“We have come to view farming landscapes as being primarily bread baskets, yet agriculture is more than about producing food. We get many positive things from agriculture, including clean water, cohesive communities, rural employment, flood protection, aesthetically pleasing landscapes and biodiversity.”

- Jules Pretty, Director, Centre for the Environment & Society at the University of Essex, UK. Presentation at the Leopold Center, Iowa: www.leopold.iastate.edu/events/pretty.html

**Small Ruminant Dairy Newsletter**

**Spring, 2004**

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**Dairy Goat Farms Wanted for Nutrition Study**

Do you want help balancing the rations you feed to your commercial dairy goats? Are you willing to work with someone to collect the milk, animal weight and feed data to be able to do that? Will you participate for 1.5 years starting this summer?

Carol Delaney and Dr. Joanne Knapp at UVM were awarded a Sustainable Agriculture Research and Education grant entitled “Implementation of Dairy Goat Nutrition Programs for Improved Sustainability.” The first goal of the study is to use the newest research data for protein and energy requirements for dairy goats that just came out of the E. Kika de la Garza Institute for Goat Research at Langston University, Oklahoma. The research was conducted by a team led by Dr. Arthur Goetsch and they have just recently put a web interactive ration balancing program on the web at [www.lurext.edu/goats/index](http://www.lurext.edu/goats/index). The second goal of the study is to make feed representatives and farmers aware of these new feed requirement tables and to consistently use them across the Northeast.

Dairy cow farmers have enjoyed ration balancing services from feed companies and consultants whereas the services for dairy goat farmers have been inconsistent. However, the farms need to provide information like individual doe milk weights, milk protein and fat analysis, body weight and condition. The grant will pay for the lab analysis of milk and feed plus a technician to collect this data. The farmer will provide the time for monthly body weight and condition measurements and milk collection. For comparison, we also need to interview the farmers to gather feed costs and milk production figures for the year before the study starts.

If interested, send in the form found on last page in this newsletter or contact Carol Delaney for more information.
MILK LINE VACUUM PRESSURE FOR DAIRY SHEEP AND GOATS

For prevention of mastitis, it is best to have a certain vacuum level to prevent milk from flushing back into the teat, among other reasons. In the last newsletter, I quoted Dr. Elizabeth Lepetitcolin from France as recommending the vacuum pressure for dairy sheep to be set at less than 39 kilopascals. The conversion to inches of mercury at 32°F is a multiplication by a factor of .2953. This gives us 11.5 inches of mercury. In the Dairy Practices Council (DPC) guidebook #71, *Farmers Guide to Somatic Cell Counts in Sheep*, they give the following recommendations for vacuum pressure based on system type:

High line: 12.5-13.5” (42-26 kPascal)
Low line (or bucket) 10.5-12” (36-41 kPascal)
Mid line 11.5-13” (39-44 kPascal)
Claw vacuum should run about 9.5-11.5” of mercury or 32-46 kPascal.

For dairy goats, taken from the DPC’s guidebook #59 *Guidelines for Production and Regulation of Quality Dairy Goat Milk*, it recommends:

High line: 13-14” (44-48 kPascal)
Low line (or bucket) 11-12.5” (38-42 kPascal)
Mid line 12-13.5” (41-46 kPascal)
Claw vacuum at peak flow rate should be between 10-12” of mercury or 35-41 kPascal.

You should have the vacuum levels checked every 1200 hours of milking by the dealer or annually, whichever is shorter. You can order these guideline booklets from the DPC by going to the website [www.dairypc.org](http://www.dairypc.org) or contacting Carol Delaney.

**Feeding Replacement Kids and Lambs Just Enough**

On a dairy farm, kids and lambs are separated from their dams at some point and weaned or fed milk until weaning. The goal is to provide a good social environment and to supply the best nutrition for adequate growth. Too little growth will stunt the animals for life and compromise immune system development; too much growth can cause fat animals.

