

Division of Marketing
Agricultural Development and Diversification (ADD) Program
1994 Grant Final Report

Grant Number 09067

Grant Title Market Enhancement of Sheep Dairy Products (Phase 1)

Amount Awarded \$13,000.00

Name Greg and Diane Kaufmann

Organization Wisconsin Meadows Inc.
 Chippewa Falls

E-Mail

WEB

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<http://datcp.state.wi.us>

**MARKET ENHANCEMENT OF SHEEP DAIRY PRODUCTS
FINAL REPORT
JUNE 30, 1995**

PROGRAM SUMMARY

A. Brief Description of project

The intent of this project was to expand markets for sheep milk cheese, to increase production of both milk and cheese manufacturing, and to increase marketing avenues for other farmers interested in sheep dairying.

B. Project created or achieved: Expansion of Dairy Sheep Milking Industry

Interest in sheep dairying has been increasing steadily over the past year. In March, a very successful Dairy Sheep Symposium was held in Madison with over 200 participants. The project recipients were very involved in the planning and execution of the symposium. Through other educational events where the project recipients were speakers or panelists a great deal of information has been disseminated during the last 12 months. The results of these efforts and the visibility of dairy sheep milking in the state has been tremendous: in 1994 Wisconsin Meadows had four families milking (including the two recipient families). In 1995 there are now 10 patrons of Wisconsin Meadows with calls of interest or intent coming in every week. Local FFA groups and university students have been exposed to sheep dairying through on-farm visits. At this point in time we believe Wisconsin to be the leading sheep dairy producer state in the nation. Efforts of grant recipients were helpful in leading to the establishment of a Sheep Dairy Research project being instituted at the Spooner Research Station. This should be in operation by Spring of '96. Milk was supplied to the Dairy Research Division at the University of Wisconsin-Madison for research purposes. Dr. Bill Wendorff has secured a grant to study potential uses of whey left over from the cheese making process. We have been very encouraged by the amount of support from various UW departments and expect that to continue.

C. Evaluation of results and benefits of project

The project has been successful in completing many of the original objectives. The most success has been reached in the areas of demonstrating the viability of sheep dairying and offering potential sheep dairy families a market for their milk as evidenced by the number of new entrants into sheep dairying. In the process of achieving those objectives much work has been completed toward standardizing the testing, handling and purchasing of sheep's milk in conjunction with the State of Wisconsin. Nutritional testing has been completed on some of the cheeses (and has demonstrated the nutritional advantage of sheep's milk - especially as a calcium source. See attached exhibit A.). Additional work needs to be completed on establishing guidelines for safety, easy testing and quality control of sheep milk handling procedures.

More work needs to be accomplished in the marketing area. The grant recipients have discovered that time marches on - the demands of milking and farming, working with patrons, and keeping ahead of government paperwork leave precious little time for the development of marketing programs and development of marketing skills. This is probably a common problem for all farmers who are trying to add value to their own products and is a concern that should be addressed by the Department of Agriculture.

D. Description of information or educational materials developed

Even though the grant recipients were speakers at many symposiums, workshops, and presentations, it is probably fair to say that more time was spent one on one sharing information on sheep dairying via the telephone or during on-farm visits. Each recipient family has at least two to three calls a week from people interested in sheep dairying and one on-farm visit per week. A field day was held at the Kaufmann farm in July, 1994 with over 50 attendees. Numerous newspaper articles have been published in the past year about sheep dairying (see attached exhibits).

Presentations on sheep dairying were made at:

- Wisconsin Sheep Producers Conference, March, Madison, WI, 1994.
- Hiwatha Grazing Conference, Rochester, MN, Nov. 1994
- Governor's Conference on Ag Diversification, Wisconsin Dells, WI, Feb. 1995
- Sustainable Agriculture Program Workshop, Rice Lake, WI, March, 1995
- Wisconsin Grazing Conference, Stevens Point, WI, March, 1995
- Spooner Sheep Day, Aug., 1994.
- Great Lakes Dairy Sheep Symposium, March, 1995.
- SunDance Hill Farm (including sheep dairying) featured in Wisconsin Public TV's documentary: "Covering New Ground: Wisconsin's Sustainable Agriculture", April, 1995

E. Future projections resulting from receipt of grant funds

We expect ^{to} see further growth in patron numbers based on interest expressed so far. We expect to see consumer interest in sheep dairying products continue to increase with more exposure to news regarding new sheep dairy farmers and as more nutritional information regarding the benefits of sheep milk products is made available. In March of 1996, the Koller family will host Farm and City Days at their farm with over 4000 community members expected to attend.

F. Financial background utilized to achieve original objective

Personal funds of grant recipients and sales of cheese have been used to achieve objectives in addition to grant funds.

G. *Other appropriate information.*

During the past year Diane Kaufmann attended the UW-Madison Applied Dairy Chemistry Short Course and the Cheesemaker's Short Course at UW-River Falls. These courses have helped to expand our knowledge base considerably as well as exposing others at these institutions to sheep dairying.

Marketing efforts the past year were concentrated in developing a mail order business and attending various sheep/fiber or food events to expose consumers to our products. Similar efforts are taking place or being planned during 1995-96.

See attached exhibits for publicity generated during the past year.

EXHIBITS

Nutrition Facts - Ewezzarella Sheep Cheese, Commercial Testing Laboratory.

Leader-Telegram, May 7, 1995, "A Wider Slice of Cheese", Joe Winter.

Letter dated October 27, 1994, DATCP, RE: Dairy Plant Milk Information Statement

Letter dated January 5, 1995, DATCP, RE: Bond waiver and licensing

Advertising:

General Brochure

Christmas, 1994 Brochure

Ad appearing in "Small Farm Today", June, 1994.

Ad appearing in "The Shepherd", Oct., 1994.

Ad appearing in Wisconsin Trails, Nov/Dev, 1994.

Ad appearing in "The Master Stockman", March, 1995.

Wisconsin State Farmer, April 4, 1995, "Farming can be earth-friendly and profitable - agriculture entrepreneurs show it works in television production".

Brochure announcing premier showing of "Covering New Ground" Wisconsin's Sustainable Agriculture" documentary.

Letter dated April 3, 1995, DATCP, RE: participation in workshop.

Press Release for 1994 Upper Midwest Organic Farming Conference.

Press release for 1995 Wisconsin Sheep Industry Conference.

Newspaper/magazine articles:

AgriView, "Diane a Believer in Future of Dairy Sheep", Aug 25, 1994.

Star Tribune, "New Interest in an old Product: sheep's milk", Aug 3, 1994.

Chippewa Herald-Telegram, "Farmers milk sheep".

REC News, "Farming with a twist: milking sheep, pasturing chickens", April, 1994.

The Master Stockman, "Kaufmanns' sheep/poultry pastures do double duty", Aug 17, 1994.

Small Farm Today, "Our Place, Wisconsin Meadows, Inc.", June, 1994.

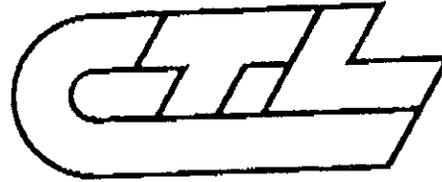
Sheep Dairy News, "Sheep Dairying in the Midwest States of America", Spring, 1995.

Leader-Telegram, "Baa, baa white sheep, have you any . . . milk?", June, 1995.

COMMERCIAL TESTING LABORATORY, INC.

514 Main Street, P.O. Box 526
 Colfax, Wisconsin 547
 715 - 962 - 3121
 800 - 962 - 5227
 FAX - 715 - 962 - 4030

Exhibit A



CLIENT

SAMPLE#

SAMPLE 1 Ewezzarella Sheep Cheese

NUTRITION		FACTS																													
Serving Size:		28 grams (1 ounce)																													
Servings per Container:																															
Amount per Serving																															
Calories	110	Calories from Fat	80																												
		%Daily Value*																													
Total Fat	9.0 g		14 %																												
Saturated Fat	6.0 g		30 %																												
Cholesterol	30 mg		10 %																												
Sodium	95 mg		4 %																												
Total Carbohydrate	less than 1 g		0 %																												
Dietary Fiber	0 g		0 %																												
Sugars	0 g																														
Protein	6 g																														
Vitamin A	4 %	Vitamin C	0 %																												
Calcium	25 %	Iron	0 %																												
<p>* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:</p> <table border="1"> <thead> <tr> <th></th> <th>Calories</th> <th>2,000</th> <th>2,500</th> </tr> </thead> <tbody> <tr> <td>Total Fat</td> <td>Less than</td> <td>65g</td> <td>80g</td> </tr> <tr> <td>Sat Fat</td> <td>Less than</td> <td>20g</td> <td>25g</td> </tr> <tr> <td>Cholesterol</td> <td>Less than</td> <td>300mg</td> <td>300mg</td> </tr> <tr> <td>Sodium</td> <td>Less than</td> <td>2400mg</td> <td>2400mg</td> </tr> <tr> <td>Total Carbohydrate</td> <td></td> <td>300g</td> <td>375g</td> </tr> <tr> <td>Fiber</td> <td></td> <td>25g</td> <td>30g</td> </tr> </tbody> </table>					Calories	2,000	2,500	Total Fat	Less than	65g	80g	Sat Fat	Less than	20g	25g	Cholesterol	Less than	300mg	300mg	Sodium	Less than	2400mg	2400mg	Total Carbohydrate		300g	375g	Fiber		25g	30g
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Fiber		25g	30g																												
Calories per gram			Protein 4																												
Fat 9		Carbohydrates 4																													

A wider slice of CHEESE

Goats, sheep help factory put new twist on nutrition

By Joe Winter
 Leader-Telegram correspondent

SOMERSET — The Bass Lake Cheese Factory is billed as the only one in the country that offers nutritionally packed cheese from the milk of sheep and goats as well as cows.

The factory south of Somerset provides choices for consumers "who are tired of the old Cheddar, Colby, Jack thing," said Scott Erickson, who owns the business with his wife, Julie. The next products to be introduced are a variety of blends of sheep, goat and cow cheese.

Cheese made from sheep and goat milk has different flavor-producing microbes, and blending these cheeses and their microbes can create batches of new tastes, Scott said.

"First we're going to do test vats and then testing of the cheese to see how we come out nutritionally," he said.

Already known are the numerous nutritional advantages of cheese made from



Joe Winter photo

Scott and Julie Erickson own the Bass Lake Cheese Factory, which produces cheese made from the milk of sheep and goats. The cheese is nutritionally better than cheese made from cows' milk, Erickson said.

the milk of sheep or goats, which each have their own character, Scott said.

"The fact that they're easier to digest means they can be eaten by people who have asthma or allergies to cows' milk," he said.

