Welcome New Members

February through March 2008

New Members to Welcome from 2007

Rob & Nan Wilson of Wilson Ranch .................................................. Heber Springs, Arkansas
Michael Smith ................................................................................. Woodbine, MD
Adnan, Merita & Omar Aldayel ....................................................... New Rockford, North Dakota
William M & Susan T Orr of Comebye Ranch ................................. Eagle Point, Oregon
Brian & Chris Donahue of Hilltop Ranch ........................................ Perkasie, Pennsylvania

New Members – February – March 2008

Frank & Marti Menacho of Olivas de Oro ........................................ Creston, California
Jill Dougherty of Sunburst .................................................................. Catlin, Illinois
Richard G, Jr & Becky W Hungerford of 4R Bar Farm ......................... Mahomet, Illinois
Lanetta J Batts & Family of Toad Haven/Mortgage Hill ....................... Colfax, Indiana
Peter & Rhonda Scherf of Scherf Farm ............................................. Michigan City, Indiana
Roger & Sarah DeVader of Prairie Meadow Farm ............................... Holton, Kansas
Bob Shauck of Shauck Livestock Farm ............................................. Eldon, Missouri
Andrew and Annette Hermann, Double-AH Farm ......................... Harrod, Ohio
Marcus A & Mark R Howell of Howell’s Farm .................................. Wapakoneta, Ohio
Roy & Barb Andrews of Amblin’A Farm ........................................... Butler, Pennsylvania
William C & Sharron Huss .............................................................. Scottdale, Pennsylvania
Betsy & Allan Quant of Voyageur Farm ............................................. Lewisburg, Pennsylvania
Cathy Payne of Payne Farm ............................................................ Block Island, Rhode Island
Ryan Graham of The Graham Farm ................................................ Marion, South Carolina
Kathy Ladley of Morning Star Sheep Farm ....................................... Gate City, Virginia
Renea L & Bruce B Dahms of Dahms Family Farms ....................... Custer, Wisconsin
Brian Folz ........................................................................................... Stratford, Wisconsin

“Every Family Has One”
Photography by Gene Schlag, Wisconsin
3rd Place - Open Category
2007 KHSI Photo Contest

“Mohawk”
Photography by Randy Grover, Illinois
1st Place - Shedding Category
2007 KHSI Photo Contest
Inside This Issue

Welcome New Members........................................................................................................................................ ii
Director’s Corner.................................................................................................................................................. 2
2008 KHSI Expo in Maryland - Something for Everyone!................................................................. 3
Katahdin Breeders Take the World Lead in Parasite Resistance Selection .............................. 4
KHSI Requests Proposals for Hosting 2009 Expo.................................................................................. 5
SCKA Meeting — There’s Still Time to Join In!....................................................................................... 6
Katahdin Sale Round Up ..................................................................................................................................... 7
Focus on EWE-TH: Mary Brokaw ............................................................................................................... 8
Meet Your Friend, The Amazing Rumen ................................................................................................. 10
KHSI Youth Committee Needs Your Photos ...................................................................................... 10
Reserve Now to Get Special KHSI Expo Hotel Rate! ......................................................................... 11
2008 Katahdin Hairald Publishing Dates & Deadlines ........................................................................ 11
KHSI Looking for a Few Good Women and Men.................................................................................. 11
KHSI 4th Annual Photo Contest Now Open!......................................................................................... 12
Conversations from the Field: Henry Licciardello .................................................................................. 16
Katahdins & Katahdin Breeders In the News ....................................................................................... 17
Summer 2008 Hairald Calendar ............................................................................................................... 17
Selecting Superior Meat Sheep in the 21st Century ........................................................................... 18
KHSI 2008 Sanctioned Sale Requirements ......................................................................................... 23
Do I Have a Winner or a Loser? ................................................................................................................... 23
Classified Ads .................................................................................................................................................. 24
Check Those Scrapie Flock Certification Program Dates ............................................................. 26
2008 Katahdin Expo Schedule (Preliminary) ...................................................................................... 29
Advertisers Index (listed alphabetically) ............................................................................................ 29

Cover: "Yearling with July Twins" photographed by Karen Kenagy of Oregon, awarded a tie for First Place - Best Promotion Category in the KHSI 2007 Photo Contest; Pictured Above: "Wow! What a Bundle" photographed by Lindsay Hodgman of Maine, awarded 1st Place - Kids & Sheep Category, 2007 KHSI Photo Contest
I heard it said when you don’t have anything to talk about, talk about the weather. This year the weather really has been something to talk about. Northern Illinois broke all the records for both snow and cold. The local newspaper reported we had 83.5 inches of snow with an average daytime temperature in February of 17 degrees F with a low of minus 4. I’ve pushed and shoveled more snow this year than in my entire life.

With this rotten weather we still have had the best lamb crop. With 5 sets of quadruplets, my wife had several bottle babies. We have over 100 lambs on the ground so our lambing percentage is well over 200 percent. This is the tribute to the toughness of the Katahdin breed.

March 14 I needed gas in the truck so drove to Durand and filled up at the local gas station. It was $3.19 a gallon and I put in 32 gallons and it cost $102.08. I came back home and told my wife it’s time to buy a new truck. The old truck was getting between 8 and 10 miles to the gallon and that was not good enough and Marian agreed. We headed to the Chevrolet Dealership and two hours later we headed home in our new truck. The sticker on the window stated we should get 19 miles to the gallon. This morning March 28 after doing several errands we stopped and got gas in our new truck. The price for regular had gone up to $3.35 a gallon. I was complaining about the price and the guy next to me said “don’t complain”. He had just paid $4.07 a gallons for diesel. I sure hope this new truck gets 19 miles to the gallon.

This year the KHSI Board of Directors had a curve ball thrown at us. In 1985 KHSI applied for and received a Charter in Pennsylvania – through an oversight we never applied for a tax exempt status with the IRS. KHSI Board Treasurer Leroy Boyd discovered this error. A board meeting was called and it was unanimously agreed that this error should be corrected. The board felt that it would be wise for us to go to the IRS instead of the IRS come to us with this shortcoming. To rectify this, the board has hired a CPA, Mr. Robert Christiansen. He has agreed to represent us and has all our financial records and needed information dating back to 1985. Mr. Christiansen stated this is a lengthy process and could take up to a year to complete our tax exempt status.

The KHSI Board is working on a job description for our breed operation office. There has never been a job description or working contract written for this office. The operation office is a contract position and not an employee. The relationship has always been a verbal agreement. A
**EXPO HIGHLIGHTS AND LODGING DEADLINE**

The 2008 KHSI Expo Sale will be held September 27, 2008 in Boonsboro, Maryland. It will provide Katahdin breeders an excellent chance to consign, view, and buy superior Katahdins. All consigned sheep have performance information provided, which few sheep sales provide.

Susan Schoenian, a nationally recognized sheep extension agent, will be KHSI’s host. On Friday September 26, Susan is putting on a great educational day with speakers who will share their practical experience and technical knowledge about a variety of topics from pasture management to marketing. Attendees will also be able to go on a field tour of research projects focusing on sheep production systems in the mid-Atlantic region of the US.

The headquarters hotel is the Four Points Sheraton in Hagerstown, MD (9 miles north of Boonsboro). To make reservations, call 1-800-325-3535. Mention the Katahdin Expo Show and Sale. I’ve been to this expo. The family will enjoy refreshments (both days), lunch on Friday, dinner on Friday, and entertainment on Friday evening.

**GETTING YOURSELF, YOUR FAMILY AND YOUR SHEEP THERE**

Hagerstown serves as a commercial and industrial hub for a Tri-State area which includes much of Western Maryland, South Central Pennsylvania, and the Eastern Panhandle of West Virginia. Virginia is also a short drive from the Western Maryland border. Because Interstates 81 and 70 intersect nearby, Hagerstown is a major north-south corridor for travelers. Good roads also make it easier to transport sheep efficiently.

While there is a regional airport in Hagerstown, most air travelers will want to book their travel through the major airports in Baltimore, Maryland; Washington DC, or central Pennsylvania. With four major airports within two hours driving distance of Hagerstown/Boonsboro – Baltimore-Washington International Thurgood Marshall Airport (BWI), Ronald Reagan National Airport (DCA), Washington Dulles International Airport (IAD), and Harrisburg (PA) International Airport (HIA) it should be easy to find a competitive airfare.

**BUT WHAT ELSE IS THERE TO DO?**

There are many attractions conveniently located to Hagerstown/Boonsboro, including the Antietam National (Civil War) Battlefield, Harper’s Ferry National Historical Park (WV), C & O Canal National Historical Park, Jonathon Hager House and Museum, Baltimore's Inner Harbor, Gettysburg National Military Park (PA), and Annapolis (temporary capital of U.S. and home to the U.S. Naval Academy). Washington DC and the Chesapeake Bay region are all within reasonable driving distance with many great activities and learning opportunities for the family.