Research from the early 1990’s at UVM and Minor Institute in Chazy, NY looked at udder development of kids when, at 6 weeks of age, were fed either an ad libitum (as much as they wanted) jersey milk diet plus low quality hay versus a diet limiting the milk to 70%/50% of the ad libitum one plus hay for 13 more weeks. Kids fed as much milk as they wanted grew faster, had bigger udders and more fat in their udders. Kids fed on the restricted diet were smaller but had twice as much mammary gland tissue pound of gland (milk secreting part of the udder) at 4 months of age.

The jersey milk fed measured 4.35% fat and 3.50% protein and the hay was 18.7% crude protein and 53% NDF(neutral detergent fiber) on a dry matter basis. The ad libitum kids drank, on average, 2.2 quarts and the restricted diet kids drank 1.2 quarts per day for 13 weeks starting at 6 weeks of age. The ad libitum kids gained .44 lbs per day vs. 33 lbs per day on the restricted diet. Alpine kids were used in this study.

In a paper presented at the 2001 Great Lakes Dairy Sheep Symposium, Bee Tolman discussed research pertaining to the same subject as applied to dairy sheep replacements. As above, the influence on the milk secreting gland is attained at the prepuberty stage or from 1-5 months of age. Before the first signs of heat or estrus, is when you can optimize the potential of the mammary gland in your replacements. After puberty, the ‘damage’ or milk duct development is mostly done. By raising fat kids or lambs, you are limiting the development of the milk gland for the rest of the animal’s life. This is because excess feed creates more fat that crowds out secretory tissue and young animals fed a lot secrete less hormones that cause the ducts to grow.

Other nutritional factors can influence milk duct growth and Tolman cited research that
showed that feeding ad libitum diets with Sunflower seeds (high in polyunsaturated fats) led to lambs with decreased milk duct growth as well as diets that were deficient in essential (saturated) fatty acids.

Kids and lambs that reach breeding weight sooner will have slightly higher conception rates and more twins. However, after puberty, you can feed them more energy and they grow enough to be bred in the first year.

The actual optimum growth rate will vary depending on the breed of goat or sheep. Larger framed breeds of goats, like Nubian or Saanan, will probably need to gain more than .33 lbs per day pre puberty compared to the Alpines studied here. If you take weights at regular intervals of your lambs or kids, you will be able to see what the most weight gain they can make on high energy diets and then calculate to feed them 70% of that diet. Obviously, some growth is determined by genetics so you need to know if your herd/flock is very diverse or more homogeneous to apply set growth goals.

Practically, how can you limit feeding your replacements? If you bottle feed or artificially feed your kids or lambs, you can feed a set amount of milk and offer hay and grain, if you want, on the side. Goat farmer, Lynn Rockwell, in Cabot, VT found that feeding her Alpine and Nubian kids less milk than recommended also had health benefits. She ships fluid milk so, she chose to feed her kids less of it partly to sell more milk and partly to prevent overeating disease that seemed to be a problem even with vaccination. Her regimen is to remove the kids from the doe at day 3 and feed them an 8 ounce bottle 3 times a day for 1-2 weeks. Then, she switches to feeding about 12 ounces each feeding twice a day on multiple nipple bucket. She continues this same amount until weaning at about 4 months of age. The kids are offered unlimited hay and a little grain (half cup each) after week 1 which they start eating early because they get hungry before the next milk feeding. Lynn feels the kids are smaller than they would be on more milk but they are healthier and they still are getting the benefits of milk for longer.

On another Does’ Leap Farm, dairy goat farmer, Kristan Doolan, has switched from bottle feeding to dam raising her kids. She wanted the benefit of reduced labor and no grain feeding. Her system is to keep the kids on the does and start milking the does right away. The kids are offered high quality 2nd cut grass hay with the does in the barn. They are a seasonal herd and kid in spring time. At week 7, she keeps the kids separate after the evening milking, milks the does with full udders in the morning and then reunites them. At week 10, the kids are fully weaned and offered only hay or pasture or browse. About 50% of her Nubian kids breed at 10 months and the rest are culled or kept until the next year’s breeding.

Most people raising kids or lambs are not feeding replacements excessively. However, if you do, the negative repercussions are double fold: more money spent on energy feed and less milk production potential in the future.