Cheese from sheep and goat milk has a small fat-cell structure, Scott said.

Sheep's milk is high in zinc, which aids skin. It's lower in saturated fats than cows' milk, he said.

Most goat cheeses are lower in fat, calories and sodium; and they're higher in potassium, vitamin A, thiamin and niacin.

Scott has found it necessary to learn more about nutrition in the past six years since starting the product lines, although much of the knowledge has been learned "from the hip."

Nutrition is more important these days for consumers and for regulatory agencies

that monitor labeling, he said.

Cream from cows' milk separates and rises to the surface, but the milk of sheep and goats doesn't because their milk is naturally homogenized, Scott said.

Bass Lake Cheese Factory was started in 1918, and several of the recipes handed down have won awards. More than 80 types of cheeses, including specialty varieties, are produced. Some of the techniques have been shared with visiting cheese makers from other countries, especially Romania.

Staff members are trained in several aspects of cheese, including how it is made, he said. The store also features antique cheese-making equipment.

So many people request tours that a self-guided route has been created, consisting of photographs, a videotape and a huge viewing window at the factory.



■ A one-ounce serving of Colby goat cheese has 108 milligrams of sodium, while a similar portion of regular Colby has 171 milligrams.

Wisconsin Meadows, Inc.



Pure Sheep Milk Products

Dear Dairy Shepherds:

We at Wisconsin Meadows, Inc. are looking to expand our cheese business in 1995. If you are planning on starting your milking string this year, give us a call or write:

Wisconsin Meadows, Inc.
472 Random Dr.
Amery, WI 54001
(715) 268-4559 or (715) 723-2262

Better yet, plan on attending the Great Lakes Dairy Sheep Symposium and Wisconsin Sheep Conference starting March 30th. Stop by our booth to chat and experience Wisconsin's best sheep milk cheeses!

Producers & Processors,
Hal & Cyndi Koller
Greg & Diane Kaufmann

Hey Cheeseheads!

Cheese that goes BAA! The Ewenique cheeses of Wisconsin Meadows. If you haven't tried it yet, ewe'll wish you had! For a brochure of our cheeses please write to the address above or see us at the 1995 Wisconsin Sheep Conference. All our fine cheeses will be available for sale.

*Shepherd's
1995*

HOLIDAY GIFT GUIDE

Art of Door County™

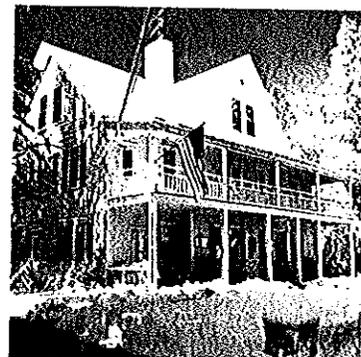
Send us your name and address to receive our new 28 page full-color mail order catalog of fine art prints, posters and limited editions of your favorite Door County landmarks, lighthouses and locations. Our newest and best catalog includes fine art notecards, framed and unframed prints as well as information about some of our Door County artists. Send for your copy today!



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1-414-868-3517

Sheep Milk Cheese

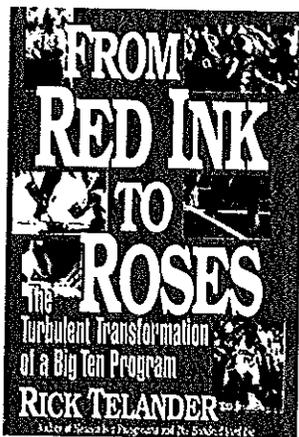
Wisconsin Meadows sheep milk cheese is not only healthy and nutritious but tastes delicious as well! Wisconsin Meadows offers exceptional gift boxes that will make "evenique" presents for your "Top of the Flock" holiday list. Handcrafted from 100% pure sheep's milk, the tasting is believing! Send for our free brochure and information about Wisconsin Meadows.



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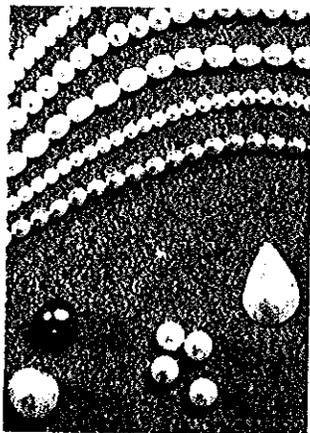


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QUESO BOLD - Carefully aged, handcrafted soft cheese. A perfect complement to bagels, muffins, crackers or bread.

GOLDEN MEADOW - a new entrant to our featured list, sure to please!

"Tasting is Believing"

WISCONSIN MEADOWS, INC.

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- A. Wisconsin Meadows Sampler - \$15.00
A sampling of four of our best-selling cheeses.
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A larger sampler of our cheeses with a 5th variety.
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Six varieties of cheese plus chocolate enchantments handcrafted using sheep's milk.

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City, St Zip: _____

Phone: _____

(Add \$6.50 per shipment for shipping & handling)

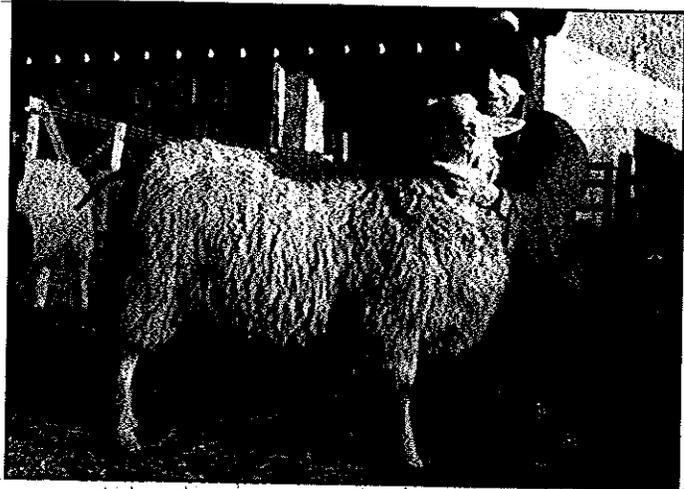
Wisconsin Meadows, Inc. Dairy Sheep & Sheep Milk Products

DAIRY GENETICS . . .

Our flocks are among the first in the United States to incorporate premier European dairy genetics. Last summer two East Friesian/Arcott Rideau rams became a part of our breeding program. These genetics hold the promise of :

- ✓ increased milk production
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GOLDEN KAAS - a golden blend of Ewezzarella and Colby

Tasting is Believing!

I like what you're doing! Please send me information on:

- Sheep dairying
- East Friesian cross rams for sale
- Cheese catalogue
- A sheep cheese sampler box (I have enclosed \$20 for 5 delicious cheeses)

Name: _____

Address: _____

Hal & Cyndi Koller
472 Random Drive
Amery, WI 54001
(715)268-7053

Wisconsin Meadows, Inc.

Greg & Diane Kaufmann
Rt 2 Box 125
Chippewa Falls, WI 54729
(715)723-2262

Farming can be earth-friendly and profitable - agricultural entrepreneurs show it works in television production

MADISON

WISCONSIN STATE FARMER

APRIL 14, 1995

PAGE 13

A new documentary from Wisconsin Public Television shows how sustainable agriculture holds the promise of higher profits, a cleaner environment and a higher quality of life for the people who grow our food and the people who eat it.

Covering New Ground: Wisconsin's Sustainable Agriculture airs Tuesday, April 25, at 8 p.m. and repeats May 2 at 10 p.m.

Farmers today are caught in a relentless squeeze between rising production costs and falling product prices, and that's forcing many of them to re-think their farming and marketing methods. In this WPTV production, farmers who have successfully employed sustainable agriculture techniques explain why they took the often risky route of changing their farming practices.

Recent studies at the University of Wisconsin-Madison show that farmers who find ways to cut back on fertilizer and pesticides actually make more money. And some have discovered a pleasant surprise - sustainable agriculture sells. Urban residents concerned about the

plight of the family farm are buying up new local products and supporting direct marketing enterprises that restore the connection between urban consumers and the farm.

In Iowa County, Paul and Cyd Bickford explain why they are moving 400 cows out of their state-of-the-art confinement barn and back to the pasture. Using portable fencing technology, the Bickfords show how rotational grazing reduced the headaches of managing their operation, drastically reduced their costs, and involved their children in the farm operation.

Outside of Chippewa Falls, Diane Kaufmann demonstrates two unique operations. Chickens grazing the hillside in portable pens are purchased in advance and picked up by customers on "chicken days." Kaufmann also keeps a flock of sheep for milking - a common practice in Europe, but just beginning in the United States. She sends the milk out for processing into various types of sheep's milk cheese, which she also sells on the farm.

Outside Lake Mills, corn and soybean

farmer Dave Schroeder outlines the steps he takes to cut down on chemical use and break the cycle of growing corn on the same ground year after year. He also talks about becoming a "worm farmer" by leaving crop residues on the soil to feed the worms. Schroeder says this practice replaces deep soil tilling because "the worms are doing it for us."

Near Amery, Margaret Swoyer and her family practice rotational grazing with their herd of registered Guernsey cows, demonstrating a technique that could turn thousands of Wisconsin's smaller run-down farms into profitable operations without a large capital investment.

Grazing expert and LaFayette County Extension Agent John Cockrell believes it could also be the key to attracting young people back to farming. The program follows the progress of Cockrell's

daughter and son-in-law who began dairy farming with no previous experience. By using rotational grazing, they are now milking 100 cows where the previous owners could only manage 40.

Near Ashland, Ken Raspolnik uses local crops to create products like salsa, mustard, apple butter and canola oil in his on-farm cannery. Raspolnik also raises rotationally-grazed sheep, powers his farm with a wind turbine, and rebuilds aging Finnish and Scandinavian log homes on his property, known as Golden Preece Village Farm.

Outside of Vinona, Richard de Witte and Linda Hailey sell individual "shares" of the vegetable harvest of Harmony Valley Farm. This fast-growing practice is known as subscription farming or CSA (Community Supported Agriculture). Each week, shareholders receive a box of

the freshest vegetables possible at less-than-retail cost. In return, the grower gets the peace of mind of selling the crop before it is planted. Shareholders are invited to the farm several times a year for a tour.

In Door County, dairy farmer Kevin Kichman explains the value of farmer-to-farmer networking for growers changing to sustainable farming practices. The Northeast Wisconsin Sustainable Farmers Network helps farmers exchange information and machinery, rapidly spreading practices that use less chemicals, fertilizer and money, says Kichman.

Oak Creek vegetable grower Will Allen shows how farmers on the urban fringe are working together to bring fresh, affordable produce into the inner city of Milwaukee. Allen heads a co-op that runs the popular Fondy Farmers

Market and points out the problems involved in what he calls the "dying art" of raising vegetables at the edge of the city.

