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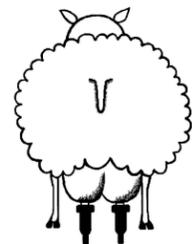
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J-DSANA is the official publication of the Dairy Sheep Association of North America

www.dsana.org



President's Message

Claire Mikolayunas Sandrock
Winter 2009 Issue

While these cool months are not necessarily off-time for many producers, it is a good time to make connections- to other farmers, to new ideas, to next year's plans. We hope that this fall symposium is an event of value. For 15 years, this has remained the only gathering of dairy sheep producers in North America. We are again delighted to highlight DSANA producers, national and international experts who cover topics central to dairy sheep production. As we continue to educate ourselves and newcomers, we hope you will contribute ideas for next year, to ensure the relevance of the program to your growing and changing needs.

As with many producer groups, this organization is run by volunteer efforts, which includes a Board of Directors and a symposium organizing committee. The vacancies on this year's board, which include 3 general board members and a new President, are an opportunity for you to forward the mission of DSANA. If you value the work of DSANA, including the annual symposium, please consider contributing to DSANA as a board member.

Enjoy your time in New York and we will see you next year - location to be determined soon!

Membership • L'Adhésion

DSANA welcomes all current or future sheep dairy producers, artisanal farmstead cheese producers, sellers, suppliers, industry professionals, and academic researchers with an interest in sheep dairying, dairy genetics, sheep milk cheese production, and sheep milk based product development. DSANA also welcomes any individual who is a friend of the sheep dairying industry.

DSANA accueille tous les producteurs (trices) de lait de brebis, les transformateurs artisanaux, les fromagers de ferme, les vendeurs, les fournisseurs, les professionnels dans la filière des ovins laitiers, les chercheurs académiques...enfin, tous et toutes qui s'intéressent vivement à la production et à la transformation du lait de brebis. Nous accueillons également les ami(e)s de l'industrie laitière ovine.

Benefits of membership • Bénéfices de l'adhésion à DSANA

- ✓ Quarterly DSANA Newsletter • *Journal tous les trois mois*
- ✓ DSANA website • *Site web de DSANA*
- ✓ Discount admission to the Great Lakes Dairy Sheep Symposium • *Tarif réduit pour le symposium annuel des Grands Lacs sur la brebis laitière*
- ✓ Voting rights to help determine the future of the association in the industry • *Droit de vote pour déterminer les orientations de l'Association au sein de l'industrie*

Annual Dues

A principal member is one who is currently milking sheep in a state/province licensed facility, or is actively involved in getting milk to the market, brokering milk sales, producing or distributing sheep milk based products.

Un membre principal producteur de lait de brebis avec un agrément provincial ou d'état, ou êtes-vous activement impliqué dans l'achat ou la vente de lait de brebis aux transformateurs, la production de produits à base de lait de brebis.

Principal Member/Membre principal \$50 US/ \$62.50* cdn

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*Exchange rate: Due to the fluctuating exchange rate between the US and Canadian dollars, we suggest Canadians check the exchange before sending in membership or submit memberships in US funds (i.e. US money order).

J-DSANA is published three times per year:

November (Symposium issue)

March (Winter/Spring issue)

July (Summer issue)

Deadlines for submission of material is three weeks prior to publishing. The editor reserves the right to move material to future issues if needed. Past issues are available on the DSANA website (www.dsana.org).

Performance of Katahdin and Crossbred Ewes and Growth of Lambs

The results are shown in Table 2. The prolificacy of the Katahdin is remarkable with a litter size of 2.25 over the two years. The livability of their lambs is also remarkable at 92% considering that lambing occurred outside in the midst of winter with just a 3-sided shelter for protection. The growth of the lambs is good and very similar between the F1 and the backcrosses. Their average daily gain of .55 lb. from birth to weaning and from birth to 60 days is slightly inferior to the average of the Spooner flock (.75 lb./day).

