pastures cannot be disinfected with chemicals. Only burning ensures that anthrax bacteria has been killed.

Due to environmental concerns, do not use heavy oils or tires to burn carcasses! Fuels permitted by the Texas Natural Resource Conservation Commission (TNRCC) include gasoline, diesel or wood. Care should be taken to keep fires from "getting out of hand." In counties under a burn ban, burning must be coordinated with local fire authorities.

Continued on next page

CASHMIRROR

Anthrax

Continued from previous page

Vaccinate healthy livestock and move the animals away from the carcasses, to clean pastures, if possible.

Other Safety Precautions

Wash your hands thoroughly after handling livestock. Ranchers can contract a skin form of anthrax that requires specific antibiotic treatment. See your physician if you develop a sore or lesions after handling vaccine or livestock or burning carcasses.

Keep dogs out of pastures and away from carcasses during an anthrax outbreak. Although dogs are reportedly resistant to anthrax, they can develop infection from the bacteria and may require treatment.

Do not swim in stock tanks or stagnant ponds in pastures where death losses have occurred. Streams are considered safer, as the moving water will dilute organisms. Report animal carcasses in streams or rivers to local sheriff or police departments.

During an outbreak, do not consume wild hogs shot in an affected area. Swine may have fed on carcasses. Although swine are resistant to anthrax, they may temporarily harbor the bacteria.

During cool weather, wild hogs will be free of the disease. As always, the TAHC recommends hunters wear latex gloves when processing game, to prevent potential exposure to bacteria, viruses or parasites. Thoroughly cooked meat is considered safe to eat.

Do not collect antlers, skulls or horns from animals. Anthrax can survive, even if bones are bleached.

Cashmere 2000, Inc. and Montana Knits, Inc. will no longer be buying cashmere or cashgora from growers, effective immediately. Sorry for any inconvenience. Thank you for your support over the years.

Sincerely, Ann Dooling

Livestock Health—Anxieties over Anthrax

Reprinted from the *New Agriculturist*, Issue 01-1

On-line at <http://www.new-agri.co.uk/>

Outbreaks of anthrax have become an annual occurrence in Zambia. Since 1990 when the disease was identified in Western Zambia, hundreds of animals and people have died. A large-scale vaccination campaign was started in the same year and has continued on an annual basis. However, reports from veterinary field staff suggest that farmers' reluctance to vaccinate has hindered control of the disease.

Farmers are told to rest their oxen for two weeks after vaccination and therefore some refuse to vaccinate their animals during the rainy season because that is when they need draught power. Some farmers, especially in areas where there has been no experience of the disease, fear that anthrax could be spread via the vaccine. The haphazard nature of vaccination has resulted in the disease becoming more widespread during recent years.

A recent study conducted by the Zambian Department of Veterinary and Tsetse Control Services suggests that farmers' knowledge of the disease is very limited, even in areas where it has been prevalent for many years. The majority of farmers are able to identify the disease only by the enlarged spleen and are unable to recognize it from an unopened carcass. The result is that vaccines meant for diseases other than anthrax are often used. There have also been complaints from farmers about the effectiveness of the anthrax vaccine because, in many instances, animals have died in the weeks or months following vaccination.

Anthrax, which is caused by the spore-forming bacterium *Bacillus anthracis*, most commonly occurs in warm-blooded animals but the spores, if inhaled or ingested in contaminated soil, food or water, are known to infect humans. It is unlikely that spread of the disease occurs from direct person-to-person contact but spores are resistant to most disinfectants and can remain viable in the soil for up to ten years. The Zambian report states that some farmers find it difficult to accept that a disease which kills cattle can also be infectious to humans, which has resulted in farmers and their families becoming infected after handling or eating meat from an infected animal. Death occurs in 25-60% of those who contract intestinal anthrax particularly as antibiotics, such as penicillin, are only effective if treatment is sought at an early stage.

Despite a massive campaign launched by the Zambian government on the importance of vaccination, erratic supply of anthrax vaccine has rendered control strategies ineffective because in most cases cattle are only vaccinated in the middle of an outbreak, when some animals are already infected.