**DIRECTOR’S CORNER, CONTINUED FROM PAGE 2**

written contract is needed to spell out a working assignment and salary.

On a brighter side, spring is coming, lambs will be growing, grass will be turning green and that means it’s time to think about getting ready for the Midwest Stud Ram Sale in Sedalia, Missouri. Monday June 23 is the show and the sale is Wednesday, June 25. This has been an excellent venue to both buy and sell sheep. Every year for the past 5 years the Katahdin Show and Sale has been getting better with more breeders and buyers attending. I encourage everyone to attend this show and sale, as it is the largest sheep show and sale in the world. There are vendors selling everything from pharmaceuticals to handling equipment. Hotel rooms are at a premium so it’s best to call for room reservations early. I look forward to seeing all of you there.

Aguascalientes, Mexico will be the Tenth Anniversary of the Mexican Katahdin Association. It will be held April 22 through the 25th. This will be held in conjunction with the Mexican National Livestock Fair – this is the largest fair in Mexico. Jim Morgan and I have been invited to attend and speak at the Katahdin Symposium. Jim will speak on the subject of EPDs and I will speak about the future of the Katahdin Breed. This will be followed the next day with the Sheep Show. The next day will be the Auction. This is a format similar to our National Expo Show and Sale. I’ve been to Mexico several times both to judge Sheep Shows and to attend different meetings and events. The Katahdin people in Mexico are wonderful hosts and I’m looking forward to this expo.

I do feel guilty I’ll be in Mexico for 5 days having a good time and doing what I like to do best talking about Katahdin Sheep. Marian will be stuck at home taking care of all the lambs, feeding and doing all the chores—if by chance you’re in the neighborhood she would be happy to have you stop and help her with the chores.

I’ve had several phone calls from breeders this past month and everyone feels they have had a very good lamb crop. I hope your lambing experiences have all been good.
Katahdin Breeders Take the World Lead in Parasite Resistance Selection

Jim Morgan, Katahdin NSIP Coordinator

Katahdin NSIP Breeders and Dr. Dave Notter of Virginia Tech and the National Sheep Improvement Program (NSIP) released the 2nd Katahdin Sire Summary for parasite resistance in March, 2008. Though this is not the first sire summary for resistance to nematodes (worms) released, the Katahdin sire summary is likely to set the world standard as the parasite resistance selection tool in sheep.

The United Kingdom, Australia, New Zealand and other breeds tested which show 20-25% heritability. These are tremendous differences that provide the tool for Katahdin breeders to identify “super-parasite” resistant sheep. These two factors are coupled with high variability: lambs in the same highly-infested pasture can range in worm eggs/gram (epg) of feces from 0 epg to greater than 10,000 epg. Rate of selection for a trait is based on the heritability and variation in the population. There is no other trait in the livestock world in which breeders have the potential to make such rapid progress.

Using across flock procedures to produce EPDs increases the accuracy and enables breeders to compare parasite resistance between flocks. It is important for a breeder selecting for improvement to be able to determine whether the genetics in his/her flock is superior to another. This improves the accuracy for selecting superior sires.

To be truly effective at preventing losses in productivity or death from parasites, selection for resistance needs to occur when lambs first start grazing. If there are parasite loads on the pasture, a lamb can be dead by 20 weeks of age. 20 weeks of age is the point at which breeds such as Suffolks in the UK, Coopworths and Romneys in New Zealand, and Merinos in Australia are being evaluated for parasite resistance.

Further research needs to occur, but the scientists involved think there is something unique about the genetics and immune system of the Katahdin and other breeds with tropical or subtropical ancestry (St Croix and Florida/Gulf Coast Native). These unique characters are that parasite resistance develops early in certain breeds and that it is highly heritable. This work strongly suggests that commercially important meat and wool-producing sheep breeds that need improved parasite resistance need to open their flock books and grade up their resistance using tropical breeds. At this point, the important sheep producing countries of the world can look to several tropical breeds for this improved resistance. The Katahdin breeders have the best tool, but research at several institutions in the US find that other breeds such as St Croix or Barbados Blackbelly or Gulf Coast/Florida Native have superior parasite resistance. The Katahdins have the advantage of better growth and muscling than the other breeds and thus are more popular in more production systems.

Katahdin breeders have a short window in time to capitalize on selecting for parasite resistance. This EPD for parasite resistance is early in its application. Katahdin breeders need to spend 3-4 generations of breeding highly resistant rams and ewes to identify the “super-resistant” sheep. Why is there a short window? First, there are other breeds of sheep with very high resistance. Australia or New Zealand could start with genetics from Southeast Asia or tropical Africa and grade up parasite resistance. Also, with the development of new molecular genetic techniques, scientists predict that in 5-10 years, it will be much easier to a) identify the multiple genes and alleles involved in parasite resistance and b) to introgress these superior genes conferring parasite resistance into any population of sheep. If Katahdin breeders act now, the Katahdin breed will be in the driver’s seat with the resistant sheep needed for the world market.

continued on page 5
KHSI Requests Proposals for Hosting 2009 Expo

The KHSI Board is ready to receive proposals for hosting the KHSI 2009 Expo/Annual Meeting. Those wishing to host can contact KHSI Operations for assistance and a general outline of the needs that should be addressed in a proposal. Potential hosts should have general ideas about developing a day of educational programs. The host location will need adequate facilities for the educational seminars/workshops and facilities for the Annual Expo Sale. Fully and partially shed sheep are also required for the hair coat inspectors training. There should also be sufficient hotel accommodations close to the sale and educational events. Many resources are available for developing, supporting and hosting the Annual KHSI Expo. It’s a great way to get Katahdins better known in a particular area. Typically, meeting registration charges are set to cover the cost of facilities and hosting the event. KHSI will also be accepting proposals for hosting the 2010 KHSI Expo. The deadline for submitting proposals to host is August 1, so that the KHSI Board can review and announce decisions at the September Expo.

KHSI Operations can be contacted at 479-444-8441 or khsint@earthlink.net.

Katahdin Breeders Take World Lead, continued from page 4

With more investment by Katahdin breeders in the parasite resistance EPD (fecal egg count EPD), Katahdins can become the “go-to” breed for parasite resistance, but the other countries will not be waiting for Katahdins to do that.

What does it take to get involved identifying parasite resistance with the new EPD in Katahdins? First, the breeder needs to have access to pastures with a significant parasite load. Without a parasitic worm load, breeders and scientists cannot tell which of the lambs in the lamb crop are superior. In evaluating the Katahdin work, Dr. Notter has found that the average number of worm eggs in the fecal material of the labs tested in a flock needs to be greater than 750 epg. Second, the lambs need to be similar in age (range of 3-4 weeks). Third, the group of lambs (contemporary group) needs to have at least two different sires represented and at least 10 lambs per sire. Fourth, the breeder needs to collect sufficient fecal material from the contemporary group in a short period during one day and then keep the samples cool/refrigerated until shipped to a lab that does fecal egg counts. It takes a time commitment and a financial investment in paying for the fecal egg counts.

Several individuals need to be mentioned for their role in the development of this world leading selection tool. First, Dr. Charles Parker has been encouraging the sheep research community for many years to look for early and/or innate resistance to gastrointestinal nematode (worms). I first heard him talk about identifying resistant rams in 1998. Without Dr. Parker, Katahdin breeders would not have known how to move forward. And, it was only with Parker’s strong insistence that Katahdin breeders look for resistance at 8 weeks of age, that Katahdin breeders tried it. This went against scientific dogma. Second, the Katahdin NSIP Breeders asked for help from Dr. Dave Notter at Virginia Tech in developing an EPD for parasite resistance. Dr. Notter has been outstanding in his support and research. Not enough can be said about his willingness to help, support and gamble with the Katahdin breeders. Third, it took a gamble by several Katahdin breeders that an across flock EPD for fecal egg count (parasite resistance) could be developed. The fourth individual to mention is Kathy Bielek of Ohio. She was key in recruiting more flocks to participate and helping with funds for fecal egg counts by securing grant funds. It should be noted that there were also several shepherds who collected and paid for fecal egg counts out of their farming funds. Finally, Dr. Dan Waldron from Texas A&M at San Angelo wrote a grant that provided funds to help support Dr. Notter and his lab in developing the EPD for parasite resistance.

Dr. Charles Parker recently said, “During the past 25 years parasites have been winning the war against sheep with genetic resistance. Now sheep with the help of progressive shepherds have the opportunity to close out the parasite war with new genetic technology. All Katahdin breeders now have the opportunity to breed for parasite resistance, the number one health problem for sheep raising in the humid regions of the world.”