The pure Katahdin ewes shed their winter coat completely during the course of the spring. The Lacaune ewes, which grow a fairly heavy coat of wool-hair mix, need to be shorn in the spring.

Table 2.

Ewe	Katahdin	Lacaune	1/2 L, 1/2 K	1/2 K, 1/2 L
Ram	Lacaune	Katahdin	Lacaune	Katahdin
# ewes	20	25	8	8
Fertility	80%	92%	63%	78%
Litter size	2.25	1.86	1.6	1.6
Livability	92%	79%	100%	73%
Birth weight	8.6	11.4	8.9	9.5
Weaning age	32	29	31	28
Weaning wt.	26.4	27.6	27	25.5
ADG (birth-wean)	.55	.56	.58	.57

Milk Production

The Katahdin ewes that we purchased had a very wild disposition, and we decided not to milk them on their first year at the research station, hoping that being mixed with the dairy flock would calm them down. This did not happen, and milking the Katahdin ewes during their second year proved to be a challenge. The F1 ewes born from Lacaune ewes had a much better disposition, while the F1 ewes born from the Katahdin ewes still had a wild streak. The Katahdin ewes and the F1 ewe lambs were put at milking 30 days after lambing after having raised their lambs. The pure Katahdin ewes were milked for an average of 33 days only, and produced no more than 30 pounds of commercial milk. The F1 ewes were uneven in their production with only 5 ewe lambs out of 10 still at milking after 130 days.

Milk production of all groups is given in Table 3. The Lacaune ewes shown in the table are the ewes that were used to produce F1s and were all adult ewes put at milking shortly after birth. Those results are encouraging and show that it might be possible to increase the commercial milk production of the Katahdin while preserving their shedding characteristic. The study will be pursued a few more years in order to gather more data.

Table 3. Milk production of Katahdin, Lacaune and F1 ewe lambs in 2009.

	Total Production (lb)	Length of lactation (days)	Comment
Katahdin (adult)	30	33	Day 30 weaning
Lacaune (adult)	670	171	Day 1 weaning, still milking on 8/4
1/2 K, 1/2 L	178	84	Day 30 weaning, 3 of 5 milking at 120 d
1/2 L, 1/2 K	175	71	Day 30 weaning, 2 of 5 milking at 130 d

Crossbreeding Trial Between the Katahdin and Lacaune Breeds

Reprinted from *Spooner Sheep Day Proceedings 2009*
 Yves Berger
 Spooner Agricultural Research Station

Justification

In a dairy sheep enterprise, the shearing of ewes is often done twice a year in order to keep them clean for a sanitary collection of the milk. Because of the shorter fleece at each shearing, the value of the wool is very much reduced. Therefore, the idea of creating a dairy breed with little or no wool is appealing. The Lacaune breed, widely utilized in France as a dairy breed, already has very little wool; located mostly on the back. The hair sheep Katahdin is becoming a very popular breed for easy care lamb production, tolerance to internal parasites, and resistance to elevated temperatures. A small crossbreeding trial was started in 2007 in order to see if we could increase the milk production of the Katahdin while maintaining the hair characteristic of the breed.

Animals Used

Twelve Katahdin ewes (9 adults and 3 ewe lambs) as well as 2 rams were purchased from a well known Katahdin breeder in southwest Wisconsin. In the fall of 2007, those ewes were exposed to one Lacaune ram. At the same time, 20 high-grade Lacaune ewes of various ages born at the Spooner Research Station were exposed to one Katahdin ram. The Katahdin ewes raised their lambs for 60 days while the lambs of the Lacaune ewes were raised on milk replacer and the dams put at milking soon after lambing. In the fall of 2008, the same Katahdin ewes were again exposed to the same Lacaune ram, and the ewe lambs born in the spring of 2008 (1/2Ka, 1/2L and 1/2L, 1/2Ka) were exposed to either a Katahdin ram or to a Lacaune ram in order to obtain backcrosses. The number of animals mated as well as the number of lambs born is presented in Table 1.