Article submitted by Mweene Mwale, freelance journalist, Zambia Note: An outbreak of anthrax in Zimbabwe was re-

Continued on next page

Anthrax in Zambia

Continued from previous page

cently reported to have killed nine people and 70 cattle after spreading from Mhondoro to Mashonaland East. The country's department of veterinary services said 757 people had been treated for anthrax so far (December 2000).

Broken Leg

By Paul Johnson

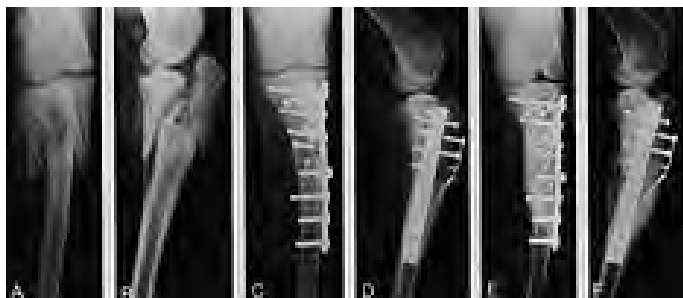
What to do with a goat with a broken leg? We have not had to face this question for 7 years. This year, we have had two goats break legs. My internet search for information delivered a recipe for cabrito (no joke!).

My research led to the big question, "How much do you want to spend?"

Is the goat livestock or a pet? Yes, some are both, but a decision must be made. We had the Vet try to salvage the first goat—he splinted her leg and we put her in a stall, to be watched and isolated for three months. However, two months in, the Vet reported the leg was not healing correctly. Our options then were to go for more intensive treatment, including surgery, metal rods and pins, or "toast" (as Linda says). As we already had spent considerable money, and the prospect for salvage was bleak and very expensive, we chose "toast" and delivered her (goat, not Linda) to the local abattoir.

When a young wether broke a leg a few weeks later, the choice was clear. Toast. Or in this case, sausage.

Another option is removal of the damaged leg. I have seen several three-legged goats which seem to function well on other farms. The books we read say bucks can't function (reproduce) if the missing leg is a hind one. Other than that, like most goat decisions, it comes down to a judgment call by the farmer.



X-Rays of broken (and fixed) goat leg.

P.C.M.A. Dissolved

The current officers of the Professional Cashmere Marketers' Association, Inc. reported in its July newsletter, The Network, that it is disbanding.

The PCMA was formed in 1995, as a Montana non-profit corporation. This Association, along with other growers and companies, including Pioneer Mountain Farm, Castle Craggs Ranch and California Cashmere Company sponsored six Business of Cashmere Conferences and published a periodic newsletter. The excellent conferences brought together annually, cashmere growers and a variety of speakers on topics of interest for cashmere business owners.

A statement from the Association officers follows:

"It looks as though P.C.M.A.'s day is either past or has not yet arrived. We've successfully conducted six Business of Cashmere Conferences, and the collected Proceeding book contain a wealth of information on how to do it. Either the cashmere industry in the U.S. has peaked or more likely it's an idea whose time has not yet come, but there's no greater interest in what goats can do on range and what a cashmere wool check can mean than there was seven years ago.

"Your officers have come to the conclusion that with the Proceedings book in place, there is not much point in continuing the Association, so we've determined to dissolve it. You, as the members of the PCMA, have been unfailing in your support for our association, have attended the conferences and paid your dues. According to our bylaws, we've resolved to return the cash treasury to those who donated it: our members.

"We've decided to contribute the remaining stock of Proceeding Books and Fleece Standard Books, to the Cashmirror Magazine. Paul and Linda have agreed to sell them and use the proceeds for contests, show and fleece show awards, as well as to disseminate information to the industry through their magazine. Refund checks will be mailed to current paid members in 4-6 weeks for the share of your retained contributions to the Association."

The Officers of PCMA
July 26, 2001

CASHMIRROR

YAZARLAR CASHMERE GOAT-HAIR MANUFACTURE COMPANY

MUZAFFER YAZAR HISTORY

The beginning of goat-hair tent and cashmere manufacturing activities in Kızılcağözü of Bozdağ in province of Aydın, Turkey, dates back to about a thousand years ago. Villagers in Turkey produce products through spinning and weaving methods passed down from their ancestors.