In La Farge, Harriet Behar explains the phenomenal growth of the CROPP (Coulter Region Organic Produce Pool) co-op, North America's largest supplier of certified organic cheese and milk. CROPP also consolidates the vegetables grown on 35 farms for sale in urban centers. By opening up new markets, CROPP is bolstering the local economy and helping sustain small farms in the area.

Wisconsin Public Television broadcasts and produces programs that explore issues facing the people of Wisconsin on WHA-TV/Madison, WPNE-TV/Green Bay, WHWC-TV/Menomonee/Eau Claire, WHRM-TV/Wausau and WLEF-TV/Port Falls.

Sheep conference set for March 24-26

Madison

The Wisconsin Sheep Industry Conference, which each year attracts up to 1,000 participants, will be March 24-26 at the Holiday Inn-Southeast in Madison.

This year, the conference begins with the Wisconsin Direct Marketing Workshop on Thursday, March 24, with registration at 8 a.m. and the first sessions at 8:30 a.m.

Throughout the day, until 4:30 p.m., the workshop offers sessions on direct marketing of lamb and wool, including producing for the organic and ethnic lamb and specialty wool markets. Other sessions will outline the legal and ethical basis of a direct marketing business, and how to work with a meat processor to add value to a lamb carcass.

Diane Kauffman of rural Chippewa Falls will discuss sheep dairying and pasturing broilers as part of a farm diversification program and Mary Jarvis of Poplar will tell how sheep dairying adds income potential to her sheep operation.

Registration for the direct

marketing workshop is \$20 per person for Wisconsin Sheep Breeders Co-op members and \$25 per person for non-members.

The Sheep Industry Conference resumes at 8 a.m. March 25 and continues to 3:30 p.m. on March 26, with sessions covering everything from fencing to foot rot, predator control to pasture management and more on "niche" marketing of lamb and wool. An extensive trade show is open at 8 a.m. all three days.

On March 25, at 5 p.m. there will be a special benefit auction with proceeds going to the Make-It-Yourself-With-Wool program, followed by a pizza party for the kids and the Wisconsin Sheep Breeders Cooperative's annual awards banquet.

On March 26, from 8 to 9:30 a.m., the Wisconsin Sheep Breeders Cooperative will conduct its annual meeting. Special Youth Day sessions begin at 8:30 a.m. and state sheep breed associations begin their annual meetings at 9:30 a.m. and 11:30 a.m.

Live animal sessions on March 26 will give a management refresher mini-course for beginners and veterans alike and provide a demonstration of the new techniques of transcervical artificial insemination of sheep.

Registration for the Wisconsin Sheep Industry Conference is \$20 for WSBC members and \$25 for non-members, plus \$16 for banquet tickets. Fee for Youth Day activities is \$5 per person for lunch.

For more information, contact Dick Roembke at (414) 377-1491.

Diane a Believer in Future of Dairy Sheep

By Jane Fyksen
Regional Editor

Chippewa Falls

There's a soft-spoken woman giving strong voice to an emerging farm enterprise in Wisconsin. A pastor's wife from Chippewa County, Diane Kaufmann is a true believer that dairying might very well prove to be the saving grace for producers struggling to glean more income from their sheep. So, while husband Greg ministers to his flock, Diane is milking hers for all its worth — and hoping for converts.



Morning finds this energetic woman at SunDance Hill Farm, west of Chippewa Falls. The radio and milkers are on, and Diane's greeting is as cheerful as her bright, spankin' clean parlor.

It takes 15 minutes to run a group of eight in and out. Unlike some dairy sheep producers who run their ewes up onto a

platform to milk, Diane stands in a cement pit. "I like the pit," she confirms. "I think it's easier to train ewes, because you don't have to teach them to go up and down ramps, too." The one drawback is that initially her flock was afraid of the

pit. The first year, she had to hang a curtain so they'd come in. Fortunately, sheep have good memories. Just as they never forget what grain in a bucket sounds like, neither do they forget the milking routine from year to year.

At the "peak" this year, she was milking about 40 morning and night.

Lambs are left on the ewes to nurse for 30 to 40 days, and then it's Diane's turn. She milks them for 80 or 90 days — on the downside of the lactation curve (which peaks around 30 days). Although she misses that early milk, she doesn't have to buy milk replacer or face the intensive management required with immediately weaning newborn lambs.

Intensive, rotational grazing is the other emerging enterprise to which Diane is lending strong leadership. She's treasurer of the newly established Grassworks, Inc., a statewide organization unifying local grazing groups and coordinating Wisconsin's annual "grazing conference."

Like dairymen with cows milking on grass, this dairy sheep producer (one of the first in the state) is intent on profitability. Diane doesn't want to get too hung up on production at any cost. She feels it's critical that her fledgling industry doesn't "get started down that road" — one she perceives as a dead end.

She asks a lot from her pastures for an-

other reason, too. Diane and Greg only own 22 acres; they buy all their grain and winter supply of hay. They run a 60-ewe flock, though Diane's goal is to up it to 100 "good ewes," all suitable for milking.

What's more, the Kaufmanns rear roughly 1,000 chickens a year on pasture — 250 roasters that dress out to 7 to 8 pounds, and the rest 4 to 5-pound broilers. They've got 20 turkeys, too. When the young birds are feathered out, the Kaufmanns put 100 birds in 10X12X2-foot covered (though bottomless) pens. The lightweight pens are moved onto fresh grass every day, leaving behind poultry manure that fertilizes the pasture.

The Kaufmanns supplement with a 22% protein grain mix they've developed themselves. A pen of 90 roasters at eight weeks get around 18 pounds of the mix a day, in addition to the grass. Their mix is 60% corn, 28% soybean meal, with the rest made up of alfalfa meal, fish meal, brewer's yeast, kelp and probiotic (the latter, according to Diane, to aid digestion for better feed conversion, as well as reduce stress).

Broilers are ready to butcher in eight weeks; roasters in 12. Though taken to a licensed plant in Minnesota for processing, all of the birds are marketed direct from the farm — broilers for \$1.25 a pound, roasters for \$1.75 cents a pound. Diane admits their pasture-reared birds basically sell themselves. However, they're not interested in expanding beyond 1,000 birds: Sheep are Diane's first love.

She's been raising sheep since 1984, four years after they moved to the country. Diane grew up in Altoona and has a degree in theology from Valparaiso University, a Lutheran college in Indiana (though she now works full-time as a computer pro-

grammer). She "sheepishly" admits that she was the driving force behind turning their country property into a working farm.

growing up, she spent a lot of time on their Boyceville farm. "Kitty Grandma" Matilda Carlson had a strong influence

Diane's grandparents milked cows, and

See Kaufmann, page 2



Enterprise Emerging

Diane Kaufmann is a leader of a movement to expand sheep dairying in a state known for its milking bovines. Diane also raises poultry on pasture, taking an active role in unifying local grazing groups.

AGRI-VIEW

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Diane Sees Plenty of Potential in Sheep Dairying

Kaufmann, from page 1 on her granddaughter, who also prefers outdoor work to household chores. (A grateful Diane intercedes that it'd be very tough to milk if Greg didn't pick up the shopping, cooking and cleaning. Their 18-year-old son, Martin, is her relief milker, and 13-year-old Kalista pitches in, too.)

She chose sheep over cattle because of their size. As for milking them, Diane explains, "I had a mental image from Grandma's that a farm had to have milk-

ing animals. Goats didn't appeal to me, so when I heard about sheep dairying, it really intrigued me."

The Kaufmanns spent \$6,000 by converting a 15X30 area of an old cement-block shed to parlor and milkhous. That includes building, plumbing and electrical materials, milking equipment and hiring cement work done. Otherwise, Greg did the construction, wiring and necessary plumbing himself.

Her white-face flock grazes within a four-strand high-tensile electric perimeter

fence, in paddocks subdivided by three strands of wire. She also relies upon electrified netting. Pastures have been improved over the years; bird's-foot trefoil, orchardgrass, clovers and a New Zealand perennial ryegrass grow on her place. The past couple of years, she's been able to graze a neighbor's hayfields (destined to be plowed come spring). That's enabled her to rest her pastures in the fall, stockpiling to extend the grazing season — a practice particularly critical considering her small acreage.

Diane's flock is predominantly Dorset — Finn/Dorset, Booroola/Dorset — with quite a bit of Arcott Rideau blood, too. But this shepherd is really fired up about the newest addition to her mix of breeds — the East Friesian. It's a true "dairy" breed from Europe, which has a long tradition of milking sheep and a well-established industry — unlike the U.S., where the sheep industry has been focussed on meat production. The Kaufmanns, along with fellow dairy sheep producers Hal and Cyndi Koller, Amery, and the University of Wisconsin, imported part-East Friesian rams from Canada last year.

Typically, Diane lambs out a small group of ewes in February, using a purebred Dorset ram, to have lambs for the fair. The main flock, however, lambs in late April on into May. The flock had been on an accelerated lambing schedule, but when she decided to milk she knew she "wanted to do it on grass," so she switched to predominantly once-a-year lambing, when the grass is coming on strong. This year, everybody lambed on pasture, too. Within 12 hours, Diane was out there docking and tagging ears. Going whole hog with East Friesian, she didn't castrate any ram lambs this year. While she intends to build her own flock with the East Friesian ewe lambs; she has a good number of East Friesian rams to sell for breeding. Diane is also awaiting a 7/8ths East Friesian, imported ram now she's purchased.

Lambs have been weaned (at 30 to 40 days, when their dams go into the parlor) directly to grass. Diane honestly admits she's having "trouble deciding if it's a good idea or not." The East Friesian is a longer-bodied, rangier sheep than she's used to dealing with, and she can't decide if the lambs are too skinny or not. In a couple weeks, she'll start graining them.

With limited acreage, this producer admits it's a struggle to provide high-quality pasture for both growing lambs and milking ewes. She's not sure yet what she'll do when she reaches a milking string of 100.

Diane is putting a lot of stock in East Friesian. "Typical" daily production in the U.S. dairy sheep industry is around 1-1/2 to 2 pounds. In Europe, where the East Friesian is the premiere dairy animal, it's more like 4 to 6 pounds. Thus, introduction of this breed into the U.S. could more than double dairy-sheep producers' progress, by upping output and lengthening ewes' lactations. Furthermore, the breed should produce twins and triplets, she notes.

At the 42nd annual Sheep Day at the Spooner Ag Research Station, Aug. 27, station assistant superintendent Yves Berger will give a research update on the UW's quarter-East Friesian lambs. Diane is scheduled to be on the program, too, addressing "Sheep Dairying: A New Ag Industry in Wisconsin." She'll be sharing the podium with the Kollers, as well as other dairy sheep producers, Jim Morris, Mosinee, and Mary Jarvis, Poplar.