Varying degrees of shedding in F1 crosses.

Table 1.

		Fall 2007			Fall 2008				
Ewes	Rams	# ewes	# lambded	Lambs born	Ewes	Rams	# ewes	# lambded	Lambs born
Katahdin	Lacaune	9	6	12	Katahdin	Lacaune	11	10	24
Lacaune	Katahdin	25	23	43	1/2 L, 1/2 K	Katahdin	4	4	6
					1/2 K, 1/2 L	Katahdin	5	3	5
					1/2 K, 1/2 L	Lacaune	8	5	8

Industry Service Award Renamed to Recognize Dr. William Boylan

Dr. Terri MacKenzie
 Ovinshire Farm

As many of you know, at each Great Lakes Dairy Sheep Symposium, we present a distinguished service award to an individual who has made an outstanding contribution or given outstanding service to the dairy sheep industry in North America. Nominations come from the membership and the Board of Directors votes for the recipient. The recipient does not have to be a member, nor a shepherd.

Last year at the annual meeting I proposed naming our award after Dr. William Boylan and this year the board of directors supported and passed the motion. Through much of this decision-making, it has come to my attention that a great many people do not know who Dr Boylan is; hence this article and the main thrust for my suggestion to name the award.

Professor Emeritus William John Boylan, born in Bozeman, Montana on Christmas Day 1929, grew up on a farm where his father had cattle and grew winter wheat. For a Future Farmers of America project, he was given some Targhee sheep by a neighbor and never looked back. He loved sheep, devoted his research life to sheep and visited sheep farms whenever and wherever he traveled. He was secretary of the Targhee Sheep Association and worked for the Montana wool lab. He built up his flock and income from his sheep sales allowed him to attend Montana State University and go to graduate school at the University of Minnesota where he received his Masters and finally, his Ph.D. in genetics in 1962. He was fascinated with the effects of crossbreeding, which he devoted much of his life's work to. In those days, North America was looking to increase the productivity of its sheep so in 1966 Dr Boylan was solely responsible for the first importation of Finn Sheep to Canada and to the US in 1968. He was also one of the first importers of the Romanov breed in 1987.

There's even a Canadian Connection, as Dr Boylan spent a few years teaching in the Department of Animal Science at the University of Manitoba in Winnipeg.

In 1966 he returned to Animal Science at the University of Minnesota. There he taught undergrad and graduate courses in animal breeding and quantitative inheritance and conducted intensive sheep breeding research until retiring, I suspect reluctantly, in 1995. Dr Boylan was regarded by his colleagues as one of the leading sheep geneticists in the country. He passed away in February 2004.



Through his travels around the world he saw how many countries used sheep milk. He then became serious about the subject, studying sheep farms, dairies and equipment dealers in Europe, Turkey and Egypt and began the first sheep dairy research in North America at Rosemont Agricultural Experimental Station at the University of Minnesota. In 1984, there were no dairy sheep breeds in North America, so, being a geneticist, he began milking purebred and then crossbreeding Dorset, Finn, Lincoln, Rambouillet, Suffolk, Targhee and Romanov to determine the best producers. In July 1989 he collaborated with a great number of international and American interests to present the 3 day long North American Dairy Sheep Symposium in St. Paul at the University of Minnesota. William Boylan presented four years of work done with his dairy flock and the development of sheep milk products at this conference. Scott Burrington, who was milking in New Hampshire at the time, recalls the amount of information and networking opportunities were overwhelming and positively reinforced his desire to stay with the industry.

Dr William Boylan was instrumental in beginning research into assisting the fledgling sheep dairy industry back in the early 1980s. He conducted research and continued to publish papers both nationally and internationally on sheep milk production, crossbreeding potential and management of dairy sheep. We are thankful that the University of Wisconsin continues to carry on dairy sheep research to this day. The growth of our industry depends on forward thinking individuals, like Dr William Boylan, to push faculty, government and private resources to improve and promote it. Dr Boylan was truly a pioneer in our industry and I felt it appropriate to recognize and name our distinguished service award after him.