To obtain a list of flocks participating in the FEC-EPD for parasite resistance and the NSIP Katahdin sire summary for parasite resistance contact Jim Morgan. To obtain a protocol for being involved, contact Jim at 479-444-6075 or jhmm@earthlink.net. Jim Morgan suggests that Katahdin breeders thank the above mentioned individuals and flocks for their contributions to the Katahdin breed.
Hi folks,

It’s me, again, you remember, “Kat Ahdin”, your friendly snooping reporter. I don’t know about you, but it seems to me like it was just yesterday that we were having cold weather. Now, almost overnight, the pecan trees are beginning to bud — according to our grandparents, that’s a sure sign that winter is over. I don’t know about your neck of the woods, but around here Azaleas and wisteria are blooming, the purple martins are back and mercy sakes alive, Katahdin lambs are everywhere!

As I was sitting there just taking it all in, all of a sudden, I realized that it won’t be long before it’ll be time for that big SCKA shindig in McComb. That’s when I decided that I’d better do some investigating and get the latest update to you. This year’s hosts have really been busy. I understand that they have made arrangements with the Hawthorn Inn & Suites for a $79.95 discount hotel rate for folks attending the SCKA meeting! You’ll want to be sure to make your reservations before May 30th. After that time, the regular rate applies. I believe they have 15 rooms blocked so there will be plenty rooms available and I’m pretty sure they can get more if we need them. See details below.

Now, old “Kat” here likes to see those fine Katahdin sheep having a nice place to rest as well as their shepherd/shepherdess so I was very happy to discover that pens and bedding (shavings or wheat straw) will be available for the sheep at the Fair Grounds.

As far as I can tell, it appears that everything is right on track. I also have it on good accord that some special guests, including a few USDA folks, plan to attend the meeting. (Animal Identification Coordinator USDA-Veterinary Services State of Mississippi and SFCP (Scrapie Federal Certification Program) Inspectors.

Well, looks like this will probably be my last “update” before the meeting, but I certainly think you will have a good time. Who knows, perhaps if you look real hard, you might even see me there! I know the Burris’, Flowers’, and Jordans are looking forward to seeing you in June and are hoping you will join them for a fine time filled with information, fun, food and good old southern hospitality!

Signing off for now, Kat Ahdin

Join us at the Pike County Fairgrounds in McComb, Mississippi! Tentative Schedule:
* Be sure to check the SCKA and KHSI web sites frequently for updates

**Friday June 13th Welcome Gathering and Sale Sheep Arrival**
- Arrival of Animals for Private Treaty Sales. * Health Papers will be required on all sheep/livestock entering the fairgrounds. All Sales will be solely between the buyer and seller.
- Shackaloa Creek Ranch Farm Tour *Those wishing to tour the farm of Earl & Mickie Burris will be able to do so Friday, Saturday (after the meeting) and/or Sunday as time permits. We will make every effort to accommodate those wishing to tour the farm.

**Saturday June 14th Speakers/SCKA Annual Meeting/Private Treaty Sales**
- Registration begins @ 7:30 AM
- Guest Speakers (Dr. Leroy Boyd/Jackie Nix, Nutritionist (SweetLix)
- Lunch - Compliments of SCKA members (Earl & Mickie Burris, Ed & Deborah Flowers and Les & Amanda Jordan)
- 2008 SCKA Annual Meeting
- Private Treaty Sales/Hoof trimming and Photo Op “Demo” with Mark Dennis
- Tour of Shackaloa Creek Ranch available Saturday afternoon and Sunday AM

**HOST HOTEL: Hawthorn Inn & Suites, (601)684-8655 or (866)299-7891, 2001 Veteran’s Blvd, McComb, MS 39648**
- SCKA Meeting Discount Rate : $ 79.95; full Hot Breakfast Buffet included
- MUST reserve rooms prior to May 30th to get discount rate; after May 30th rates return to regular rate
- Specify that you are with SCKA when making reservations in order to get discount (group) rate.
- If possible call Monday - Friday between 8:00 - 4:00 and ask for Sharon or Amy

Other Area Hotels: all hotels are conveniently located right off the Interstate (I-55 )
- Hampton Inn (601)684-8655
- Comfort Inn ( 601)249-0080
- Best Western (601)249-4300
- Days Inn (601)684-5566

For additional info contact: Earl & Mickie Burris, shackaloa@aol.com, Farm (601)567-2513, Cell (601) 551-6970; Ed & Deborah Flowers, flowers4@ftcweb.net, (601) 532-6060; Les & Amanda Jordan, lajordan@wildblue.net, (601) 684-1205
The KHSI Sale Committee is rounding up all the organized sales that include Katahdins. KHSI periodically posts information on sheep sales and sheep events as a public service. Posting sale and event information does not imply endorsement or verification of the claims of any sale or event. KHSI encourages the use of performance records and production data as the primary means of selecting sheep instead of emphasizing visual appraisal typical of most shows, sales, and auctions. Sales and events posted are not sanctioned by KHSI unless otherwise noted. Contact the KHSI Operations Office to ask for your sale to be posted. 479-444-8441 or khsint@earthlink.net.

June 7, 2008. 2nd Annual North American Hair Sheep Association Sale in Bowling Green, Kentucky at the Barren River Regional Livestock Center. Contact Philip Glass, President of the North American Hair Sheep Association. Seminars 9-11. To consign contact Philip Glass at 325-465-4267 or dorper@wildblue.net

June 14, 2008. South Central Katahdin Association Annual Meeting & Private Treaty Sale. Pike County Fairgrounds, McComb, Mississippi. Contact Mark Dennis at 337-364-0422 or denn907@bellsouth.net for more information.

June 14, 2008. Scott County Hair Sheep Sale held at the Home Place in Gate City, Virginia. Registered Katahdins, Commercial Katahdins and Katahdin crosses will sell. Sale Chairman is KHSI member, Pete Odle. His contact information is 276-452-2772 or jodle@vt.edu


August 2, 2008. 3rd Annual Center of the Nation NSIP Sale. Spencer, Iowa. Only sheep with EPDs from the National Sheep Improvement Program can be consigned. More information available from Jim Morgan at 479-444-6075 or jlmm@earthlink.net


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Focus on EWE-TH: Mary Brokaw

Editor’s Note: Lee Brokaw, KHSI member from Brokaw Farm Katahdins at Stronghurst, Illinois, submitted this article about his sister.

How would you describe your current sheep and other farming/livestock activities?

I have greatly enjoyed the opportunity to become involved in the family farming operation. I have become involved through both 4-H and FFA. I began showing sheep as a 4-H project and that foundation has allowed me to now build a small flock of 20 ewes which I have established as my SAEP (Supervised Agriculture Experience Program) in FFA. I will keep detailed production records on these ewes and the ewes I retain from them throughout my four years in high school with the goal to interview for the opportunity to receive SAEP award recognition on my sheep enterprise. I am involved with daily feeding and care of our sheep as well as working with the ewes during lambing time (December-March). Having sheep as a project allows me to gain skills such as responsibility and dependability while being a part of my family’s farm.

Are other family members involved with your sheep and if so, how?

Yes, my parents, Patrick and Brenda Brokaw as well as my brother Lee are involved in the sheep operation, Brokaw Farm Katahdins. We work together throughout the year from breeding to lambing to marketing. It is a true family project as one person may work on the marketing more while others take time to select breeding stock for sale. Our goal is to keep it fun and interesting while building a solid flock where we can produce high quality breeding stock to sell to breeders across the US.

What was your first experience with sheep?

My experience with sheep began when I started helping my Dad and brother with daily chores and when I began showing at the county fair. My brother and sisters showed when they were in 4-H and FFA and so being the next in line, I transitioned into the role of helping Dad and showing when they went off to college. It is interesting to me as my family has always had sheep on the farm and it is a great project that works well with our grain operation.

How did you learn about Katahdin sheep and why did you decide to make them part of your operation?

I was young (3 yrs) when my parents purchased our first group of Katahdin ewes from Laura and Doug Fortmeyer in Kansas in the spring of 1995. We had wool sheep on our farm before and when my parents came upon the Katahdin breed it seemed to fit our farm better in terms of a low-maintenance
breed with good mothers, early maturing rams, and vigorous lambs that would also make a good breed to show. My parents have taught me about the history and characteristics of the breed as well as lessons on health and nutrition, and concerns or issues that may come up during the year. I have learned about temperaments of sheep and how to properly handle sheep during lambing and in the show ring. It is great to work with a breed that has a milder temperament as it greatly reduces the number of problems we have during lambing time and while moving sheep between pastures throughout the year.

What resources have you used to solve problems or answer questions about your sheep?

I have used a variety of books, online resources, and university publications. Each of these gives different information and allows me to find the answer to the problem we may be dealing with. When it is difficult to pinpoint a specific problem I often turn to a veterinarian or person with expertise on the issue to give advice and to help solve the problem. We are blessed in our area to have several good vets within 15 miles of home, which allows me to get advice and/or medications without a long wait. In addition to resources that I use when solving problems, I also use general Katahdin booklets or pamphlets for answering general breed questions. These have proven very helpful if I am asked questions from new breeders or from people that are not familiar with the breed, such as when attending shows like the county fair.

What has been the most rewarding aspect of raising livestock in general and sheep in particular?