There are about a half-dozen farmers milking sheep in Wisconsin, with considerably more expressing an interest.

Kaufmann appreciates all the support this new enterprise is getting from UW sheep experts, like Dave Thomas and Yves Berger. Well over a year ago, they proposed setting up to milk sheep at the Spooner research farm to UW administration, but have yet to get a go-ahead. Meanwhile, the University of Minnesota is dismantling its sheep milking operation, with plans to move it to the Morris station in the west-central part of the Gopher State. UW sheep experts have also proposed that Minnesota's operation be moved to Spooner for a joint Wisconsin/Minnesota project.

The Kaufmanns — teaming up with the Kollers — have a new project of their own. Wisconsin Meadows, Inc. The two families formed a corporation in January this year, and are contracting with Bass Lake cheese factory at Somerset to process their milk — and that of two other Wisconsin producers — into several types of 100% sheep-milk cheeses. "We wanted

to add value to our product," explains Diane. (The other outlet for Wisconsin sheep milk is LaPaysanne, a cheese plant at Hinckley, Minnesota.)

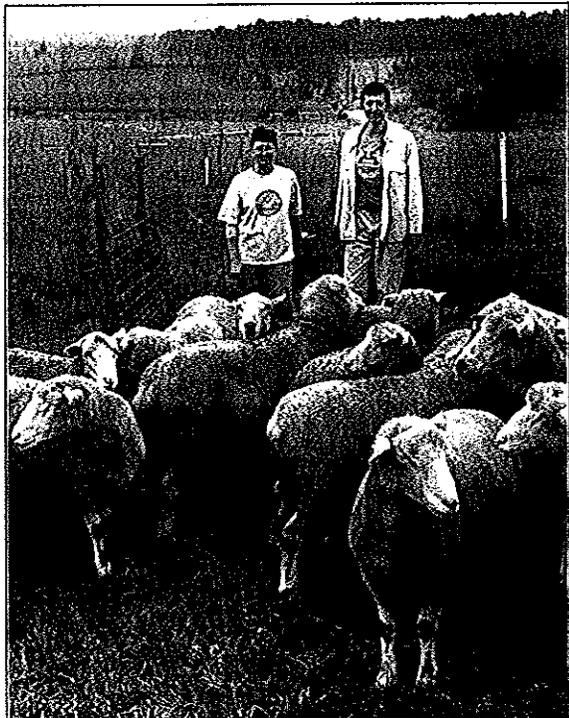
Diane's role with Wisconsin Meadows is more "nuts and bolts," while Hal Koller and her husband, Greg, are more into marketing. So far, Wisconsin Meadows sheep cheese are in upscale delis in Madison and Milwaukee, a restaurant in Michigan. They also ship cheese direct to customers, and feature it at festivals.

Diane says sheep dairying — which realistically promises milk prices in the ballpark of \$50 or \$60 a hundred — offers "tremendous potential for growth." Folks are "beginning to see that it's not a flash in the pan, and there's enough people milking now, that newcomers don't have to reinvent the wheel," she points out. Diane adds that Wisconsin's image as "America's Dairyland" bodes well for the state's fledgling sheep dairy industry, as does its existing dairy infrastructure (especially all the small cheese plants) and its pastures and forages.

Demand for producer milk outstrips supply, and "the markets are there" just waiting to be tapped for sheep cheese and other products, says Diane. What will ultimately make or break the industry, in her mind, is "genetics and production." Output of U.S. ewes simply must be increased to make it worthwhile to invest time milking twice a day. As in every other kind of farming, ultimately "profit" will dictate this one's future, Diane warns.

Diane works with seemingly boundless energy, for the future of not only sheep dairying but Wisconsin agriculture as a whole. She's been active in the western Wisconsin sustainable farming network and is a founder of the Wisconsin Women's Sustainable Farming Network. She was instrumental in securing a \$9,000, three-year grant from the state ag department's sustainable ag program. Diane invites farm women throughout the state to a conference the first weekend of November at a Bible camp near Chetek.

She edits the newsletter for the North American Dairy Sheep Association (NADSA) and was recently invited to be on the advisory board for the UW-Madison Center for Integrated Agricultural Systems (CIAS).



Tending Flock

Diane Kaufmann and her husband Greg converted an old cement-block shed into a parlor and milkhous for their flock of 40 milking sheep.

Hoping to find a niche in the dairy world



Staff Photo by Joey McLeister

Diane Kaufmann's operation near Chippewa Falls, Wis., is one of the state's top producers of sheep's milk. The high fat content of sheep's milk is especially good for cheese production. Kaufmann and others believe sheep's milk could someday save small endangered dairy farms.

New interest in an old product: sheep's milk

By James Walsh
Staff Writer

Chippewa Falls, Wis.

From the second floor of Diane and Greg Kaufmann's house, their Sundance Hill Farm is as pretty as its name. Surrounded by oak, elm and spruce, the 22 acres of gently rising hills, soft green pastures and rough-hewn fence seem like a postcard of old-time farming come to life.

Chickens roam free. Cats creep and loll about the farmyard. And right around 5 p.m., Diane Kaufmann opens the door to the small milking parlor.

Udders full, the animals eagerly trot to their stalls to be milked.

"Baaaaa," they bleat.

Baaaaa?

In the middle of America's Dairyland, where cows have ruled pasture and barn for generations, Kaufmann is one of a small group of dairy farmers milking sheep. Yep, sheep. And while sheep's milk production is just a drop in the bucket compared with what Flossie churns out day after day, Kaufmann and others believe sheep's milk could someday save small endangered dairy farms in the Midwest.

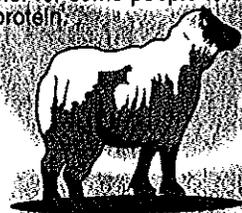
"I wouldn't be doing it if I didn't think there was a potential for it," said Kaufmann, massaging one of her 60 ewes' udders to coax more milk into the can. "There's a lot of room to grow."

The notion of milking sheep isn't unusual in other parts of the world.

Sheep continued on page 12A

Bullish on sheep's milk

Although sheep's milk contains more butterfat, it's higher in polyunsaturated fats, making it lower in cholesterol than cow's milk. It's easier for some people to digest because it contains higher levels of protein.



	Cow's milk	Sheep's milk
Butterfat content:	3-3½%	6-7%
Percent of mono-or polyunsaturated fat	35%	45%

Source: Alfa-Laval Co.

Vitamins and minerals

(as percentage of recommended daily allowance per liter of whole milk)

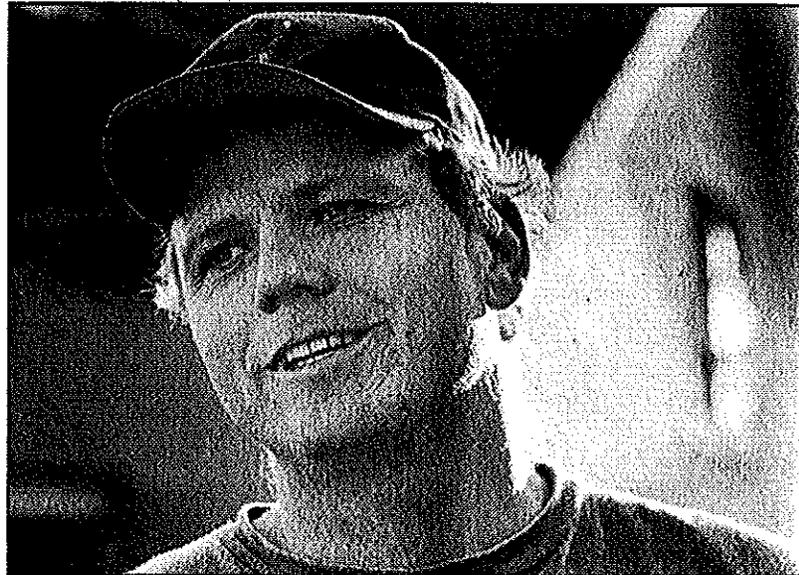
	Cow's milk	Sheep's milk
Calcium	170	254
Potassium	101	97
Sodium	40	31
Iron	5	9
Vitamin A	20	33
Vitamin E	35	79
Vitamin C	31	61
Vitamin B-12	77	280

Star Tribune Graphic/ Ray Grumney



Photos by Joey McLeister

Kaufmann and her sheep farm are getting a lot of media attention. Wisconsin public television filmed Kaufmann and her family at Prince Hill Farm. At right, Hal Koller is a sheep dairy farmer whose milk is marketed with Kaufmann's. He first started raising sheep for wool and meat. An article about milking sheep got him to try it.



Sheep/ Europeans make cheese from sheep's milk

Continued from page 1A

Sheep's milk has long been valued in Europe for the cheese it makes. It's higher in fat than cow's milk, so you can get more cheese from sheep's milk than from the same amount of cow's milk. Real Roquefort cheese, aged in caves in France, is made from sheep's milk. Half the feta cheese sold in the United States comes from sheep.

But, for some reason, the idea of milking sheep never came across the Atlantic.

"Our ancestors came here and left the sheep behind," said Bill Boylan, a University of Minnesota researcher credited with launching the sheep dairy industry in the United States about 10 years ago. "They began making the Model T."

But, Boylan said, "The potential is there."

Americans import about 40 million pounds of sheep's milk cheese from Europe a year, he said. He estimates the potential U.S. market at \$200 million annually.

Yet there are only 25 to 30 sheep dairy farmers in the United States. And there are only a few cheesemakers that process sheep's milk, including a former snowmobile plant in Hinckley, Minn. Boylan and other sheep experts say that pioneering producers must develop a "sheep dairy culture" in America.

"We're about where the French were 50 years ago. Right now, we just don't have the infrastructure," Boylan said. "What Americans are looking at is to get a toehold in the market."

What began when the University of Minnesota started milking a sheep dairy flock in 1984 has grown slowly. There are only three or four sheep dairy farmers in Minnesota, a couple in Idaho, a few in North Dakota and South Dakota and several in California and New England. The University of Minnesota's Rosemount experiment station milks about 150 ewes, Boylan said.

Wisconsin, which lost its status as top cow's milk producer to California last year, tops the country in the number of sheep's milk producers, with 10 farms.

Kaufmann said that her grandmother was a dairy farmer, but that she didn't want to own cows. Sheep, smaller and easier to handle, were a practical choice.

"We weren't going to have cows, and we didn't have the land or the money or the expertise for that," she said.