1Negative effects of a high level of nutrient intake on mammary gland development of prepubertal goats. CE Bowden, K.Plaut, R. Maple, and W. Caler. 1995 JDS 78:1728-1733

ANNOUNCEMENTS

**VERMONT AGRICULTURAL HALL OF FAME NOMINATIONS DUE **
Last year the inaugural class of the Vermont Agricultural Hall of Fame was chosen and eight incredibly deserving individuals were inducted. This year, we are seeking four candidates to honor as leaders in the agriculture industry who have exemplified personal values, performances and achievement in Vermont and share a good neighbor relationship with farming and non-farming families. These folks will be recognized for their high standards of conduct, leadership, innovation and accomplishment for agriculture and have publicized and built public awareness for excellence in agriculture.

Recipients of the award should be from one of the
following categories: farmer, education (extension, FFA, AITC), Government (elected, appointed, employee) or Non-Governmental (fairboard, Farm Bureau, Grange, etc). There may not be an award from every category each year. Presentation will be made in August during the Champlain Valley Exposition. The application must be postmarked by June 30, 2004. For more information or to request an application, please call Jackie at 802-434-5646 or email crkbdrks@aol.com.

Sunday, August 29th, 2004 at 11:00AM - The New England Classic Boer Goat Show will be held during the running of the Windsor Agricultural Fair at the Windsor Fairgrounds in Windsor Maine and judged by Dr. Fred Homeyer of Antelope Creek Ranch in Robert Lee, Texas. Dr. Homeyer is a recognized leader in the Boer goat industry and is a certified USBGA Judge. This is an open show and we welcome entrants from all Associations from any part of the country. Goats will be judged based on the USBGA Scorecard. The Maine Futures Class is additional to the main show. This class is open only to Maine residents and limited to Fullblood bucks and does 12 months and younger. Entry fee is $10.00/goat. For registration information contact Ken Spaulding, Saint Albans, Maine 04971, (207) 938-3714.


10th Great Lakes Dairy Sheep Symposium - November 4, 5 and 6, 2004, will be held at Best Western Hudson House Inn, Hudson, Wisconsin (715/386-2394 hotel). Please mark your calendar, program and registration will come later. Contact: Yves M. Berger, tel: 715-635-3735, fax: 715/635 6741, ymberger@facstaff.wisc.edu.

RESOURCES

Vermont Grass Farmers’ Association Directory of Grass-Fed Products for Sale, 2004 - This new publication lists member farms contact information and products available for sale, and highlights topics of interest related to Grass-based agriculture. Produced by the Vermont Grass Farmers’ Association and the UVM Center for Sustainable Agriculture Vermont Pasture Network Program, 31 pages, $5.00 suggested donation to help defray publication costs. To order, contact the Center for Sustainable Agriculture at (802) 656-5459 or sustainable.agriculture@uvm.edu.

POSITIONS OFFERED/WANTED

Sheep milker wanted for a Vermont summer-April to October. Will work in all aspects of bucket milking 50 ewe dairy and new cheese making facility with retail store. Some painting and landscaping also involved. Salary negotiable. Housing can be provided if desired. Granville, Vermont. Contact Dan at dhewitt@kingcon.com or 802-767-4127.

Intern wanted: Family-run, sustainable sheep dairy in its fourth year of operation is looking for an intern for the 2004 season. Our farm has about 150 milking ewes and 300 lambs that are seasonally-grazed on over 100 acres of pasture. Housing, meals and a stipend will be provided to the individual who is interested in learning, working, and sharing their knowledge on one of the few sheep dairies in NY. Please call in the evening (518-854-9695) or email www.dairysheepfarm.com to find out more about the position.

Intern wanted, Cheesemaking: Sprout Creek Farm is a 200 acre working, educational farm in Dutchess County, NY, owned and operated by the Religious of the Sacred Heart, an order of nuns committed to education and social justice. We are starting our fourth year producing grass-fed cow's milk cheese, using our herd of Jersey and Guernsey cows, and this year will be developing a goat cheese. We practice sustainable agriculture and are working toward organic certification. The internship runs from March through July. Work week Tuesday - Saturday, with occasional Sundays. Pay will be 10/ hour. Responsibilities will include assisting the Cheesemaker in the following: monitoring the cheese make; cutting and wrapping cheese; monitoring the ripening room; selling cheese in the on-site market and off-site locations; such as farmer's markets and wine festivals. Visit our website for more detailed information about the farm, www.sproutcreekfarm.org. Please mail resumes or questions to Allison Lakin, Creamery Manager/Cheesemaker, Sprout Creek Farm, 34
Lauer Rd, Poughkeepsie, NY 12603, Phone: 845-485-9885, Fax: 845-454-6158.