The annual overall production of approximately two thousand villagers is one thousand goat-hair tents. The cashmere used is the outcome of dehairing process which, at this stage, is half-processed. It weighs approximately 1.5 kgs for per m. of goat-hair tents and the cost per kg is \$1.20, while the cost for cashmere may vary depending on the yield and quality. More information is available if you are interested.

ADVANTAGES OF GOAT HAIR TENTS

1. It is extremely cool inside due to the porous nature of the tents.
2. These tents are superior to others made from cotton and similar substances in efficiency due to their inflammable nature.
3. The tents aren't easy for scorpions and other harmful insects to crawl on due to their hairy nature.
4. The tents work as perfect shields against sun-rays.

Orders that do not exceed 10 tons are prepared in 15 days. Raw cashmere ratio is 28% - 35%.

Contact information

E-Mail : myazar@ttnet.net.tr

muzafferyazar@hotmail.com

Telephone: +90 0256 314 16 45

Address: Zafer mah. 90 sok. No: 20 Nazilli-Aydın-Turkey

Emails from Muzafer Yazar:

August 6, 2001

"We learnt your address from internet. We are producing tent made by goat hair. We are the only producer in Turkey. If you need textile raw material we can send you sample. We would like to contact you if it is possible. We are the producer raw cashmere."

September 13, 2001

"First I want to say my sadness about that horrible event which was occurred in your country..."



Goat hair tent samples.

Goat Hair Tents

The information at left, is from Yazarlar Cashmere's internet web site at: <http://www.cashmere.8m.com/>

The English translation on the page is rough and our emails with Muzafer Yazar are with some language difficulties. We think that this company is making woven tents (or maybe just tent fabric?) from goat hair by-products from the cashmere dehairing process. It certainly sounds like a good use of the by-product and seems that the remaining cashmere in the guard hair would certainly add warmth to the fabric—in addition to discouraging scorpions from crawling up your tent.

The weight of the fabric is listed as 1.5 kgs per m of tent. This would translate to 3.3 pounds per 39.37 inches or about one pound per foot of tent fabric. Not knowing how wide the tent fabric is, this still doesn't tell us much.

Cost is listed at 1.20\\\$ per kg. And the good news is that if your order does not exceed 10 tons, it can be prepared for you in 15 days.



Sample of half-processed cashmere—ratio 30%.

Herd Liquidation

Take advantage of the liquidation of one of America's premier cashmere studs to add to or augment your existing herd of cashmere-producing animals. All animals, with the exception of the Spanish does and their cross-bred offspring, are pedigreed. Fleece tests (from TX A&M) are available for many of the superior bucks. This sale is in effect until the end of October, 2001.



Cashmere Does



Cashmere Bucks

Fleece-tested bucks	\$750
3 year old and older cashmere bucks	500
2 year old cashmere bucks	350
2 year old and older cashmere does	250
2001 cashmere kids—before 8/31	75
2001 cashmere kids—after 8/31	90
Yearling cashmere bucks	250
Yearling cashmere does	200
2001 Sp/cashmere X kids	15
2001 Sp/cashmere X kids, bottle fed	25
Spanish (Texas) does	100

Spanish (Texas) Does

**Cashmere 2000,
Inc.**

Ann Dooling

3299 Anderson Lane
Dillon, Montana 59725
Phone: 406-683-5445
Fax: 406-683-5567
Email:

Also for sale: Down Under® goat handling equipment - \$4,000, 3 complete shearing sets (motor, flexible downshaft, handpiece, blades, head holder and stand) - \$1,000@



Discounts for multiple purchases—10% off for 10, 20% off for 20, 25% off for 30, 30% off for 40, 35% off for 50 or more.