Hal Koller, a sheep dairy farmer whose milk is made into cheese and marketed with Kaufmann's, thinks more Minnesota and Wisconsin dairy farmers may make that choice. Considering that sheep's milk can sell for 75 cents a pound — compared with about 12 cents for cow's milk — and that the cheese can sell for as much as \$30 a pound, the prospects are attractive, he said.

Converting small cow-dairy farms in the Midwest to sheep-dairy operations may be a better financial alternative for farmers who now must compete with huge dairy operations of the South and Southwest, he said.

"I've had people come visit us. They're milking 150 cows, and they want to add a sheep herd," said Koller, who farms near Amery, Wis.

Koller's barns are clean, the milking parlor spotless. A computer in a barn office records the lineage of each of his 350 ewes, charts their milk production and analyzes the fat and protein content of their milk.

His border collie, Cap, efficiently and energetically herds sheep from pasture to the milking parlor that overlooks the Apple River. His guard dog, Rosie, lives with the flock and keeps coyotes and joggers at bay.

Koller, 35, tall and tanned, started raising sheep for their wool and meat several years ago. He still markets wool and lamb. But when he saw an article about milking sheep at the University of Minnesota, Koller proposed a new venture to his wife, Cyndi.

"My wife thought I was nuts," he said.

But it's starting to pick up, he said.

He and Kaufmann market their own line of gourmet cheeses, made at Bass Lake, Wis. And they're projecting gross sales of \$50,000 to \$100,000 this year. They expect to make even more money once U.S. sheep start making more milk.

American breeds produce only about 150 to 200 pounds of milk a year, Boylan said. So producers are trying to breed their sheep with the higher-producing East Friesian sheep from Germany. They can produce 600 to 1,000 pounds of milk a year.

Currently, the U.S. Department of Agriculture will not allow pure East Friesian sheep into this country, Boylan said. So breeders are importing East Friesian mixes from Canada.

Roger and Lucie Steinkamp, who make sheep's milk cheese, yogurt and ice cream at their Hinckley processing plant, said demand for sheep's milk is growing.

"Our biggest problem, really, is getting enough milk," he said. "We need people to come into it for the long haul."

The Steinkamps got into the business

after Lucie, who is from France, noticed that there wasn't any good sheep's milk cheese available in markets here. Drawing upon economic development experience they gained while working in Africa the Steinkamps opened their dairy about six years ago. Now their La Paysanne label appears on 18 to 20 different varieties of cheese, as well as "ewescream" and "ewegurt" in cities across the country.

This year they'll process about 80,000 pounds of sheep's milk, Steinkamp said, four times as much as last year. Sales also are four times greater than last year, he said.

"The only challenge is getting people to put it into their mouth," he said. "Then they love it."

Steinkamp, who had a booth at the Minnesota Heritage Festival in Minneapolis over the weekend, said consumers like sheep's milk products. It's more expensive than cow's milk cheeses and dairy products, he said. But it's lighter and lower in cholesterol. The milk also is naturally homogenized, and some say it's easier for humans to digest.

Koller said researchers are even looking at using sheep's milk for baby formula.

Still, Koller said, it's hard to get respect for milking sheep in cow country. "I've heard all the jokes," he said. "But it really has the potential to be big."

"In Wisconsin, the cow is always going to be king. We're just hoping to be a court jester."

Farmers milk sheep

CHIPPEWA FALLS, Wis. (AP) — In the middle of this state dubbed America's Dairyland, Diane and Greg Kaufmann milk 60 sheep on their 22-acre farm.

Mrs. Kaufmann believes milk from ewes could someday save small endangered Midwest dairy farms that are now mostly populated with cows.

"I wouldn't be doing it if I didn't think there was a potential for it," she said. "There's a lot of room to grow."

The notion of milking sheep isn't unusual in other parts of the world. It's higher in fat than cow's milk, so you can get more cheese from sheep's milk than from the same amount of cow's milk.

Mrs. Kaufmann's grandmother was a dairy farmer, but she didn't want to own cows. Sheep, which are smaller and easier to handle, were a practical choice.

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— Diane Kauffman
Local farmer

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Researchers are even looking at using sheep's milk for baby formula, but it's still hard to get respect for milking sheep in cow country, Koller said.

Farming with a twist: milking sheep, pasturing chickens

by Donna Sanders

Diane Kaufmann is a dreamer willing to work backbreaking hours while facing disaster with optimism. In other words, she is a farmer.

A city gal whose introduction to farming was visits to her grandparents' dairy farm near Boyceville, she was in her 40s before she was able to establish the dairy farm that she's longed for since she was a youngster. However, her dairy farm is distinctly different from every other dairy farm in Chippewa County; Kaufmann milks sheep. She is one of only five farmers in Wisconsin and some 25 in the nation who do so.

For Kaufmann, first came the land. When she and her husband, Greg—assistant pastor at Our Saviour's Lutheran Church in Chippewa Falls—returned to Wisconsin from Colorado in 1980, they bought a 22-acre hobby farm just west of Chippewa Falls, where they are members of Dunn County Electric Cooperative. The Kaufmanns believed this was a good place to raise their two children, Martin, 17, and Kalista, 12, but at that point milking sheep wasn't even a dream.

Kaufmann bought her first three sheep in 1984, and in her efforts to learn more about their care, she discovered a book called *Practical Sheep Dairying*. From it she learned that sheep had been milked for centuries. Possibly they had even been milked before cows. Cheeses such as Roquefort, feta, and Romano had traditionally been made from sheep's milk.

"My idea of a farm always had some sort of lactating animal on it, but cows were just out of the picture for me," Kaufmann said. "They were too big and required more land and equipment than I had...or wanted to have." To her, milking sheep made perfect sense; it was an animal she could handle, she had enough land to provide forage, and the milking season could be tied to the grass season.

While her husband had always known that Diano wanted

“*She was saying ‘dairying’; he was thinking ‘12 months a year and absolutely no way.’*”

to farm, his immediate reaction to milking sheep was negative. "The whole thing was that in my mind dairying equals 12 months a year, locked to the farm, can't go anywhere," he said. "And my whole goal is to be free to go when I want to take church youth trips. She was saying 'dairying,' and I was thinking '12 months and absolutely no way.'"

"When he realized it was a seasonal thing and you could adjust your season, then it was no big deal," Diano Kaufmann said. Instead of year-round, sheep are milked for about five months.

While milking sheep was just a glimmer of an idea, Kaufmann was busy attending seminars and workshops, learning how to care for sheep and manage her 14 acres of pasture to produce as much grass as possible.

Gradually her sheep flock increased as she gained confidence. At the same time, all the elements necessary for sheep milking began to take shape. First she attended some seminars on sheep dairying. Then a market for the milk developed in Hinckley, Minnesota. The cheesemaker there wanted to help establish sheep dairies, so he imported milking equipment from Europe.

Even though her market is a three-and-a-half-hour drive, the trip only has to be made a few times a year, as sheep's milk has the unique property of being able to be frozen without damaging its ability to make cheese. So Kaufmann puts it in the freezer and takes it to Hinckley when the freezer is full.

With a chuckle her husband recalled the reaction of other motorists to her driving down the highway with the frozen



Above: Kalista Kaufmann shows the negative results of a mastitis test, which must be performed regularly if the sheep's milk is to be sold. Below: Diano Kaufmann milks sheep on her farm near Chippewa Falls, where University of Wisconsin-Madison professors have studied her methods of grass management and sheep milking. The Kaufmanns are Dunn County Electric Cooperative members.



"About three years ago the whole thing started to gel," Kaufmann said. "It took two years to get the barn adjusted and the [milking] parlor built." Drawing on family strengths, she got Greg involved in the construction.

"Once it got set up, it was her baby entirely," he said. But the children help. Kalista enjoys working with the animals, and Martin can be counted on to help out when necessary.

To those familiar with cow-milking facilities, Kaufmann's setup looks like a miniature, almost toy-like version. Her parlor holds eight sheep in about the area it would take to house two cows. Her milking equipment looks like that used for cows, but again it's a miniature version.

In the summer of '92 she milked for about three weeks—just long enough to become familiar with the equipment and to train the ewes to come in the barn. They are easily lured into the parlor with their greed for corn. Last summer she milked 45 ewes. She would like to build her flock to 100 ewes. But rather than just increase her flock size, Kaufmann will do selective breeding to improve the ewes' milk production.

"Right now I am milking the equivalent of beef animals," she said. "The U.S. doesn't have any dairy breeds as such." She is getting about one pound of milk each milking, whereas European dairy breeds get about three pounds each milking.

She almost glows with excitement when she describes her breeding program and how she plans to import European genetics when they become available. Already she has imported some Canadian rams with better milk-producing genetics, but she didn't like their flighty nature and wants to improve disposition as well as increase milk production. Her long-term goal is to produce breeding stock that will be in demand by other sheep dairymen.

Besides selling lambs, wool, and milk and working full time as a computer programmer for an Eau Claire legal firm, Kaufmann has developed another agribusiness. She raises pastured chickens, again making intensive use of the pasture she has available. The chickens are contained in portable pens that are moved each day. Their manure contributes to the grass cycle that sustains the sheep, and they can feed on the fresh grass without running wild.

The product is a leaner, tastier chicken, for which her customers are happy to pay well above market prices. Starting in 1989 with just 200 birds, each year she increased production until this past summer she raised 1,000 chickens.

While she does have some trouble finding enough customers to direct-market her lambs, she has no trouble finding customers for her chickens.

"The warm fuzzies you get from people who buy the chickens really make it worth the labor," Kaufmann said. "People just really appreciate those chickens. Our older customers tell us they taste like chickens used to taste."

In 1980 the Kaufmanns bought a hobby farm, but now Sundance Hill Farm is definitely a working farm—with

Kaufmanns' sheep/poultry pastures do double duty

Chippewa Falls

Greg and Diane Kaufmann have been grazing dairy sheep on their 17 acres for several years, but they are "still figuring what is the right amount of sheep for this amount of land."

Established in 1980, the Kaufmanns' Sun Dance Farm has been the site of a rotationally grazed Eastern Friesian lamb operation for four or five years. The Eastern Friesians are a European dairy breed.

With 60 ewes and 90 lambs, they think their steeply-sloped land could take even more sheep pressure. "It's a balancing thing," Mrs. Kaufmann said.