Invest in Cheese

Dr. George F. W. Haenlein

University of Delaware Dept. Animal & Food Science

In Northern Italy, where Parmigiano-Reggiano cheese is produced, an interesting financial program arrangement for loans to the cheese producers by the Credito Emilian bank has been successfully working since after World War II, according to an article by Colleen Barry of Associated Press in the Wilmington Delaware News Journal (August 31, 2009).

The program allows Parmesan cheese producer to give the bank part of their produced cheese as collateral for loans. Typically, a cheese maker with an annual production of 7,000 wheels of 85 lb. each may put up 2,000 Parmesan wheels, while they are aging. A wheel is worth about \$425, and the bank provides a loan of 60-70% of their value. The wheels are stacked in a bank vault, where temperature is maintained at 64-84 degrees F and 90% humidity by knowledgeable employees. Each wheel is easily traced to its producer because the month and location of production is stamped on each wheel.

In times of financial difficulties and economic hardships as presently experienced in Italy, this program using cheeses as collateral has been very helpful to cheese makers and to the image of local banks where agriculture and Parmesan cheese making is important and highly appreciated.

Sheep Milk Wins Big at 2009 American Cheese Society Competition

Claire Mikolayunas

At the 2009 American Cheese Society (ACS) Competition in Austin, Texas, 1,327 cheeses were entered into the competition and only 314 cheeses took home awards. Of these cheeses, one-third were made with sheep, goat or mixed species milk. The demand for sheep milk continues to increase throughout the nation, as artisan and farmstead cheese makers realize the unique flavor and component characteristics of sheep milk.

The Best of Show third place award was given to Carr Valley's Cheese Company's Cave Aged Mèlage, a cheese made with sheep, goat, and cow milk. Among all awards distributed, sheep milk cheese producers were recognized from Wisconsin, California, New York, Oklahoma, Washington, Oregon, Missouri, Tennessee, Georgia, and Quebec.



Green Dirt Farm's Dirt Lover - bloomy rind cheese

Congratulations to the ACS Award Winning DSANA Members!

Bellwether Farms	San Andreas, Pepato
Blackberry Farm	Singing Brook
Flat Creek Lodge	Half Ewe Blue Farmhouse, Agrippina Feta, ColBaa with Black Truffle, ColBaa with Scallion and Ginger
Green Dirt Farm	Fresh plain yogurt, Fresh Nettle cheese, Bossa
Hidden Springs Creamery	Farmstead Feta, Driftless Basil, Driftless Honey Lavendar, Driftless Maple, Driftless Cranberry, Driftless Natural, Ocooch Mountain, Ocooch Mountain Reserve
Old Chatham Shepherding Company	Ricotta, Hudson Valley Camembert, Nancy's Camembert
Wisconsin Sheep Dairy Cooperative	Mona

Research News - Effect of Skipping Two Milkings

Dr. George F. W. Haenlein

University of Delaware Dept. Animal & Food Science Newark, Delaware

Some very interesting research with dairy sheep has been reported from the University of Barcelona, Spain, Department of Animal Science and Nutrition by Dr. V. Castillo and co-workers in the Journal of Dairy Science (August, 2009, pages 3684-3695). Spain has more sheep (more than 25 millions head) than any other country except Turkey (about 29 million head). The production of sheep milk seems to have received more attention by researchers in Spain than in any other country, although Spanish dairy sheep, except for Manchega, have lower milk yields generally than East Friesian, Lacaune, Chios, Awassi, and Assaf in other countries.

A very practical question for dairy sheep management, skipping two milkings, and its effect on milk yield and health of the udder was studied by the above team. To skip two milking on the weekend can reduce production costs and improve the quality of life for the farmer. Previous research has shown differences in abilities of dairy ewes to tolerate longer milking intervals depending on the size of their udder cisterns. Ewes with a larger udder cistern have a greater cisternal milk percentage and less resorption of milk lactose into blood plasma. Ewes with a small udder cistern seem to adapt less well to longer milking intervals. The research team studied short- and long-term effects of skipping 2 milkings per week in 2 breeds of dairy sheep, Manchega and Lacaune, divided into 2 groups each by size of udder cistern.