CASHMIRROR

2001 NWCA Fleece Competition Results *August 11, 2001* *Monroe, Washington*

Judge: Cynthia Heeren

GRAND CHAMPION DOE

BPC Howdy, Wes & Marilyn Ackley
Bessey Place Cashmere, Buckfield, Maine

RESERVE CHAMPION DOE

BBS Ruth, Jeanne Austin
Blackberry Slump, Augusta, New Jersey

GRAND CHAMPION BUCK

BPC Jupiter, Wes & Marilyn Ackley
Bessey Place Cashmere, Buckfield, Maine

Reserve Champion Buck

Qamaka, Ann Wood
Tamarack Ranch, South Vienna, Ohio

Sue Lasswell Handspinners' Award

BPC Howdy, Wes & Marilyn Ackley
Bessey Place Cashmere, Buckfield, Maine

DOES - Shorn

Doe Kids (born 2000), 12 entries
1st NLF Liberty Rass, Mickey Nielson, Liberty Farm
2nd #123, Diana Mullins, Still Waters Cashmere
3rd NLF Liberty Wonder, Mickey Nielson, Liberty Farm

Does Age 2-3 (Born 98-99), 13 entries

1st Dot, Diana Mullins, Still Waters Cashmere
2nd NLF Liberty April, Mickey Nielson, Liberty Farm
3rd WFF Bagel, Dan & Marti Wall, Wallflower Farm

Does Age 4-7 (Born 94-97), 4 entries

1st none awarded
2nd WFF Hyssop, Dan & Marti Wall, Wallflower Farm
3rd none awarded

Does Senior Over Age 7 (Born before 94)
no entries

DOES - Combed

Doe Kids (born 2000), 8 entries
1st SF Gabrieli, Roy Repaske, Stoney Crest Farm
2nd SF Fantasia, Roy Repaske, Stoney Crest Farm
3rd BBS Monica, Jeanne Austin, Blackberry Slump

Does Age 2-3 (Born 98-99), 11 entries

1st BPC Howdy, Wes & Marilyn Ackley, Bessey Place Cashmere
2nd SF Raisin, Roy Repaske, Stoney Crest Farm
3rd SF Anna Magdalena, Roy Repaske, Stoney Crest Farm

Does Age 4-7 (Born 94-97), 15 entries

1st BBS Ruth, Jeanne Austin, Blackberry Slump
2nd Tess, Diana Mullins, Still Waters Cashmere
3rd SF Scarlotti, Roy Repaske, Stoney Crest Farm

Does Senior Over Age 7 (Born before 94), 4 entries

1st BBS Heavenly, Jeanne Austin, Blackberry Slump
2nd LFC Vivaldi, Roy Repaske, Stoney Crest Farm
3rd TCF Kimberleys CEI, Roy Repaske, Stoney Crest Farm
3rd BMCF Freckles, Doug & Roberta Maier, Breezy Meadow Cashmere Farm

WETHERS - Shorn

Wether Kids (born 2000), 5 entries
1st #218, Diana Mullins, Still Waters Cashmere
2nd #203, Diana Mullins, Still Waters Cashmere
3rd #213, Diana Mullins, Still Waters Cashmere

WETHERS - Combed

Wether Kids (born 2000), 1 entry
1st TRC Reuben, Ann Wood, Tamarack Ranch

Wethers Age 4-7 (Born 94-97), 2 entries

1st BBS Charlie, Jeanne Austin, Blackberry Slump
2nd BBS Jaques, Jeanne Austin, Blackberry Slump

BUCKS - Shorn

Buck Kids (Born 2000), 3 entries
1st BPC Jupiter, Wes & Marilyn Ackley, Bessey Place Cashmere
2nd BPC Jubilee, Wes & Marilyn Ackley, Bessey Place Cashmere
3rd BPC Jeep, Wes & Marilyn Ackley, Bessey Place Cashmere

Bucks Age 2-3 (Born 98-99), 1 entry

1st BPC Indiana, Wes & Marilyn Ackley, Bessey Place Cashmere

BUCKS - Combed

Buck Kids (Born 2000), 4 entries
1st CCS2019, Chris McGuire, Capricorn Cashmere
2nd TRC Bond, Ann Wood, Tamarack Ranch
3rd BBS Delmore, Jeanne Austin, Blackberry Slump

Bucks Age 2-3 (Born 98-99), 1 entry

1st Qamaka, Ann Wood, Tamarack Ranch

Bucks Age 4-7 (Born 94-97), 2 entries

1st RV Chance Wayne, Jeanne Austin, Blackberry Slump



Calendar of Events

Association Contacts

September 22 - 23, 2001 (Classes start 9/21)