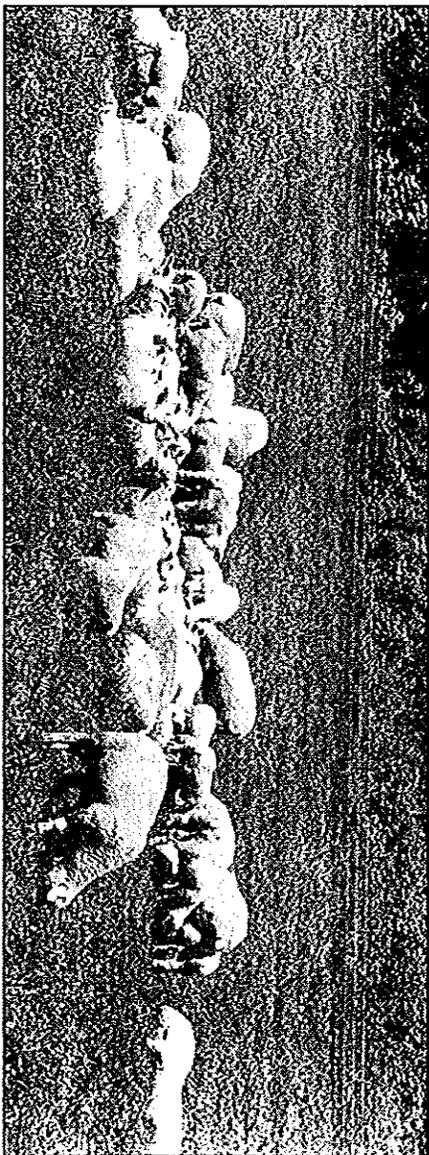
This balancing principle also applies to which age group needs the most good-quality feed first — the ewes or the lambs. "They both need good-

quality feed," she told a large group gathered for a pasture walk on their farm July 16.

But with the lambs, there's no "time crunch with lambs being ready," they're gaining slower," Mr. Kaufmann said.

The Kaufmanns, who live atop a hill outside Chippewa Falls, graze dairy sheep and poultry on the steep inclines leading from their home. "We're real fortunate with the lay of the land," Mrs. Kaufmann said. "We've got slopes going both ways, so water is no problem."

In the back pasture, which is reached by a tree-lined path, they have birdsfoot trefoil, which is palatable and nutritious, orchardgrass, clover and other grasses. Most of the pasture came up on its own volition, Mrs. Kaufmann said. The Kaufmanns own no tractors or



Grazing dairy sheep: Greg and Diane Kaufmann graze 60 dairy ewes and 90 lambs on 17 acres of pasture near Chippewa Falls, in combination with their 1,000-head chicken grazing operation. They admit that their rich, rolling pastures could probably hold more sheep than it now has, but they're still figuring just the right numbers for maximum efficiency.

Photo by Heidi Clausen

farm equipment.

"It makes a nice, diversified pasture," Mrs. Kaufmann said. Lambs are weaned at 30 days and go directly to grass.

"We like to graze as long as we can," she added. They can usually continue the process through September. Last year, they grazed their dairy sheep to Dec. 1.

The Kaufmanns sell ram lambs to market at 90 to 110 pounds, or five to six months of age. "We want them to finish out on grass, not any grain," she said.

The fencing around the pasture still "needs work," the couple says. A four-strand, high-tensile fence is being used, but

the "sheep don't respect it, and it breaks." They may go to nylon poly-wire. The back pasture has a 22-inch galvanized woven wire with two hot wires on top.

"We've been real pleased with it because it does keep the lambs in," Mrs. Kaufmann said. She wants lambs to stay in the outside perimeter of the paddocks, at the very least.

Wooden fence posts line the alley leading down the hills to the pastures. The slope of the land helps get pressure down the hill for the waterer, which consists of a barrel and 1-inch line waterer. An ultraviolet stabilized black pipe is used because it does not break in the sun, Mr. Kaufmann said. Also,

the black color helps it fight freezing.

The pipe comes in 100-foot and 400-foot lengths and makes hauling of water to the sheep obsolete on the Kaufmann farm.

Milk from the Kaufmanns' dairy sheep milking parlor goes for cheese. In recent months, they joined forces with Hal Koller, Amery, and formed "Wisconsin Meadows," which sells four varieties of cheese and does its own marketing.

A bulk tank used for processing the chickens performs double-duty with the sheep. The chickens are put on ice in the bulk tank, followed by frozen sheep's milk in plastic containers. Sheep's milk, which can be frozen, is high in solids.

OUR PLACE

WISCONSIN MEADOWS, INC.

by Hal Koller and Diane Kaufmann



Diane Kaufmann and sheep at Sundance Hill Farm

photos courtesy Diane Kaufmann

Milking sheep is an activity that predates recorded history. Today over seven million tons of milk are produced annually throughout the world. While this seems like a lot of milk, very little milk was produced in this country. The U.S. imports over 43 million pounds of sheep milk cheese each year, demonstrating that a viable market exists. Sheep dairying has a place on many farms and landscapes: on a small farm that might not be able to support a large animal enterprise, on marginal crop lands and pasture lands that can support sheep but could never support large animals, and with small cow dairy operations that have been displaced by large high-production dairies. Sheep dairying is relatively inexpensive to set up and easy to run. It is starting to show signs of becoming an added-value industry that may enable those who want to make a living from sheep the ability to do so.

WISCONSIN MEADOWS

In order for sheep dairying to become a viable enterprise in the U.S., domestic sheep's milk products must be of the highest quality and take advantage of the high nutritional

value of sheep's milk. With this in mind, late 1993 saw a new venture known as Wisconsin Meadows, Inc., formed by Willowbrook Farms (the Kollers) and SunDance Hill Farm (the Kaufmanns). Wisconsin Meadows, Inc. is a marketing corporation to develop and market specialty sheep milk products. Collaboration and pooling of time and resources will enable our two farms to hit the market with more product and more "energy." It is our desire to add value to our own milk and to increase on-farm income.

We are very excited about the reception our cheeses have had in major metropolitan deli's and in cheese competitions at the Minnesota State Fair. Wisconsin Meadows, Inc. currently produces six varieties of sheep milk cheeses. All the cheeses are made by master cheesemaker Scott Erickson at Bass Lake Cheese Factory in Somerset, Wisconsin. Current markets include specialty food stores, cheese shops, high-end food stores, natural food stores, and mail order sales. Taste testing at numerous sheep/wool and gourmet food festivals offer us direct feedback from the consumers and direct market exposure.

As the demand for Wisconsin Meadows' products increases, it is our intent to expand our farms' production and eventually purchase milk from other producers, ultimately providing niche markets and added-value to other small farm enterprises. With this agripreneurial effort in mind, the following are descriptions of both farms and the sheep dairying management involved on them.

Greg and Diane Kaufmann of SUNDANCE HILL FARM

SunDance Hill Farm has been producing lamb and wool since 1986. In 1990 we added pastured poultry and in 1992 we began sheep dairying. We find the two species complement each other. Our farm has been moving towards a grass-based system of management for the past 5 years. We have 14 acres of improved pasture and 7 acres of house, outbuildings, woods and unimproved pasture. The pastures include Birdsfoot trefoil, orchard grass, Ellett rye grass, other grasses, some alfalfa, and clover.

We have watched the pastures improve as our grass management has improved. Part of the improvement has come from diversifying the species. Since we added pastured



East Friesian cross lambs born January 1994.

poultry, the pasture fertility has increased. This past year we carried 1000 broilers, 50 ewes and 97 lambs on the 14 acres. We did not take any hay off this year and were behind the grass growth on about 7 acres for most of the summer. The ewes came off pasture to their winter woodlot area on November 20. Four acres have been saved for early spring grazing and pasture lambing.

The ewes achieved a 206% lambing percentage in 1993. The breeding consists of a Dorset background with Dorset, Booroola Dorset, and Arcott Rideau rams used on the flock. In our experience, the Dorset has a lot to offer the dairy shepherd, with her gentle disposition and calmness in the parlor. This year we are using an Fl East Friesian/Arcott Rideau ram to increase milk productivity, prolificacy and size. His first lambs are on the ground and look great! We are still milking the equivalent of a beef animal, although we saw great promise in the Arcott Rideau ewe lamb cross which came through the parlor last summer. We anticipate even greater future yields as we continue to select for productivity.

Most of our lambs are direct-marketed to local consumers. Our region has not been a traditionally heavy lamb-eating area, so it can be a search and find mission to locate individuals who enjoy eating lamb. We are finding that by offering both chicken and lamb, each brings in new customers for the "other" meat. There is a lot of interest by consumers in finding grass-fed lamb and poultry whose diet does not include any

medications or drugs. We have not marketed our meats as organic because of the purchased feed we use. That will be a direction we will be pursuing. Most of our consumers are primarily concerned with what the critters are eating and how they are raised. They want to come out and see for themselves how we farm. We encourage this (and even require it in the case of picking up the chickens) because too many urban people are disconnected from the land (80% of Americans are three generations or more removed from the farm).

"Word of mouth" is definitely developing in ways that surprise us; we get calls from people we have never had any contact with who want to buy our products. We are still learning a lot about marketing and know that it takes time to do a good job with it. We find a lot of satisfaction

in producing a good product and selling it directly to our customers.

Hal and Cynthia Koller of WILLOWBROOK FARMS

Willowbrook farms is located near Amery, Wisconsin, along the Apple River. The operation consists of 150 acres of cropland and 100 acres of pasture. Crops grown include hay, corn, and small grains. Some pastures—34 acres—have been improved with Birdsfoot trefoil. We do some rotational grazing with portable electric fencing and permanently fenced pastures. An old turkey farm pasture comprises 25 acres. We graze open ewes on this for the duration of the growing season. The pasture consists exclusively of crack grass. Because of the high nitrogen levels in the soil, we usually cannot see the ewes until mid-summer!

Our cropping philosophy is to plant only enough corn for sheep feed, enough straw for winter, and as much hay as possible, to store for dry years or to sell. We keep a field in corn for only one year, then seed in alfalfa or trefoil. We accomplish this with two tractors (50 and 60 HP), a three-bottom plow, a 10-foot disc, a 10-foot grain drill, a haybine and a round baler. Other equipment necessary is borrowed or bartered from neighbors. This keeps capital investments at a minimum.

Our buildings consist of a 60 x 80 pole barn for lambing and finishing lambs, an 18 x 100 pole barn for hay storage and small groups of sheep, a 28 x 36 milking parlor/milk room, a 32 x 80 loafing barn, and an old 20 x 40 dairy barn, also used for hay. With cold winter lambing in



A Friesian cross Dorset ram lamb. One of the first born in the United States.

northwestern Wisconsin, these buildings come in handy!

We have had sheep since 1983, and sheep dairying since 1989. Determined to make the farm pay, we explored the little bits of information available on dairying, mainly from the University of Minnesota. We became the first sheep dairy business in Wisconsin. We have since been joined by six other brave souls in this state, and several more are starting this year.