It is rewarding when I have the opportunity to sell good breeding stock and to hear back from breeders that they have greatly enjoyed the sheep. Raising sheep is a fun project, yet it makes it worthwhile when you see the product of your year's work. In addition to the reward from raising good stock are the benefits of spending quality time with the family and with other breeders at shows and conferences, such as the Midwest Stud Ram Sale at Sedalia in June. I had the opportunity to go to Sedalia last year with my Dad and greatly enjoyed meeting with other breeders and watching the shows.

What are your plans and goals for your Katahdin sheep?

My short term goals are to show and sell at this year's Midwest Stud Ram Show and Sale in Sedalia this June. I want to expand my FFA project throughout my four years of high school by retaining quality ewe lambs. I want to continue to establish our family's flock in the future on the foundation that we have built over the 12 years we have had Katahdins. I would like to visit other flocks throughout the country as I am interested in how sheep are raised throughout the US. As I have learned, the sheep industry is changing greatly and the demand for high quality hair sheep is increasing. I want to continue to learn more about the Katahdin breed while being open to where the breed needs to be in the future to meet the demand of people in this country and abroad.

What are your future educational and career goals (in addition to sheep production)?

As a freshman in high school, I am unsure where I would like to be in the future in terms of a career. At this point, I am interested in staying involved with sheep and the Katahdin breed. I have greatly enjoyed working with sheep on our farm and learning from my parents and brother. I am excited for the opportunity to become more involved in raising and showing Katahdins while expanding my knowledge of sheep production.
Meet Your Friend, The Amazing Rumen

By Richard Gilbert, Ohio

By raising broiler chickens on pasture I learned the beauty of grazing species. In the mid-1980s I was living on the outskirts of an Indiana town and mowing a lot of grass around our house, keeping the sward pretty for us and tender for those chickens. Trouble was, I hated mowing. It was wasteful of time, if nothing else. Animals could be taking care of that chore!

There’s a reason that, around the world, farmers and ranchers with more land than cash have relied on ruminants. Ruminants can convert cellulose—the fiber in plants—into milk, meat, cheese, leather, and wool. Humans can’t digest much cellulose, the cell walls of plants, and neither can most animals. This is unfortunate, because cellulose comprises much of the organic carbon on the entire earth.

The ruminant is nature’s original and unsurpassed creation for adding value to abundant forage. Unlike chickens and hogs, which need a concentrated energy source such as grain, flocks and herds of ruminants, subsisting on nothing but plants, salt, and a little water, built fortunes and empires over the epochs as they drifted across plains.

It takes a big, complex digestive apparatus to make a living from cellulose. The sheep’s small intestine alone can be ninety feet long. But the rumen, or paunch, where forage is first deposited, is what makes all the difference. This fermentation vat ranges in size from five to ten gallons in sheep. Along with the sheep’s three other stomach compartments, the rumen fills the animal’s left side and extends into the right.

“[T]he ruminating function is evidently designed to enable the animals in which it is present to gather their food with the greatest possible rapidity in the open, and then to retire to a less exposed position for the purpose of thoroughly masticating it at leisure,” speculated Richard Lydekker in his 1912 book The Sheep and Its Cousins.

However, the miracle of the rumen transcends it being a storage facility for forage, and the cud chewing itself isn’t what digests cellulose. Each milliliter of rumen fluid contains ten to fifty billion bacteria, one million protozoa and various yeasts and fungi, according to a paper posted on the Internet about the digestive physiology of herbivores by veterinarian Richard Bowen of Colorado State University.

This means that a five-gallon rumen contains more than 200 billion bacteria, using the low estimate. The sheep’s cud-chewing shreds the forage into more pieces so the rumen fauna have more places to attack and consume cellulose. The sheep then absorbs its formerly bulky food in the form of soluble starches and sugars.

An important secondary benefit to the ruminant of employing so many microscopic plant-consuming creatures is that rumen bacteria and protozoa regularly end up in the animal’s true stomach and small intestine, where they’re digested and provide protein and amino acids. Protein is expensive, so being largely protein self-sufficient makes ruminants even more thrifty for farmers. Microbes also furnish their hooved hosts with vitamin K and all of the B vitamins, whereas other mammals can only synthesize two B vitamins.

The rumen environment is anaerobic, much like silos for fermenting forage into silage. To buffer acidic conditions in the paunch, ruminants produce much saliva—cows generate up to 150 liters a day. Here we get into the rumen’s dark side, its byproducts of lactic acid, carbon dioxide, and methane.

Highly fermentable feed, such as grain, can be dangerous through its acidifying effect. Acid can bring a sheep’s digestion to a screeching halt. “Acidosis,” which usually gives sheep scours but can be fatal, results when lactic acid kills too many microbes, releases harmful bacteria, and sometimes causes the rumen’s lining to slough off.

Shepherds thus must consider what they’re feeding the rumen’s microbes—the diet of that internal flock being as important to consider as what the sheep themselves are eating. Of course, microbes can adjust to grain digestion if shepherds slowly introduce grain to the diet. The adaptability of ruminants is underscored by the fact that their internal workforce can be converted to a

CONTINUED ON PAGE 11

KHSI Youth Committee Needs Your Photos

Michael Seipel, KHSI Youth Committee Chairperson

Start snapping your camera! The KHSI Youth Committee is planning to make a montage/collage of pictures of youth and their Katahdins. These can be 4-H projects or family members helping with the flock. Youth and adults are welcome to send photos. For more information contact Michael at mseipel@truman.edu or 660-768-5744. Submit pictures to Michael Seipel at mseipel@truman.edu or 29901 St Hwy 3, Callao, MO 63534.
The Amazing Rumen, continued from Page 10

Ruminants belch out this gas constantly, although it isn’t usually obvious that they’re doing so. If gas becomes trapped in the rumen, this is dreaded bloat, which can expand the rumen to such a size that the afflicted animal cannot breathe and suffocates.

More cows than sheep die of bloat, the most common type being “frothy bloat” in which a foam traps fermentation gases; the foam can’t be released by burping, and the gases beneath the suds continue to expand the rumen until it crowds the throat and lungs and the animal asphyxiates. Boat can be caused by consumption of too many legumes under certain circumstances and triggered as well by any body position—such as being trapped on its back—that prevents a ruminant from belching.

Usually rumens are forgiving, however, and shepherds take these miracles for granted. Thankfully the sheep don’t care about your ignorance as they reap the reward of being able to flourish from solar energy captured in plants. They do seem to ponder their good fortune as they ruminate.

There is an obvious sensual satisfaction to the sheep in this laborious business of cud chewing,” observes Allan Fraser in Sheep Husbandry and Diseases, a 1957 Scottish book. “A flock ruminating and at rest on rich pasture is one of the most placid and contented spectacles a disturbed world presents.”

Richard Gilbert has raised Katahdin sheep for ten years in Athens, Ohio.
KHSI 4th Annual Photo Contest Now Open!

KHSI Promotion Committee

Attention all photographers: KHSI announces the opening of the 4th Annual Photo Contest in our continuing efforts to get quality photographs to be used in promoting Katahdin sheep. The contest is open to all who wish to enter. The photographer does not have to be a member of KHSI. The photograph must include Katahdin sheep.

Entries must be received by November 1, 2008 at khsint@earthlink.net or on a CD/floppy sent to KHSI Operations, PO Box 778, Fayetteville AR 72702 (CDs are preferred).

Photographs from previous contests have been used in ads in national sheep magazines and other KHSI promotional activities. Several have been included in the Katahdin Hairald.

Entries will be judged on composition, exposure, focus, relevance, and creativity (or appeal) with the goal of promoting Katahdin sheep. Awards in each of the 6 categories:

Grand prize: Choice: 1 year free membership OR 1 year free breeders page on website OR free $50 value in registration paper fees or promotional items (hats, T-shirts, silver Katahdin head, metal signs).

First runner up: Choice of $25 value in registration paper fees OR 3 hats or 2 T-shirts OR 1 silver Katahdin head OR 1 metal sign

Second runner up: Choice of free hat or T-shirt or $10 value in registration paper fees.

Categories

1. Best Promotion of Katahdins – Photographs that show one or more of the qualities promoted for Katahdin sheep such as: no shearing, efficient grazers, superb mothers, low maintenance, easy lambing, adaptable, etc.

2. Action – Photographs of activities such as moving/trailing sheep, lambing, tagging, exhibiting, grazing, feeding, etc. (Note that all pictures featuring youth ages 18 and younger should be entered in the “Kids and Sheep” category.)

3. Scenic – Photographs of sheep outdoors. (Photos entered in this category cannot include people.)

4. Kids and Sheep – Photographs containing pictures of youth less than 18 years of age and sheep.

5. Shedding Sheep – Photographs that demonstrate Katahdins shedding. An entry could be composed of a sequence of 2-3 pictures of the same animal.

6. Open Category – Photographs that do not fall into the five above-listed categories.

7. Just for Youth – Pictures of Katahdins taken by individuals under 18. The picture topic can be any category.

Other Contest Rules

• Photos being submitted have never been previously published.