Oregon Flock & Fiber Festival, Clackamas County Fairgrounds, Canby, Oregon. Workshops, classes, animal shows, animal exhibits, vendor booths, contests, lamb and cabrito cookoff. Your one-stop shopping center for the fiber enthusiast. Cashmere goat show - 10 AM, Saturday, 9/22. Christopher Lupton seminar, 6:30 pm, Saturday, 9/22 (see page 3 this issue)
<http://www.flockandfiberfestival.com>

September 29 - 30, 2001

13th Annual Vermont Sheep and Wool Festival, Snowshed Lodge, Killington Resort, Killington, Vermont. Contact Kat Smith, 136 Jack Perry Rd., Wallingford, VT 05773, 8020446-3325

October 2-3, 2001

ECA Fleece Competition (2nd) and Goat Show (3rd) at the State Fair of Virginia, State Fairgrounds, Richmond, Virginia. Judge, Joe David Ross, Texas.

October 20 -21, 2000

New York State Sheep and Wool Festival, Dutchess County Fairgrounds, Rhinebeck, 914-756-2323, 2www.sheepandwool.com

September 2004

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

Cashmere America Co-operative

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

Cashmere Producers of America (CaPrA)

Kris McGuire, President, 970-493-6015, email: krisvadale@aol.com, Membership info: Marilyn Burbank, PO Box 2067, Rogue River, OR 97537, email: burbank@cdsnet.net

Colorado Cashmere and Angora Goat Association (CCAGA)

Carol Kromer, Club Contact, 719-347-2329

Eastern Cashmere Association (ECA)

Gloria Rubino, President
 570-629-6946, Toadhaven@aol.com

North West Cashmere Association (NWCA)

Website: <http://www.nwcacashmere.org>, Paul Johnson, President, 503-623-5194, paul@cashmirror.com
 Diana Mullins, Membership Coordinator, 509-997-2204, dmullins@methow.com

Pygora Breeders Association (PBA)

Inga Gonzales, Secretary, PO Box 565, Knightsen, CA 94548, 925-625-7869, email: Igonozo@goldstate.net

Texas Cashmere Association (TCA)

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



NWCA Pres. Johnson, entering competition fleece entries into a laptop computer, fortified by Starbucks and maple bars.



NWCA fleece competition judge, Cynthia Heeren, carefully inspects the 86 fleeces entered into the competition.

CASHMIRROR

CALIFORNIA CAPRETTE CASHMERE

Barbara Fiorica
13059 Cherry Rd.
Wilton, CA 95693
916-687-6406
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PO Box 2556
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650-225-1171
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compuserve.com

COLORADO

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
970-568-7941
Borganic2@aol.com

ROLIG GOAT RANCH
Cashmere Producing Goats
Steven or Ellen Rolig
8435 CR 600
Pagosa Springs, CO 81147
970-731-9083
roliggoatranch@
pagosasprings.net

CONNECTICUTT

**THUNDER HILL
CASHMERES**
Coleen Nihill
165 Boston Post Road
Old Saybrook, CT 06475
860-873-3403

MAINE

**BESSEY PLACE
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ackley@megalink.net
Page 26, August 2001

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Lance@airs.com

GRUMBLE GOAT FARM
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207-785-3350
fax: 207-785-5633
grumble@midcoast.com

SPRINGTIDE FARM
Peter Goth & Wendy Pieh
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207-529-5747
fax: 207-529-5739
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MARYLAND

MIDDLETOWN FARM
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cashmere@bitterroot.net

DOUBLE OUGHT RANCH
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phone & fax: 406-557-2291
message: 406-447-6210
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Yvonne Zweede-Tucker
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smokeridge@marsweb.com

NEVADA

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goatsnsoap@idsely.com

ROYAL CASHMERE
Eileen Cornwell
Byron Higgins
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 JERSEY

BLACK FEN FARM
Virginia Hinchman
Kevin Weber
117 RD 2, Rt. 46
Hackettstown, NJ 07840
908-852-7493
fax: 908-852-1336 (call first)
blackfen@juno.com

CREEKSIDE FARMS
Eugene Applegate
426 Monroeville Rd.
Swedesboro, NJ 08085
956-241-1820
Fax: 856-241-1896
GAPPLEGATE@Snip.net