Our flock has 250 ewes: 150 polled Dorset and 100 Dorset crosses. We are also managing 100 purebred Hampshire ewes for another party. Our crosses are a mixed bag of at least 50% Dorset, with a prior emphasis on developing a Dorset/Romanov cross to increase hardiness and lambing percentages. We also have the intent of increasing milk production and out-of-season breeding capabilities. In 1993 we purchased a 57% East Friesian/43% Rideau Arcott ram to bring some of the first true dairy genetics into this country. Early February saw the first lambs drop, and in early summer some will be offered for sale, in conjunction with those at Sundance Hill Farm. Our sheep will also be on display at the World Sheep and Craft Festival in Bethel, Missouri, on Labor Day weekend.

SHEEP MANAGEMENT

Our flock is on an accelerated lambing program. In sheep circles, added labor and management costs for accelerated lambing has been an important concern. With sheep dairying this problem is minimized; the sale of milk more than covers the cost of lambing extra lambs. Until two years ago, we proceeded on a fall, mid-winter, and spring basis; now we accelerate to lamb periodically

throughout the year. With dairying and better feed management, we have extended lactation periods and increased conception rates. This has ranged from 30-60% of those exposed. The best conception rates are for ewes whose lambs have been removed and are being milked.

This year we are reevaluating our system for time and resource management. We have found that late fall milking is not very productive, yet summer months tied up in the parlor take away from crop production. Lambing and milking year-round evens cash flow and maximizes facilities. We just have to find the right mix of lambing and milking.

To maximize lamb and milk production, ewes must be fed properly. Letting ewes lose weight in open or dry times does not work with accelerated lambing and milking. We feed to maximize the potential of both the ewes and the seasons, using four basic rules:

- 1) Always keep ewes in good flesh.
- 2) Feed according to available feeds. In spring and summer (and even into fall), utilize pastures.
- 3) Supplement forages with grain if necessary.
- 4) If in doubt on what is necessary, look at the ewes and refer to rule 1.

Ewes are fed good hay or grass year-round and, if environmental conditions dictate, during gestation a 12% protein ration consisting of cob corn and 33% pellet. Once ewes lamb, the grain ration is slowly increased to a 15-16% protein level, while the fat content is reduced to 8%. This increases milk production and extends lactation.

Lambs are weaned at 30 days; prior to that, they are exposed to a creep ration of 18%, consisting of rolled corn, soybean meal, sheep balancer pellet, molasses, mineral, and salt.

This early weaning gets the ewe into the parlor at her peak milk production, but intensifies management of the lambs to ensure their continued growth. It is difficult to look at a 25 lb. lamb and consider it old enough to do without mom. Proper feeding and a clean, well designed creep area are important.

Although 30 day weaning is the most common dairying practice, it is not the only method. Weaning can be done at 45 days or day one. We experimented with one day weaning in 1991, and had fair success with increased milk production per ewe. However, labor with the lambs was much more challenging.

MILKING

When weaning takes place, the lambs are left where they were raised, and the ewe is moved to the parlor or the loafing barn where she is housed. We try to wean in the afternoon and milk for the first time the next day. This minimizes stress from being weaned without adding the stress of first entering the parlor until 12-15 hours later. Hay is always available to get the ewe's mind on feed, rather than lambs. We wait until we have at least 24 ewes available to enter the parlor; this is the number we feel makes it worthwhile to fire up the equipment.

It takes three days to a week for new ewes to understand the milking system. Prior to entering the parlor, the ewes are let into a waiting area. This allows us to put hay in the loafing barn. It also gives the ewes time to defecate before entering the parlor. The better the hay they receive after the milking, the happier they are to get it. Most ewes are anxious to move to the waiting area after only a few milkings.

It is important to remember that the single reason that the ewes enter the parlor is to get fed. Therefore, make sure your feed is palatable. If they are greedy and like the food, they will stampede to get into the parlor.

At the entrance is a guillotine gate and a 35 foot chute. This allows us to let 12 ewes in at a time, matching the number of self-locking stanchions on the platform. Keep the flow of sheep as carefree as possible. Added stress not only makes the experience unhealthy for the ewe, it also adds unnecessary time and unpleasantness for the milker. It has taken a couple of years of trial

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proper measures must be taken to extract the milk. The number one rule is cleanliness. Clean sheep give clean milk, which makes for better taste.

Bacteria is controlled by the way the milk and equipment is handled. We wash and sanitize all equipment after each milking, then resanitize it prior to milking. We make sure that all equipment is thoroughly dry before milking; water is a great home for bacteria. Any surface that milk might contact should be sanitized regularly. We filter the milk as it enters the stainless steel buckets to prevent dirt and debris from entering. In addition, there are spigots at the base of the buckets, allowing them to empty without repouring or rehandling the milk. We put the milk into sterile plastic bags, which are then placed in a 4-gallon lidded plastic bucket. The buckets are then cooled. We used to cool the milk in the bags in a bulk tank, but felt this was energy inefficient. The milk is going directly into a freezer this year. It is very important that the milk must be cooled as quickly as possible after milking. The freezer maintains at least a -10° F temperature.

Mastitis and high Somatic Cell counts (SCC) also cause reduced milk quality. Mastitis causes the biggest loss of production in a dairy flock. Some causes include: stress, dirty/wet bedding, unclean equipment, improper operation of milking equipment, improper cleaning of teats, allowing infected ewes to contact clean ewes.

To minimize the spread of mastitis:

1) Keep loafing barn and waiting area freshly bedded and dry.

2) Lime ewe walkways that go in and out of the parlor.

3) Keep teat cups clean. Do not milk infected ewes with clean ewes. Milk infected ewes last.

4) Set vacuum pump at 11 lbs. mercury. Set pulsator for 120 pulses/min.

5) Wash teats with a mild udder wash solution. We use an iodine base. All teats should be dried immediately and completely. We do not wash every milking; if teats are clean, washing may promote problems. We do wash our hands with sanitizing solution before each new parlor group.

6) Post dip all teats after milking to protect the teat canal. There are many teat dips on the market; we prefer an iodine base.

7) Treat infected ewes with an antibiotic. Consult your vet for treatments. We use LS-50.

8) Test ewes periodically with the California Mastitis Test. If possible test ewes for production and SCC via the local Dairy Herd Improvement Association.

9) Lower stress in handling.

INCREASING PRODUCTION

Measurement of the ewes' milk production is the most important part of managing a dairy flock for success. The most likely way to improve flocks in this country is via selection. Dairy ewes in Europe are 4-5 times more productive than here, but we have made some gains in just four years. Currently, we have 120 ewes in parlor, and the last test had a flock average of 1.2 litres (2.6 lbs.)/ewe. However, we have probably sent that many ewes "down the road" to reach this point.

We choose ewes with well-placed teats and evenly formed udders. Equally important is attitude; the ewe must be docile. A ewe with average production and a long lactation period is superior to one with a high daily average and a short lactation. Some rams have been selected from higher producing ewes, and some have been purchased from outside. Importation of a European dairy sheep (i.e. the East Friesian) will increase daily production. We chose a Romanov to increase multiple births, with the idea that this would signal a higher need for milk production in the ewe.

Although we have seen an increase in output every year we have milked, only a small part is due to genetic improvement. It is largely due to better management and elimination of ewes not contributing to the dairy. Only in the last year have we seen the results of picking lambs based on milk production. The two year olds entering the parlor are showing a marked increase as a group.

THE FUTURE OF SHEEP DAIRY GENETICS

It is fair to say that the sheep dairy industry is still in its infancy in the U.S. Certainly a barrier to a profitable dairy is the low milk production per ewe of most American sheep. This is why the introduction of East Friesian genetics is so exciting to us. They will be big-framed animals with good wool quality, prolificacy, and heavy milking

Your Last Chance!

The price of Small Farm Today magazine will change on July 1, 1994. The newsstand price will increase from \$3.50 to \$4 per issue. This means that one year subscriptions will change from \$18 to \$21, two year subscriptions will rise from \$33 to \$39, and three year subscriptions will rise from \$45 to \$54.

Why?

We have worked hard to hold the line on our production costs, but the cost of doing business has risen dramatically in the five years since our last increase. We want to continue to provide you a quality magazine. After examining all our options, a small rate increase seems to be a better choice than sacrificing quality or pages.

What does it mean to you?

July 1, 1994 is only a few weeks away. This is your last chance to renew your subscriptions at the old rate. As a special incentive, we are offering our index—a \$3.00 value—free with any subscription/renewal received before July 1. If you have a friend who has been thinking about subscribing, please let him know about this upcoming change.

Thank you!

I want to personally thank all of our subscribers for standing by us for the last ten years. We appreciate your support, your knowledge, your farms and your dreams. This magazine exists for you. Let's continue to grow together for the next ten years and beyond!

Ron Macher
Publisher/Editor
Small Farm Today

why the introduction of East Friesian genetics is so exciting to us. They will be big-framed animals with good wool quality, prolificacy, and heavy milking ability. Following are some tidbits of information regarding the East Friesian gleaned from Olivia Mill's book, *Practical Sheep Dairying*:

- The Friesland ewe is considered one of the highest yielding ewes in the world.
- This "Holstein of the sheep world" has been found to improve almost any breed it is mated with.
- The Friesland can breed throughout most of the months of the year.
- The Friesland is a big-framed ewe.
- The wool is in great demand by hand spinners who find it exceptionally easy to spin and weave.
- A Friesland ewe in her second to sixth lactation can be expected to give 3-4 litres a day for the first 90 days. Larger-uddered or mature ewes may give more and milk longer

ending up with a lactation yield of 700-800 litres (154-176 gallons).

Producers who have no interest in sheep dairying may still be interested in an ewe who will produce multiple births and have enough milk to feed those babies without sacrificing lamb carcass and quality. The future looks bright for this breed.

The East Friesian cross rams which our farms used this past year for breeding are F1 rams, with the other cross being Arcott Rideau. Arcott Rideau was developed in Canada as a maternal breed to incorporate many of the advantages cited above for the East Friesian. In fact, 13% of the Arcott Rideau is an East Friesian component added for higher milking ability. Purebred East Friesian semen from Switzerland was used to inseminate a flock of Arcott Rideaus. Ram lambs from this breeding were brought into the U.S. last summer. In the future, it appears that it will become

easier to import dairy genetics from overseas, as a protocol for importation is in the final stages of approval by APHIS and the USDA. This is indeed good news for the sheep (dairying) industry. While no one has a crystal ball to accurately predict the future, our feeling is that both commercial sheep and sheep dairy farmers alike will be gratified with the progress this dairy breed offers.