Experimental Design

Forty Manchega and 18 Lacaune multiparous ewes during week 8 to 22 of their lactations were milked by machine twice daily. Lambs were weaned at week 5 of lactation. At week 6, ewes were evaluated 8 hours after morning milking for their cisternal to alveolar milk ratios and half-udder cisternal areas by ultrasonography. Large half-udder cisterns in Manchega measured more than 10 cm², in Lacaune more than 15 cm². Ewes of the 2 breeds with smaller cistern areas were moved into the second research group. The average cisternal to alveolar milk ratios at week 6 for small versus large udder cisterns, respectively, were for Manchega ewes 57 vs. 64% cisternal milk and for Lacaune 70 vs. 74%.

Results

Response of ewes to skipping 2 milkings on the weekend varied by breed and stage of lactation. During early lactation, Manchega's milk yield was about 15% less. Lacaune ewes did not show significant milk losses, but milk yield losses were related to udder cistern size in both breeds. Milk losses in mid-lactation were less and none at all in late lactation. When the twice-daily milking frequency was restored on Mondays, daily milk yield increased significantly in Manchega by 20% and in Lacaune by 27%, compensating for the milk losses over the weekend in early lactation. The compensatory increased milk yields were positively correlated to half-udder cisternal size, 32% vs. 4% for large vs. small size in Manchega and 32% vs. 29% in Lacaune, respectively. Milk fat contents dropped significantly during milking omissions, but recovered totally within 48 hours. No changes were observed in protein, sodium, potassium contents and somatic cell counts in milk. Plasma lactose contents increased temporarily during milking omissions. It was concluded that skipping 2 milkings weekly can be a good management strategy with no negative effects on milk yield and composition during any lactation stage in large udder cistern ewes with healthy udders. Small cistern ewes would have smaller milk losses in mid lactation and no milk loss in late lactation.

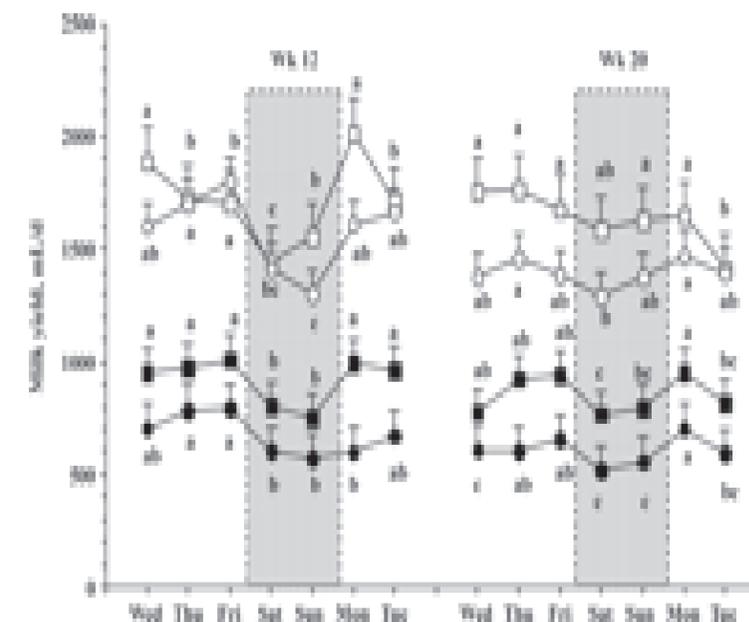


Figure 1. Effect of milking omissions (Saturday and Sunday) on daily milk yield during wk 12 and 20 of lactation in Manchega (closed square) and Lacaune (open square) dairy ewes. a-c Means within a breed and week without a common letter are different ($P < 0.05$).