• All entries become the property of KHSI to be used or reproduced at the discretion of KHSI. Owners of the photographed sheep may continue to use the photos.

• All entries must be submitted in digital form, at least 300 dpi, either by email or on a disk or CD. (Camera and copy shops and some discount stores can help you turn your best hardcopy photos into digital format. Call Operations at 479-444-8441 if you need suggestions on this).

• Entries must be submitted in the name of the person who took the photograph.

• Entries are limited to two per person per category.

• Provide the following information in an email or in a file on the disk or CD:
  1. Title of photo
  2. Category (from the seven listed above) into which it is being entered
  3. Photographer’s name
  4. Mailing address
  5. Phone number
  6. E-mail address
  7. Approximate date photograph was taken
  8. Approximate location of where photograph was taken

Questions? Please call or email KHSI Operations at khsint@earthlink.net or 479-444-8441. We do want to acknowledge that we used ASI photo contest guidelines as the basis for the KHSI contest.
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KHSI Expo Sale (Boonsboro, MD)
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Summer 2008

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The pedigrees of our lambs include the genetics of these rams:
• Goliath
• Samson
• Fully Loaded
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• Big Stuff
Editor’s Note: This is the second in a series of interviews with KHSI members.

Note: Text and phrases in italics are questions and comments from the Katahdin Hairald.

Andrea Licciardello, known as Henry, is the only Charter Member of KHSI that is still active in KHSI. Henry had Katahdin sheep prior to the forming of Katahdin Hair Sheep International, the first Katahdin association. Henry was born and raised in New Jersey. His parents emigrated from Sicily and were truck farmers in New Jersey. At that time many in New Jersey, including Henry’s parents, raised vegetables. New Jersey is known as the Garden State because of its history of being a major source of vegetables for New York and the east coast.

Why did you choose Katahdins? I had been raising sheep for several years. We kept 20-30 wool sheep. Over the course of a few years, I had finally sheared enough sheep, that I was practiced enough to get the shearing done. But doing it only once per year – Boy did my back hurt. Shearing was the reason I chose Katahdins.

When did you buy your first Katahdins? In 1982, I came in from shearing the sheep and asked my wife, "Are there sheep that don’t need shearing?" Two months later, my wife Janet showed me an ad in The Shepherd magazine for sheep that did not need shearing. In the late summer of 1982, I drove to Vermont and bought 20 ewes and a ram from the Jepsens. The Jepsens were getting older and close to selling out of the sheep business. I picked the 20 nicest ewes with the cleanest coats and one ram. The Jepsens had recently added St Croix hair sheep to their flock, but I didn’t buy any of those. (The Jepsens owned the first satellite flock of Katahdins. They had bought their sheep from Michael Piel in the mid-1970’s). I paid $200 per ewe and $300 for the ram.

Did you have an agricultural background before raising sheep? We had a truck farm in the “Garden State” of New Jersey and raised vegetables including asparagus, tomatoes, melons and eggplant. Every little farm had horses, cows and pigs in the late 40’s and 50’s. We farmed using horses back then. Over time, most of the farms in New Jersey sold out to developers.

What has kept you in the Katahdin business? We own 50 acres of sandier soil and do not have it in vegetables. The land is good for sheep. We have stayed in the business by not buying hay and running a moderate animal density. I also enjoy raising animals and until the last few years, I did not have to advertise to sell Katahdins. Early on, I tried to increase the number of ewes in our flock from 20 to 50, but I had so many requests for Katahdin ewes it was hard to build the flock. "They sold themselves”. Selling the Katahdins has paid for the purchase of a tractor, hay baling equipment and sheep handling equipment. Only three times in 35 years, have my ewe lambs gone to auction.

What are some of the highlights of your Katahdin raising career? I really liked selling whole trailer loads of ewe lambs. One time, I sold 60 ewe lambs at one time. Another time, I sold bred ewes to buyers 300 miles north of Calgary Alberta. They were delayed and arrived when the ewes were due. They loaded 60 ewes into a double-decker goose neck trailer. It took them two weeks to drive home because the ewes kept lambing and they had to stop. They never lost a lamb. We also sold 50 lambs into Montana two times.

What do you do besides farming? For many years, I was a produce auctioneer. Then voice auctioneers were replaced by electronic boards. More recently, I do a weekly auction of used furniture.

Where do you market your meat lambs? In recent years, we have sold our meat lambs at New Holland, Pennsylvania. This is a large Eastern market that auctions over 1000 head of sheep per week. They prefer lambs less than 80 pounds.

Have you thought about raising other breeds of sheep since starting with Katahdins? We tried Dorpers from 1998 to 2002. The Katahdin-Dorper crosses sold very well. The...
first 50% cross had lambs with great muscling. However, the ewes had more foot problems and parasite issues than the Katahdins. We lost adult ewes to parasites, which we had never had happen with the Katahdins. The 75% Dorper-Katahdin crosses had increased problems and the lambing percentage decreased even more. We now have only full blood Katahdins. Several of our Katahdin ewes have never had their feet trimmed.

Do you have any interesting stories to relate about the early Katahdin days or people involved in Katahdins? Mrs Barbara Piel was very generous. In 1985, she provided the funds for all flocks of the Charter Members to be inspected. I was also on the first KHSI Board of Directors. The KHSI Annual meeting was in Louisville Kentucky in November for the first several years. There would be the directors and three to four members present. The board meetings dealt with shedding and coat inspection issues. (Note: Prior to 1998, all sheep had to be coat inspected to be registered. The KHSI board had to deal with the offspring of ewes and rams that died prior to inspection. Without inspection, the sheep could not be fully registered).

Do you have any thoughts or comments for those of us who have joined KHSI after you? I think it is important to keep a Katahdin a moderate size sheep. A 130-170 pound ewe is large enough. Don’t make them larger. We used to lamb in the barn in February. Since we switched to lambing in April on pasture, it doesn’t even seem like you have sheep. I really like sheep and have a great love for animals.

The Katahdin Hairald thanks Henry Licciardello for his time and thoughts. We thank Henry for his early and long time support of the Katahdin breed and KHSI.

Katahdins & Katahdin Breeders In the News

Milledge & Roxanne Newton’s Katahdins made Times Square! Milledge and Roxanne are members from Georgia. They have the first sheep operation in the USA to be “American Humane Certified” by the American Humane Association. This is not to be confused with more publicly known Humane Society (HSUS). The American Humane Association, established in 1877, is concerned about abuse/neglect/exploitation of both animals and children. Pictures of the Newton’s Hound River Farm and their Katahdins were exhibited on the huge outdoor Reuters Sign in Times Square nine times between Feb 26th and 29th, 2008.

Carl Ginapp and his family were featured in a March 27 article in the Globe Gazette. The Ginapps live in Mason City, IA. http://globegazette.com/articles/2008/03/27/news/local/doc47eb0d216ce23349031789.txt

Ruth Bleau’s picture, information about her flock and publicity about her April 12 on-ranch seminar were featured in an article March 14, 2008 published in Nevada County Union. http://www.thuneunion.com/article/20080314/NEWS/849463695.

Ruth Bleau lives in Grass Valley, CA.

Kathy Bielek, KHSI member from Wooster, OH, presented results of her USDA SARE (US Dept of Ag, Sustainable Agriculture and Research) grant at the National SARE meeting in Kansas City March 25-27. She also received a third SARE Grant in March 2008 to evaluate parasite resistance in Katahdins.

Is your flock in the news? Have you seen other Katahdins in the news? Send us the info and we’ll list it here! Email to khsint@earthlink.net or call and leave us a message at 479-444-8441.

Summer 2008 Hairald Calendar

KHSI periodically posts information on sheep sales and sheep events as a public service. Posting sale and event information does not imply endorsement or verification of the claims of any sale or event. Sales and events posted are not sanctioned by KHSI unless otherwise noted. Contact the KHSI Operations Office to ask for your event or sale to be posted. 479-444-8441 or khsint@earthlink.net.

June 13-14, 2008**. SCKA (South Central Katahdin Association) Annual Meeting & Private Treaty Sale. Pike County Fairgrounds, McComb, Mississippi. Contact Earl & Mickie Burris for more information at shackaloa@aol.com or 601-567-2513 or 601-551-6970


Sept 25-27, 2008**. 2008 KHSI Expo. Includes educational workshop and a premier Katahdin Sale. Boonsboro/Hagerstown, Maryland


** Indicates there is an article with more information in this issue of the Hairald.
Selecting Superior Meat Sheep in the 21st Century

By James Morgan, PhD

Author’s Note: Parts of this article were previously presented at the American Sheep Industry’s Jan 08 Annual Meeting in Las Vegas, NV and the Canadian Sheep Federation Board of Directors Meeting in Victoria, BC in Nov 07. An earlier version of this article was published in the Feb ’08 issue of The Shepherd. This current version has been updated with information about the impact of new DNA technology for sheep that will be released in the coming year.