NEW YORK

FROG WINE FARM
Elizabeth Dane, OMD, PhD
134 West 93rd Street, Suite
2E
New York, NY 10025
212-866-3807
fax: 212-866-2340

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
10630 Springville-Boston Rd.
Springville, NY 14141-9011
716-941-5826
goats7228@cs.com

OHIO

TAMARACK RANCH
Bob and Ann Wood
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PO Box 567
South Vienna, OH 45369-

Directory

CASHMIRROR

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937-568-4994
tamarack@voyager.net

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
L i n d a _ L o w e l l @
b e a v t o n . k 1 2 . o r . u s

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: 503-873-5430
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GOAT KNOLL
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HIDDEN MEADOW FARM PYGORAS
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TOE IVO
403-967-4843
~~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>



Japan Reports First Case of Mad Cow Disease

Japanese officials have just reported their first case of mad cow disease. This is the first case of BSE (bovine spongiform encephalopathy) confirmed outside of Western Europe. BSE is a brain-wasting illness that has been linked to the fatal variant Creutzfeldt-Jacob disease in humans, which has been the cause of death of about 100 people in Britain since it broke out in the mid 1980's. The United Nations reported earlier this year that they considered Japan at risk because it imported large quantities of meat-based animal feed from Western Europe.

BSE was diagnosed in Europe in 1986 and resulted in wholesale slaughtering of herds, mandatory testing and a European Union ban on British beef exports, which was later lifted.

Last year, in an attempt to limit exposure, Japan banned the import of EU beef, food made from processed beef, and bull sperm to their country. They also restricted blood donation from people in Britain.

In early August, officials noted a cow in Shiroy, Chiba prefecture, that mysteriously lost the ability to stand. The cow was slaughtered August 6th and sent to a research center for testing. Initial testing results were reported negative for BSE. Further tests were carried out and these second tests came in positive for mad cow disease.

Chiba is a main supplier of agricultural products to Tokyo, which borders the state on the west. There are 100 cattle in Shiroy and many have been quarantined even though none are thought to carry the disease. Officials have not yet decided whether to slaughter the herd.

It is suspected that the diseased cow became infected from eating infected animal feed.

Japanese officials are still debating whether to extend the ban on meats produced by other farms which used the same suspect animal feed. The director-general of farm ministry's livestock industry department, Takemi Nagamura, told a news conference, "This suspected case does not change our position that the chances of mad cow disease occurring in Japan are very low."



Using Japanese government data, EU scientists give Japan a BSE risk-rating of three on a rising scale of one to four. They have judged Australia and the United States, by contrast, to be free of any risk of BSE.

Incubation period for mad cow disease is believed to be between two and eight years after infection.

FMD Update

New outbreaks in the UK in Leicestershire and a new ban on transporting sheep out of Devon show Foot and Mouth Disease epidemic is far from over. The new cases have continued to grow on a weekly, even daily basis over the last four months. New rules on transport appear just the beginning for what appears to be a long autumn. The country has been divided into three categories—disease free, at-risk, and high risk.

Actual numbers as of Sept. 14th are:
2,013 actual cases 3,851,000 head of live-stock slaughtered.

Scotland, home of the cashmere test herd, remains disease free!

Say What?

Fortune Cookie Wisdom

You have brains and good bones; for any girl they are as rubies.
 Liberate yourself from the constraints of niceness.
 Lovers are like diseases: easy to catch and hard to get rid of.
 Today buy nothing.
 Beware of superior-acting small dogs and fried meats that anger up the blood.
 You irradiate goodness.
 Information wants to be free, not just badly paid.
 Gravity will have its way with you; learn to smooth talk.
 Learn to measure people not by what they can do for you, but how tired of them you are.
 Regret nothing.
 Explore more types of caffeine.

Coming Attractions!

Next Issue

Coyotes—The Good Guys!?