**Seeking Internship:** We are looking for a part-time internship at a goat dairy farm which produces farmstead cheese. We have special interests in animal care, health/wellness, cheese making, small scale organic/biodynamic farming, and what it takes to maintain a sustainable farm. We would appreciate any opportunities to learn. We have experience in artisan bread baking, culinary industry, graphic design and marketing.

Todd Wilcox and Shereen Alinaghian
347-743-8238

**For hire:** Hi, I am a sophomore at Skidmore College and I am interested in finding a job working on a sheep farm for the summer of 2004. I am also interested in working on farms that harvest and spin their own wool. I have little experience but I am very enthusiastic about the work.

Contact Jesse de Vries at j_devrie@skidmore.edu.

**Overseas work:** VOCA (Volunteer for Oversea Cooperative Assistance) is looking for a person knowledgeable in sheep dairy and cheese processing for a 2 week assignment in Armenia. If you are not yet busy with lambing, milking, cheesemaking, please consider it.

Location: Armenia, Shirak Region

The aim of the assignment is to assist the local sheep cheese producers in sheep herd management, increasing quantity of milk, improving quality of produced cheese. There is a serious lack of information in sheep farming practices, in terms of sheep living conditions, and disease treatment. A qualified volunteer expert is needed to explain to local sheep cheese producers proper technology of sheep milk production, collection, processing. The assignment will include on job training of local producers on sheep herd management, survey on domestic demand, assessment of collection, processing, packaging and production requirements of sheep milk. If interested in this assignment please contact directly Henry Garcia-Alvarez, Regional Recruiter, California ACDI/VOCA, 1-800-556-1620, HGarcia@acdivoca.org

**Help Wanted: Farm Operations Manager** at The FARM Institute. We are a non-profit organization operating farmland on Martha’s Vineyard Island with a mission to provide education in sustainable agriculture to children and the community. Our methods are grass-based and organic (not certified). We have a small Belted Galloway and Murray Gray beef herd, approx. 35 sheep, poultry, and a vegetable garden. We will be transitioning to a 200 acre former dairy farm over the next 12 months.

The position involves management of and participation in the day to day operation of the farm, and developing programs for a successful operation. A retail farm stand is planned for our new farm.

Qualifications required are: a diverse agricultural background including animal husbandry, soil and grassland preparation and management, effective leadership, an entrepreneurial spirit, a commitment to a strong work ethic, and a desire to promote our mission. The position offers the potential for expanding your experience in farming as well as exploring opportunities for growth with our organization. A salary commensurate with experience, health care benefit program and housing will be provided.

If you are interested, please send a letter of intent with your resume to John Curelli, Executive Director, The FARM Institute, P.O. Box 1868, Edgartown, MA, 02539, 508-627-7007, johnc@fardinstitute.org.

**Apprentices wanted:** Willow Hill farm, Milton, VT organic, u-pick blueberries, grassfed meats, sheep yogurt, award-winning farmhouse cheeses, sell on-farm, farmers’ market, and nationally. May-September 2--4. Off the grid housing is provided with weekly stipend. Days are Mon-Fri with alternating Sat or Sun off. Hours per week are to be determined. Some Saturdays will be spent at the Farmers’ market. Duties include moving animals on pasture, cleaning milk parlor, yogurt making, assisting with fence building, feeding animals, and part-time milking chores. Also weeding/mowing/picking blueberries and helping u-pick customers July-Aug. Applicant must be energetic, reliable, punctual and able to work alone as well as in a retail situation. Person must be able to do a variety of tasks as everybody does a little bit of ‘everything’. Contact Willow at 893-2963 or info@sheepcheese.com
CLASSIFIEDS

For Sale: Cheese processing equipment: I have two packages- one, just the 5 major pieces (bulk tank, MPD 10/25, cream separator, 100 gal. bulk tank, bottler, capper and filler) or this plus cheese making equipment. For details contact Courtney Haase, 603-927-4176.