In the next few years, there will be increased availability of multiple DNA tests that identify specific genes, alleles or regions of chromosomes that enhance meat production, performance and disease resistance. Will this totally change how sheep producers select superior stock?

Last Three Decades of the 20th Century

Before thinking about the future, a look at the end of the 20th century is needed. By far the greatest advancement in selecting superior livestock genetics in the latter half of the 20th Century was the development of quantitative genetic procedure called Best Linear Unbiased Predictor (BLUP). These advanced statistical analyses provide EPDs (expected progeny differences). The theory behind BLUP originated in the 1950s, but its practical use by livestock breeders required more accessible and powerful computers. The use of BLUP and the resultant EPDs have dominated selection of superior stock in the US beef, dairy and pork industries since the 1970s and 80s.

Start of the 21st Century

At the start of the 21st century, EPDs produced by BLUP are still the best that producers have to identify genetics for superior performance. There is nothing better. Ten, fifteen or even one hundred DNA tests will not replace BLUP when it is used to identify balanced optimal performance. Growth and reproduction are controlled by hundreds of genes with complex interactions between them. So the livestock industry will still require the on the ground evaluation that BLUP provides to determine how new genetic combinations perform in a multitude of environments and production systems.

EPDs increase accuracy in predicting the performance of the progeny of breeding stock. In sheep, common traits include weaning weight, post-weaning gain, prolificacy, milk, loin/rib eye area, back fat and also fiber traits for wool sheep. Two difficulties in selecting superior breeding stock are: a) the observed phenotypes of all important performance traits are only partially heritable and b) how to create selection indices that balance performance for the economically important traits. Even when raised in the same flock under the same conditions, selecting the lambs with the fastest growth is not as accurate as using EPDs. Comparing lambs born in different seasons and different years or in different flocks is even more difficult. Basically, we use EPDs to increase the accuracy of selection. Each performance trait is composed of both genetic and environmental components (“nature and nurture”).

We do need to step back from the use of EPDs and DNA tests and point out a couple of things. EPDs are not the only components used to identify superior animals. A teacher and mentor of mine, Dr. Charles Parker, likened the selection of superior genetics to a three-legged milking stool. The three legs of the stool are performance, conformation and pedigree. Animals that are structurally incorrect and have unacceptable conformation need to be culled.

Ignoring structural soundness and conformation will eventually result in animals that are unacceptable. Another issue is that many livestock producers have used EPDs to maximize performance and have not balanced selection. Just as with race cars that are designed for extreme performance, continually selecting for maximal post weaning growth and loin eye can result in extreme animals with significant production issues. Race cars are not balanced for comfort or efficiency. A protocol for selection of superior livestock for meat performance needs to balance economically important traits, including reproductive efficiency and maternal behavior as well as rate of growth and muscling. Too often, breeding animals are picked only for maximal performance for only one or two traits and are not balanced.

Superior performing stock needs optimal growth, reproductive efficiency and carcass yield. One approach is to use indices which weight each trait with its importance for the breed and production system. Indices are typically constructed for “maternal”, “terminal-sire”, wool or dual purpose breeds. A few indices also include costs of inputs (forage, purchased feeds) and market (selling price).

New Sheep Selection Indices

Many of the advances in selection of superior sheep genetics in the 21st century will be the result of developing improved selection indices that weight and balance the most important traits needed for increased profit and production. EPD selection indices are available in the major sheep producing countries but they can be improved. Two examples of indices created in the US for the National Sheep Improvement Program are highlighted in this section. Other countries have good indices as well. They can all be improved.

Lamb Survival to Market. Common sense indicates that we need to emphasize selection for lamb survival to market age. Too many sheep in the US and the world require

Continued on page 19
significant assistance during lambing and the lamb’s first few days. If they survive the first few days many die before market. Common sense is that no matter how superior the genetics are for growth or muscling, if the lamb isn’t born or alive at market, there will be no income and no meat. In the past, lamb survival has been considered important only for maternal breeds.

Preliminary studies at research centers in the USA indicate that the sire breed selection may affect lamb survival to market by at least 15%. Breed sires were used on a common ewe breed so that prolificacy and maternal behavior had no effect and the differences in survival and production were due to the breed used as the sire. If the producer is selling lambs by the pound at weaning or slaughter weight, a 15% decrease in survival has a much greater effect than a 15-30% increase in weight gain. The producer in most marketing scenarios in the USA will be rewarded by using sires with moderate gain and high survival and not selecting sires only on maximal gain and muscling and ignoring lamb vigor. These producers will not be bragging about weight gains over coffee at the cafe on Saturday morning, but quietly smiling about their bank accounts being fatter.

Future sheep selection indices must include survival as a component trait, no matter whether the breed is used as a terminal, maternal or dual purpose breed in the production system. An example of the importance of survival for meat production is the Pounds Lamb Weaned/Ewe Lambing index developed for NSIP for the Katahdins and in the future for other breeds. This trait was developed by Vanimisetti, Notter and Kuehn from Virginia Tech (2004, 2007). Their evaluations indicate the relative importance of each component that contributes to total pounds weaned. Genetic correlations in this study emphasize the importance of number weaned. The genetics for ewes that reliably wean is much more important at predicting pounds weaned than other traits such as growth or number born (Table 1). A mature Katahdin ewe averages 2.1 lambs/litter and there are significant numbers of triplet litters (Table 2). This study once again emphasizes the importance of selecting for live weaned lambs rather than just for number born, growth and superior conformation. One of the key points from this study is that 94% of the “total pounds weaned” in Katahdins can be predicted by the number weaned. Other breeds or cross-breds are surely similar. Weaning percentage and total pounds weaned are heritable (0.10 to 0.14) in the Katahdin.

| Table 1. Genetic correlations among ewe productivity and component traits in the Katahdin |
|--------------------------------|----------------|----------------|
| Trait 1                      | Trait 2        | Genetic correlation |
| Number born                  | Number weaned  | 0.5             |
| Number born                  | Average pounds weaned | 0.16           |
| Number born                  | Total pounds weaned | 0.42           |
| Number weaned                | Average pounds weaned | 0.52           |
| Number weaned                | Total pounds weaned | 0.94           |
| Average pounds weaned        | Total pounds weaned | 0.77           |

Ewe productivity measured as total pounds weaned per ewe lambing

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From Vanimisetti, Notter & Kuehn, 2004

Selection Indices Weighted for Financial Return. Seed stock producers in the major sheep producing countries of the world use indices to meet breeding objectives. All of these include financially important traits, but few weight the component traits for production costs and market returns. To optimize selection for financial return, seed stock producers need indices that weight the economic costs and market value. Recently, the National Sheep Improvement Program in conjunction with researchers at Virginia Polytechnic Institute and State University and Montana State University released a new breeding objective for Tarlee sheep (Borg et al, In Press). Targhees are a medium/fin wool breed general purpose breed often used in extensive range conditions of the western USA.

Borg and coworkers produced an aggregate breeding value predicted directly from a published multi-trait EPD by weighting each EPD by its economic value. Weightings were determined by using a bio-economic model that predicted changes in animal performance, feed requirements, costs and returns associated with changes in each EPD. Feed costs for ewes and lambs were predicted to be greater with selection for increased weaning weight, maternal milk, fleece weight and percent lamb crop. The majority of these flocks sell lambs as feeder. Lambs with high weaning weights are discounted by the lamb buyers. Thus, the model had to include economic losses for lambs discounted for being too large.

Borg’s results are summarized in Figure 1. It is a complex figure, but makes a few very important points.

The simple approach to understanding Figure 1 is that if a trait has a value of greater than 100, then selecting for that trait will increase economic return. If the height of the bar is less than 100 then selecting for that trait will decrease economic return.

Each bar in the graph indicates the change in economic value from
one generation to the next by selecting for improvement in one trait while holding the genetics for all other EPD traits constant. The trait of interest is moved one standard deviation greater between the two generations. Values greater than 100% for a trait indicate an increased financial return by selecting for that trait. Values below 100% indicated decreased return for increased selection for that trait. The greatest economic return for both Targhee farm and range flocks is created by increasing the percent lamb crop. The amount of increased economic return varies based on cost of feed and the discount for selling heavy feeder lambs. Significant increase in value of marketed lambs is also realized by selecting on weaning weight. Note that increased ewe size (yearling weight) decrease economic returns.

![Figure 1. Returns over feed costs with different selection criteria with high and low feed costs and with and without discounting for heavy lambs.](image)

Key points from Borg and co-workers’ results include that no matter the cost of feed or the price received for lambs: a) the greatest financial return results from increasing the number of lambs born. While the selection index does not weight survival, increasing the number born is predicted to increase the number of live lambs marketed. b) Increasing rate of gain (weaning weight) is predicted to increase financial return but to a lesser extent than increasing number born, but the amount of return for increasing weaning weight is affected by cost of feed and price received for lambs. c) Increasing yearling weight (mature size) of the ewes decreases financial returns. The authors state that larger ewes eat more feed and have higher maintenance costs.