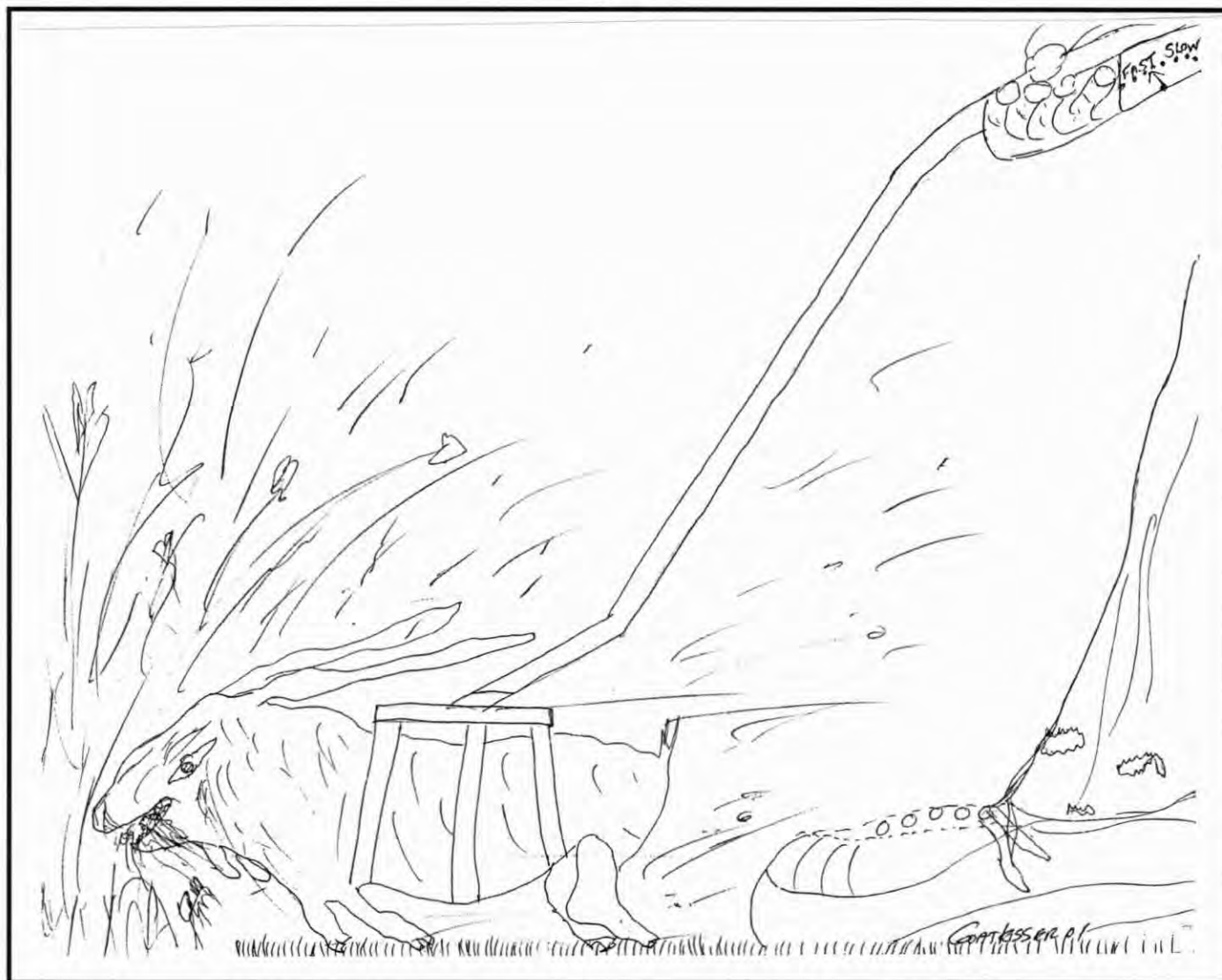
Can this Fleece be Saved (This combed fleece had very fine guard hair and a lot of dandruff...but the color was gorgeous!)

The Prickle Factor

OFFF Coverage

Winners of the Photo Contest

And more...stay tuned!



Medium was the best speed. Domestic weed control sometimes resulted in ankle bites at higher speeds.

Before Fido

Today, the general consensus is that the dog is man's best friend, but in ancient times, it was not Fido or Spot who played this honored role, but the humble goat. New genetic evidence suggests that goats travelled around the world at the heels of early farmers, serving as a walking milk supply and a chip for bargaining. Apparently, Rover was either not the favored hound of today or was still swimming around in the gene pool.