For sale: Contents of small cheese plant. 50 Gal Vat pasteurizer, cheese molds, 8 x 10 walk-in cooler (needs compressor), cream separator, stainless steel sinks, etc. no reasonable offer refused. For more information or to see equipment call Kevin between 1&2 pm or 8&9 pm @ 802-483-6377 or Call 802-257-4595 any time.

For sale: 8 gallon mini-vat pasteurizer, used in great shape, $6,000; 14 Alpine goats, $100-$250 each or package deal (5 are 3-year olds nursing kids and have registration papers, 5 are 2-year olds and able to be registered, 4 are 1-year olds) plus Boer X and San Clemente X goats. Need to sell as soon as possible. Call Bruce and Erin Bickford, Walpole NH at 603-756-9619.

For Sale: I have a dairy ram for sale. He has been great for my flock but I’ve used him as much as I care to. He is 4. Half Friesian half Lacaune acquired from the Old Chatham flock. He is healthy and has a very high libido. You will need good stout fences to keep him. For more info, please contact: Alexa Jaffurs, Paradise Elsewhere Farm, Colrain, Mass 01340, 413-624-0271.

For sale: Registered Togs and LaManchas; 60+ Does; many due in March and May; 40 yearlings under lights to be bred for fall, CAE prevention program. FOR SERIOUS INQUIRIES ONLY. Barbara Reed info@littlerainbow.com 877-486-5371 15 Doe Hill, Hillsdale, NY 12529.


For sale: Lazy Lady Farm has just about finished it’s 2004 kidding season...phew!!!!!!!! We were fortunate this year to be blessed with lots of lovely females. Many were sold before they were born, but with a 70-30 doe to buck ratio.... I still have a few does left. The herd was just tested and all are CAE negative. The farm is a certified organic dairy. The does are reg. French Alpines with herd averages of over 2200 lbs. All the girls milk for 305 days. If you are interested in any of these girls please write or call 802-744-6365 (laini@sover.net) Price: $150.

For Sale: Floral Cooler. 6.5’ high x 6’ wide x 32” deep with 2 sliding glass doors. 110 volts. Good working order previously used for aging cheese but functional for a wide range of refrigeration needs. Sliding door needs some work. $500. Call evenings before 8 pm. 827-3046.

For Sale: Nubian and nubian cross kids. Selected for milk production on browse and grass. Does $25. Bucks free. These prices apply only when kids are picked up within 2 days of their birth. Make reservations today. Will be freshening in late March. Does’ Leap Farm. East Fairfield. 827-3046.

For Sale: Purebred Tunis ram, about five years old. Sires great looking lambs that grow very fast and nice. I have a lot of twins with him too. I have used him for 2 years and I hate to get rid of him, but I must. He has a good disposition also. Call 518-284-2863 anytime Tuesday thru Friday, after 6pm Saturday thru Monday. Asking $200.

Taking Orders on pasteurizer: I’ve been working on an idea to make a new, small (50 gal.) vat pasteurizer available to the farmstead cheese community, with an eye toward a unit that will fit into a low-tech, minimum cost operation. I’ve officially placed the order for my unit, and have just received the approval drawings (what we know as blueprints) for the first production model. I can send a .PDF format document that consists of both the actual plan drawings and the notes and specs for construction. It should answer any questions about materials, layout, dimensions, etc, that you may have. Anything else you need to know, please feel free to ask. For more information, contact Keith Morgan-Davie, 315-839-7105, wndhvn@juno.com.
POSITION ANNOUNCEMENT: Farm research position, part-time for 1.5 years. Approximately 20 hours per month. Will be collecting milk samples and weighing and body scoring goats. Training provided. Requires own vehicle and valid drivers' license to travel around Vermont. Competitive pay on contract. Will start May/June 2004. For more information: carol.delaney@uvm.edu or 802-656-0915.

The Small Ruminant Dairy Project is supported at UVM by the Center for Sustainable Agriculture, the UVM Animal Science Department and UVM Extension.

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