**Genomic Work**

The genome of sheep has been sequenced. In the future, as genetic markers and specific genes are identified with important production traits, sheep breeders will be able to send in DNA (blood samples or hair) and receive results back indicating whether a sheep is carrying specific traits. The most common current use of this in the USA sheep industry is for scrapie resistance as many seedstock producers sell sheep that are RR at codon 171. Similarly, other genes available for selection include the myostatin gene in Texels and the Carwell gene in Dorsets which both improve muscling, carcass yield and decrease fat thickness. Selection for these genes increase loin eye area (longissimus dorsi) and decrease fat thickness without any negative effects on tenderness. These genes can be added to many breeds with open flock books. In the future we can expect several more DNA tests to be available.

**New DNA Technology To Be Released.** In the next year, new DNA technology will be released. For $300 to $1000, a potential service sire can be tested at 64,000 different sites in the sheep genome. These are called 64K SNP chips (single nucleotide polymorphisms; acronym pronounced “snip chips”). This is an incredibly powerful tool. The power of this new DNA tool is way ahead of our knowledge of the sheep genome to know how to use it. Over the years it will become more useful, as the sheep scientists and genetic companies determine which of these 64,000 sites at which sheep can differ are functionally important. At this point, few are known.

Let’s take an example. In the next year, we will be able to compare the differences at 64,000 different sites in the sheep genome for a Katahdin sire, Suffolk and a Texel sire. We find a few hundred to a thousand DNA sites where they differ, but which of these 64,000 sites are important? Which of the 64,000 make a Texel a Texel and make a Katahdin a Katahdin? Which of the several differences lead to shedding? It will take many years of research to determine which of the 64,000 SNP’s (single nucleotide polymorphisms) are important and for what traits.

In a few years, the leading sheep breeds and leading breeders will be selecting and selling sires based on EPD indices that couple EPD traits and with specific DNA markers identified by the 64K SNP Chip. EPDs will remain important because a) EPDs integrate the activities of many genes and how they affect growth and milk and prolificacy and b) superior EPDs will be very helpful in the identification of DNA markers in the 64K SNP chip. Artificial insemination will be required for leading breeders to recover the costs of using the 64K SNP chips to genotype their rams. If ewes are genotyped with the new chips, then embryo transfer will help offset the costs of these tests.

**Disease Resistance.** Of particular interest is the identification of gene markers or genes associated with increased disease and parasite resistance. New Zealand researchers have patented tests for genetic resistance to foot rot and gastrointestinal parasites. It remains to be seen if these tests identify foot rot and parasite resistance in all breeds of sheep and for all nematodes throughout the world. Using a genetic lab test for disease resistance
First crop ewe lamb (PVR 134) by Powerline and PVR 045. Pictured at 85 days.

First crop ram lamb (PVR 133) by Powerline and PVR 045. 60 day wt. 73 lbs. Pictured at 85 days.

Introducing

POWERLINE

SWP-116, RR triplet out of Top Choice (from Stretch) and imported Canadian dam JB68M

We have bred Powerline to 25 of our ewes.

TAKING ORDERS NOW

First lamb crop will be ready early June. All sale lambs will be RR and genotyped.

Thanks to John Stromquist, this exceptional herd sire is making his home in central Texas.

Gaylin Ratliff
2901 Stanley Lane
Brownwood, Tx  76801
325-646-4683
Email: ratlifpvd@pgrp.com

We will have lambs at SCKA Sale in McComb, MS and Midwest Stud Ram Sale in Sedalia, MO
White Post Farm
A Significant Difference

Top Choice
SWP 06-135
sired by Stretch

Father of them All!

Planning to take 2 ewe lambs and 2 ram lambs to Sedalia.
Hope to see you there!

John and Steve Stromquist
White Post Farm • Durand, IL 61024
Phone 815-629-2159 • email Stromquist@stateline-isp.com
Please visit our website www.stromquist-katahdins.com

✓ NSIP Records available
✓ Certified Scrapie Free

Probably the best lambs we've ever had!
Taking Orders NOW
Ready the first of June
KHSI 2008 Sanctioned Sale Requirements

The 2008 KHSI Expo Sale will be held on Saturday, September 27, 2008 at noon in Boonsboro, Maryland. Requirements to enter the 2008 KHSI Sanctioned Sale are listed below. Animals need to arrive in Boonsboro by 5 PM on Thursday, September 25th and will sell at noon on September 27th. If sellers or buyers would like to be on a list to provide transportation or share transportation costs, please contact Jim Morgan, KHSI Operations at khsint@earthlink.net or call 479-444-8441.

The consignment forms will be posted at the KHSI website, www.khsi.org (events page) or available from KHSI Operations by July 1. If you have any questions, contact Jim Morgan in the KHSI Operations Office, 479-444-8441 or khsint@earthlink.net.

- KHSI registered Katahdins are eligible. Members can also consign 87.5% ewe lambs.
- Sale animals must not be docked or clipped.
- Accurate recording of date of birth, type of birth (1-2-3-4), and type of rearing (0-1-2-3-4 measured at 30 days of age). Must be provided for each animal.
- Dam production records are required (number lambs born/reared each year of production).
- 60-day weight must be provided (taken on or around 60 days of age; 45-90 days of age, but prior to weaning). The date at which this weight is taken must be recorded.
- Birth weights and 120 day weights are optional, but are highly recommended.
- Consignment Fee of $20. Maximum of 2 animals/class. Classes include: Rams & Ewes for the following ages. Yearlings (9/1/05-8/31/06), Fall (9/1/06 - 12/31/06), Jan 1-Feb 15 born, Feb 15-Mar 31 born, April 1 and after.
- Interstate Health Certificates (B. ovis tests for rams) and Mandatory or Scrapie Flock Certification Program Tags are required.
- Consigned animals are required to have been bred and raised by the consignor.
- One ewe or ewe lamb must be consigned for each ram.

KHSI recommends that sellers send papers and payment for registrations and transfers to the KHSI Registry, as a courtesy to their buyers.

(KHSI Registry information on page 1 of this issue.)

Summer 2008 The Katahdin Hairald • www.KHSI.org Page 23

Do I Have a Winner or a Loser?

by Gary E Ricketts
Reprinted by request with permission.

I am rather confused these days
About the value of my yearling ram.
One judge called him rugged and well-muscled.
Another said he was structurally correct and stylish.

However, a third said he was too refined and plain.
And a fourth said he was light muscled and flatribbed.
Some say he is very growthy.
While others say he is too small.

At some shows he was the champion,
But at others he was way down the line.
Some call him a great stud prospect,
While others say it is not good enough.

It really is confusing to me
When others opinions do not agree.
Is my really as good as some say,
Or is he as bad as others think him to be?

Judging is simply one person’s opinion
On any give day,
And somewhere in all this confusion
I must come to a conclusion.

I must make my own judgment
As to the value of this ram.
In so doing, some information is available to me
That the judges did not know.

He is a twin from a very productive ewe,
And I have kept four of her daughters.
His weaning weight last year
Was the very best in my flock.

His ultimate test will come
Not at the fairs and shows,
But at breeding time
And during the lambing season.
The performance of his sons and daughters
Will ultimately prove his true worth.
Visually, I like the ram of mine,
But I like even better the performance behind him.

So time will provide the final judgment.
On this yearling ram of mine.
His performance beyond the show ring,
Will far outweigh his performance in the show ring.
Classified Ads

Classified sale ads for Katahdin or Katahdin-cross sheep are free to all KHSI members in the Katahdin Hairald and at the KHSI website. For the Hairald, please limit length to 40 words. Sheep Wanted Ads can be placed for free for non-KHSI members. Ads for the Fall 2008 Hairald are due July 1, 2008. Contact KHSI Operations, 479-444-8441 or khsint@earthlink.net

SHEEP WANTED

LOUISIANA

Butcher Lambs. Meat Lambs. 50-100 lbs. Nabill Kased has opened a cafe along with his ethnic grocery store in the suburbs of New Orleans. He needs meat for both and has asked me to contact Katahdin breeders. He wants to feature Katahdin lambs at both places. He is working toward farm fresh semi-organic eatery. Please call him if you can deliver lambs. 504-400-2191. Posted by Les Jordan, KHSI member from Mississippi

MINNESOTA

RR Black Ram. Wanted. RR black ram located in Minnesota. Send an email to Bosheleur@aol.com with Black Ram in the subject line. Prefer pictures. Does not have to be breeding age at this point. Curtis Van Leur, 651-438-3826

OHIO

Ewe Lambs. Black & White or Brown in color ewe lambs. will bottle feed. Lewie Hindman, 740-292-0919.