For more information, contact Hal and Cyndi Koller at Willowbrook Farms, 472 Random Dr., Amery, WI 54001; (715) 268-7053 or Greg and Diane Kaufmann at SunDance Hill Farm, Rt. 2 Box 125, Chippewa Falls, WI 54729; (715) 723-2262 •

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SHEEP DAIRYING IN THE MID WEST STATES OF AMERICA

March and 30° below. I left lovely lambing weather in England to be plunged into alternate hard frost and snow melt. At the invitation of Professor Dave Thomas of the University of Madison, Wisconsin, I was to speak at the first Great Lakes Dairy Sheep Symposium. Sponsored by the Babcock Institute for Dairy Research, three overseas speakers had been invited. Dr. Francis Barillet from Toulouse, France, Dr. David Henderson from Moredun, Scotland and myself.

To put the record straight, I have been going backward and forward to the States to promote sheep dairying ever since 1982, when Judge Clyde Burch held his Sheep and Crafts Festival at Bethel, Missouri on Labor Day weekend and started the first American Association to promote the milking of sheep. He had Tunis sheep, at that time the best bat to milk since almost all the other breeds had been systematically programmed to dry off the moment the lamb was taken away. Between then and a couple of years ago efforts to promote sheep milking have been hard work. The reason? No suitable sheep.

After several abortive attempts to persuade the USDA to allow the importation of better breeds to milk, the Rideau Arcott was released in Canada from an Experimental Station and with the small percentage of Friesland blood in it, presented overnight a whole new ball game. It could be imported from Canada without problem. Shortly after, Friesland semen was allowed (after due quarantining etc. of the rams) into Canada and Ian Clark and Hani Gasser quickly took advantage of this so that now there is available in the States a small amount of half Friesland sheep, slowly moving up in percentage year by year to full blown one hundred percent pure Friesland Dairy animals.

I will not describe the agony along the way to reach this point. IN 1987 the fourth of the Sheep Dairying Associations in the United States was formed called the North American Dairy Sheep Association, NADSA for short. Under the skilled and well informed direction of Roger Steinkamp and his wife Lucie, who being French had a good idea of what was needed, together with a brave bunch of pioneers, they set forth to milk what sheep they could find and make and market sheep cheese, a virtually unknown product in the Mid West States of America. They were lucky to be supported by Dr. Bill Boylan of the University of Minnesota, St. Paul's, who in his work as a geneticist, was milking and measuring the yields of various breeds of sheep to evaluate them for lamb rearing. He had surplus milk and so really started the present industry.

On this occasion, I had been invited to go a few days early to visit some of the farms that were setting up to see if I could give them some practical help since few of them had ever seen sheep being milked before and it was very much a case of "the blind leading the blind". There were plenty of problems.

Perhaps the most common and the most bewildering was the extraordinary lack of any knowledge of sheep nutrition. There is an excuse for this. Sheep meat in the States is really hardly considered as a commodity. Almost impossible to find lamb in shops and most people said they would not buy it until they had tasted it in a restaurant,

where it was usually the most expensive item on the menu. Knowledgeable sheep raisers had tried to market their lambs to British specifications only to be told by the Meat Packers (equivalent to our slaughter houses), that they were not fat enough and that they must go to a feed lot to reach the most economic weight - for them - to slaughter. Hence the American housewife, who is far more fat conscious than we are, was totally put off buying lamb meat which when cooked had to have half the portion cut off and left on the side of the plate. With this sort of training, most of the sheep farmers believed in barley or corn, plus some soya as the only feed suitable for sheep. Higher protein was actively discouraged as being too expensive, or if they had cheap high protein it was not balanced with energy. Copper toxicity was a problem, not necessarily because of the wrong mineral mix, but the build up in the livers of the ewes when housed all winter and then stressed. They have a very short summer, mid May to mid September. The rest of the year, although bright and sunny is below freezing point. Animals have to be fed and housed for at least six months or more.

So it is not surprising that the sheep industry in the U.S. is in rapid decline, down a million head from last year from 7.2 million to 6.4 million with Texas being the only State having a reasonable number of sheep at 1.3 million. They say that 1995 is a record low.

Other common problems related to the lack of plans for sheep parlours, since most of these Homesteaders who wanted to milk sheep also had excellent building skills and would be happy to construct everything they needed themselves. They were held to ransom by the few that knew. They seemed unable to visualise alternative, cheaper ways of getting the sheep milked. Especially as they might not find in a year or two sheep milking was for them and did not want to spend a lot of money on a system that they might not be in use for long.

The coming of the Friesland genetic material had them all convinced they were not going to succeed. Maybe they will, but there is more to

sheep dairying than just good sheep. Milk hygiene, milking technique, mastitis control and above all feeding all has to be learnt painfully by trial and error.

The easiest way to market sheep milk in the States is to an established cheese dairy. At Bass Lake, just over the Minnesota border into Wisconsin, Hal Koller had persuaded Scott Erikson, an established cheese maker to make his sheep milk into cheese as well as the cow and goat he already made. The place was ideal as apart from the cheese making area it had an attractive shop where cheeses from all over the world were sold alongside the 45 types made by Scott himself. There used to be 2,800 cheese plants in Wisconsin, which they claim had it been a country and not a state would be one of the greatest cheese producers in the world. Now depleted to 200 plants and most of them automated, it was a rare find to come upon a dedicated cheese maker who cared about making small amounts of speciality cheese.

He was making Goat Jack when we arrived and would be making sheep cheese the next day. All the milk is pasteurised and he claimed he could put back any flavour he liked by getting different starter cultures. Scott was an impassioned enthusiast for cheese and although the packaging was far from the most attractive I have ever seen, the taste of some of them was good. The range of sheep cheeses being marketed under the name of "Shepherd's Pride" had such names as "Golden Kaas", "Dorset Romano", "Cordero Gold" and "Ewearella" made to a Mozzarella recipe. To my taste "Deronda" was the best. They also made some Sheep milk Manchego and "Quesco Fresco" a spreading cheese designed for cocktail biscuits. It seemed an interesting fact that according to USDA figures the importation of Pecorino cheese from Italy has doubled 1980 and 1990, while that of Roquefort has halved. This may show some trend in taste of the American cheese lover.

One farm we visited wanted to be Organic. but had little cultivatable land and would not be able to use wormers. This problem might be



Sheep Cheeses at Bass Lake

overcorn. . . . nbs left the farm soon after birth, provided . . . other farmer, who normally ran a feed lot, could be persuaded to take the lambs earlier and feed them on an automatic lamb bar. Milk replacer is expensive, but I felt that was only because so little was bought and a deal could be done provided a guaranteed quantity was ordered.

On several farms I saw the part Friesland animals, but they did not seem to be producing outstandingly more milk yet. They were easy to spot with the finer heads, barer udders and louder voices. At the Spooner Research Station, Yves Berger, a Frenchman from the Burgundy region of France, was hoping to set up a trial milking various crosses of sheep to evaluate the best of the soon to be available European breeds so that a North American Dairy ewe can ultimately be developed. The big problem has been the lack of incentive to clear the flocks of O.P.P. an equivalent, but not entirely similar disease to Maedi Visna. It would be pointless to set up a Research Station unless the sheep were clear of diseases, and the bull, or should I say the ram, will have to be taken by the horns and a clean-up operation done among the milking flocks or the money spent on the expensive exotic blood lines will all be wasted.

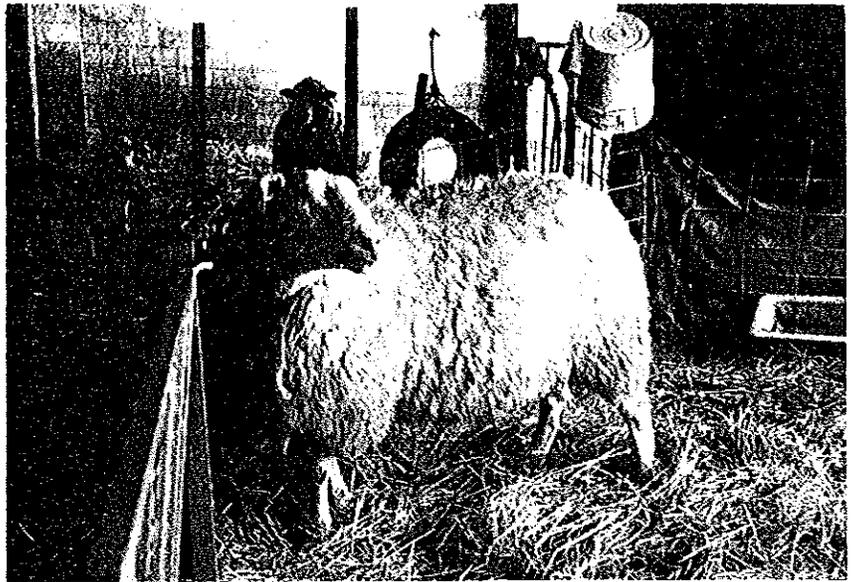
While staying with Diane and Greg Kaufman at Chippewa Falls I saw one of the three quarter bred Friesland rams from Canada, by a Swiss ram called Odo out of a half Friesland crossed Rideau Arcott ewe. Hard to tell he was not pure bred, with his rat tail and large, aristocratic head. They also send their milk to Bass Lake, and Diane milks from a deep pit out of which she has to continually climb to feed and let the sheep in and out. Limited land placed a restraint on her getting much bigger and getting better sheep was the obvious answer. The sheep were Finn/Dorset, pure Dorset, Booroola/Dorset, Polypay and Rideau Arcott. The ewes averaged about 750ml/day and milked for 120 days after weaning the lambs at 30 days. After 90 days in milk she had 6.6% fat and 4.6% protein in the milk with SCCs of 834,000, however a month later the SCCs went down to 63,000 while the fat went up to 8.5% and protein to 5.5%. They lamb in May and milk to October. She is OPP free and seemed to be working along the right lines to success.

The Sheep Dairy Symposium

Held in the Holiday Inn outside Madison, people had started to arrive by the time I finally got there. Many old friends and soon I was making new ones. The Steinkamps were manning a stand for their "La Paysanne" cheeses and particularly popular were their ice creams. Ian Clark had come from Canada to promote his Eurosheep enterprise particularly the Frieslands. Pure Frieslands were now being born and would be available to enter the U.S. shortly. Over 200 people turned up on the Sheep Dairying day of this three day Sheep Conference, mostly just to find out a bit more about it, but all were keen, thirsty for knowledge and hopeful this aspect of the sheep industry in the U.S. might increase overall sheep numbers in the long run.

Always on the look out for good tips to bring home, I heard of one from New Zealand. Instead of putting feed in for the sheep at milking, put a molasses roll. This will take them several weeks to lick and keeps them happy while being milked and avoids all the putting in of feed between each row milked.

Olivia Mills



Diane Kaufman's 3/4 Friesland ram



Diane Kaufman and Yves Berger



Ian Clark promoting "Eurosheep"