The lowly goat most likely assisted our ancestors in conquering new territory and developing early trade. Modern-day goats still bear the genetic signature of the movement and mixing of animals 10,000 years ago.

Goats have often been dubbed the "poor man's cow" because they can survive in harsh conditions on meager food. You don't often hear this comment about Fifi. Have you every priced her dog food? Not to mention her hair-do's!

In many countries, the world's 700 million goats now play second fiddle to the four major livestock species: cattle, buffalo, pigs, and sheep. We've known that goats were considered "secondary species" to cattle, pigs and sheep, but we hadn't been informed that buffalo also top them on the list of "preferred" livestock. At this rate, they'll soon be behind emus and potbellied pigs.

However, in olden times things were different. A genetic analysis of more than 400 goats from 44 countries throughout Europe, Asia, Africa and the Middle East suggests that goats were once the favored domestic animal. Old farmers were smart.

Researchers have found that the goat's genetic history is different from other farm animals, such as cows and sheep. This history shows more mixing between continents, suggesting that goats travelled with early farmers as they journeyed and colonized new land. Researchers now think that humans took their goats with them when they moved, and much more so than sheep or cows. Goats were probably the travelling partner of choice because they provided milk. It seems that goats were "walking fridges", acting as a handy portable food supply as well as a trading tool.

The study reveals that all goats alive today are descended from three distinct lineages. The first goat population arose about 10,000 years ago in the Fertile Crescent region of the Middle East—this is also the area where cattle originated. The other two goat lineages arose more recently, probably in south eastern Asia and the Middle/Near East.

This recent study, which was carried out by a Swiss-French team, is published in the US Journal Proceedings of the National Academy of Sciences. It is based on studies of mitochondrial DNA, the scrap of genetic material that is passed from mother to child.

Information from BBC News Online, "Ancient Farmers Were Goat-Herders", http://news.bbc.co.uk/english/sci/tech/newsid_1313000/1313016.stm

CLASSIFIED ADVERTISING

CashMirror Back issues, \$3 each or a dozen for \$30. 10/89 - 7/01. 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, 3rd to 4th grade reading level, or for brightening the lives of bored adults. Guaranteed only happy endings. \$7.50. Order from CashMirror Publications. <http://buster.cashmeregoat.net>
Maremma Sheepdog Club of America, Maremma Livestock Guarding dogs, PO Box 546, Lake Odessa, MI 48849, 616-374-7209. Free information and Breeder Directory.

T-Shirts: CashMirror and Mild Goat Men, Heavy-duty cotton T's still available in Large and XLarge sizes only. All the Small and Medium people already have theirs. Suitable for "downtown" wear, yet sturdy enough for barn chores. CashMirror T's are natural-colored. MGM T's come in choice of burgundy or dark green. \$17.50@. All prices include shipping. Order from CashMirror Publications.

Why Not a Cow?

Regarding the article at left about goats being "walking fridges", you're probably wondering why early farmers didn't just travel with their cows. Certainly a larger refrigerator would have been more suitable, especially if the farmer had a big family. Why didn't they take along a cow? My theory hinges on the fact that the goat was also considered an item to trade—old money, so to speak. Cows would certainly have provided a larger refrigerator for the family, but when traveling with a "purse-full" of cows, it might have been more difficult to "break a cow" to pay for a night's lodging at the inn rather than just pulling out a couple of goats. You couldn't always find change for cows on ancient roads—especially late at night.—Ed.

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

Breeders Directory listing for full year \$30.

Notable Quotes

"Whether women are better than men I cannot say — but I can say they are certainly no worse."

... Golda Meir

"It has been proposed that changes in skeletal morphology, particularly population-wide reduction in body size, quickly follow human controlled breeding (of goats)."

...Melina
Zeder and Brian Hesse, "The Initial Domestication of Goats in Zagros Mountains 10,000 Years Ago"

"Significant capital outlays can be required if fencing must be upgraded to hold goats. Angora goats are held with good sheep fences, but cashmere goats generally need improved fencing."

...RIRDC, Australia

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.



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