PENNSYLVANIA

Five Full Blood Ewe Lambs. Five full blood Katahdin or very high percentage 08 ewe lambs. Need not be registered, but quality and multiple birth. Please contact with prices and details. Prefer white to lighter uniform color. Erich. Klein, Carlisle, PA 717-249-8694 theejkleins@embarqmail.com

TENNESSEE

Registered Ram Lamb or Yearling Ram for fall breeding. Prefer color. Scott at skdyer@blomand.net or 931-235-0212.

SHEEP FOR SALE

ALABAMA


ARKANSAS

North Central Arkansas. Registered Rams & Ewes. Pregnant 06 & 07 ewes. Also, mature ewes, rams, ram lambs and ewe lambs. Different genetic lines. Certified Scrapie Free (SFCP). Mary Van Anrooy, Clinton, AR. 501-893-6158. jovc@earthlink.net - Photos available.

CALIFORNIA

Northern CA. Registered Rams and Ewe Lambs. Packages available: unrelated ram and ewes. Hal Higgins, Oroville, CA 530-679-2128 or higgins@shearersheep@sbcglobal.net. Sheep for sale year round.

COLORADO

Western Colorado. Entire Registered & Commercial Flock. 6 registered, 2 registerable & 4 commercial(Dorper or Barbados crosses). All less than 2.5 yrs. Proven ram 2 yrs old. $1500 OBO for the whole flock. 1 registered yrlg ram $175. 970-874-5439 Logos423@gmail.com http://www.divinecanine.org/flock/index.htm Chet & Amy Wise Delta, CO.

FLORIDA

Registered Ewes & Ewe Lambs. Downsizing flock. 18 ewes & ewe lambs. Can sell them individually or make a deal on the entire group. Wonderful opportunity to hit the ground running in the hair sheep business.

ILLINOIS


Southern Illinois. Registered Fall Ram & Ewe Lambs. Sep/Oct 07 ram and ewe lambs (2 each). Registerable. RR Sire. $250 each. Flock is Certified Scrapie Free (SFCP). Joyce Geiler, Pocahontas, IL at 618-669-2440 or jgeiler@hotmail.com

INDIANA

Southern Indiana. Registered Feb born Lambs. All colors. Ready to go in April. Lori Howard 812-839-3639, HAW@SEIDATA.COM Canaan, IN

Northern Indiana. Registered Spring Ram & Ewe Lambs. Registered Spring ram & ewe lambs out of RR Sires. SFCP. Available in June. Born Jan-Apr. Excellent Stock. 574-267-4308. or bobandruthie@embarqmail.com Robert Frantz, Warsaw Indiana

IOWA

Northern Iowa. 40 Registered Yearling Ewes. White, good mothers. $200 ea. Ready in May in time for the spring grass. Carl Ginapp, Mason City 641-425-0592, cmginapp@myclearwave.net
Classified Ads, continued

SHEEP FOR SALE

KANSAS

KENTUCKY
Central Kentucky. Registered RR Ram & Ewe Lambs. Born 3/08. Certified Scrapie free flock (SFCP). All multiple births. A few yearling rams available. EPDs provided on stock. Kay Cloyd, 859-254-2840 or kaycloyd@cs.com

MAINE
Registered Ram & Ewe Lambs. Select Apr born lambs out of RR ram. SFCP 6 yrs. In NSIP. FAMACHA monitored. Bred for conformation, size, health, parasite resistance, temperament & genetic diversity. Some direct descendents of Piel Farm foundation ewes. Ready 7/08. 207-845-2888, stwhite@fairpoint.net www.littledovekatahdins.com

MISSOURI

OKLAHOMA
North Central Oklahoma. Registerable Feb/Mar Ewe Lambs. Registered flock, SFCP. Claude & Mary Jane Rice, Barnsdall OK 918-846-2426, mjr30@stinternet.net

OREGON
Western Oregon. Registered & Commercial Ewes available at Springwater Stables, Oregon City. Range of color and age. Package prices offered. For information & pictures visit our new website www.web.mac/is.amira

Pennsylvania:

Central Pennsylvania. Registered Jan-born QR & RR Ewe & Ram Lambs. Selling 12 of the 95 ram lambs born this year. Highest adjusted 60 day wts out of multiple births, aseasonal, easy-keeping ewes. Cadie Pruss, Ewe Win Farm acadia@lcworkshop.com, 717-242-4154


Pennsylvania. Purebred Apr 07 Ewes exposed for early April/May lambing. Pasture raised, excellent bloodlines, all twin/triplet born except for 3 singles from yrling ewes. Registerable. utting.farm@gmail.com 717-225-8837 or 717-521-6701 www.maranathameadows.com

TEXAS

North Texas. Registered Mature Ewes, Ewe & Ram Lambs. 20 very productive young, mostly white, QR ewes, on 2nd or 3rd lambing. Large selection of Feb-Mar born ewe and ram lambs sired by an RR Goliath bred ram. $200-$300. near Dallas, Mary Bowsher 972-544-8909, mbwosh@msn.com

Texas. Registered Ewes, RR & QR Ram Lambs. 20 Ewes with lambs. Will have ewe & ram lambs and rams. 3 RR & 2 QR rams; excellent. Paula & Randy Ayers. 830-985-3186 pkayers1022@aol.com

WASHINGTON
Registered Ram & Lambs & Ewe Lambs. 3 rams available. 2 yr old proven ram, red in color, $250. Two 9 mo old ram lambs, $175 ea. All 3 rams twin-born. 2 Registered ewe lambs $135 ea. Jake @ 509-935-0729 or atvs@netscape.com Addy, WA

NE Washington. Registered Ewe & Ram Lambs. 7 registered ewe lambs, mostly pinto, 2 chocolate, $135 ea. 9 males $75 ea. 2 suitable for breeding rams, one chocolate, one pinto. $175 ea. Will wether on May 15th if no calls for rams. 509-486-8123, lurch@wildblue.net

WEST VIRGINIA
is particularly attractive, since very few producers wish to expose their whole flock to a disease or high levels of parasites to identify which of the animals are more resistant. The thought of exposing all animals in a flock to contagious foot rot to determine which are genetically resistant to foot rot is particularly unattractive and inhumane.

Selection for genetic resistance to gastrointestinal parasite using BLUP and fecal egg counts (FEC) has been successful in many countries. Australia, United Kingdom, New Zealand and the USA have all released FEC-EPDs that identify sires that have offspring with increased parasite resistance. With the development of gastrointestinal nematodes with resistance to multiple anthelmintics (dewormers) the need for genetic tests for parasite resistance is important. It will be a huge labor saving approach compared to collecting fecal samples and counting nematode eggs that the current technology involves. The question still remains whether resistance to gastrointestinal parasites can be identified with a single DNA test, but this is greatly needed.

**NEEDED RESEARCH**

The sheep seedstock industry needs research and more funds for research in the following areas. All selection indices need to include lamb survival to at least weaning age. The researchers can develop these indices but it will require a high level of commitment from those breeders submitting to NSIP and other genetic evaluation programs to track and accurately report birth and then losses. Genetics for survival is often complicated by predator losses which usually are random and not due to genetics. Selection indices need to be balanced for optimal performance and increased economic return. Research needs to be continued on specific DNA tests that identify traits and markers that improve growth, muscling and disease resistance. Finally, seedstock producers will need help from the sheep researchers to develop indices that incorporate DNA tests with EPD selection indices and produce balanced genetics.

**SUMMARY**

After 40 years of use in the livestock industry, the major technology for identifying superior performance in sheep breeding stock is still BLUP (Best Linear Unbiased Prediction) and its use to produce EPDs. Developments in the last 40 years have included the release of several new EPD selection indices that improve the seed stock industry’s ability to identify superior genetics. In particular, it is suggested that breeding objectives for terminal sire as well as maternal breeds include trait selection for lamb survival. Recent evidence indicates that sire breed selection can have significant effects on lamb survival and thus financial return.

Sheep genetic researchers need more encouragement and especially more funds to develop indices that link genetic trait selection to economics of production and marketing. Using indices weighted by bio-economic factors will increase the financial return to sheep producers. As anthelmintic resistance continues to increase, the sheep industry needs to continue to prioritize selecting superior genetics for parasite resistance. In particular, the industry needs to investigate the potential of breeds from the tropics or with tropical breed ancestry to greatly improve the genetics for parasite resistance in commercial meat production.

Within five years, the leading sheep breeds and breeders will be using the new power of the 64K DNA SNP chip coupled with EPDs. They will improve sheep producers’ ability to identify superior performance and disease resistance.

Breeds interested in staying commercially important in the future will need to keep up and use the new technology coupled with new EPD selection indices.


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**Check Those Scrapie Flock Certification Program Dates**

*By KHSI Operations*

Every few years, a KHSI member in the Scrapie Flock Certification Program (SFCP, also known as the voluntary Scrapie program) buys sheep from a flock with lower status date. In these cases, the flock reverts to the status of the flock with the lower date. In one case, a flock lost 3 years of status and in another case; a flock went from certified Scrapie free to having less than one year in the program. Purchases of rams do not affect status, but the purchase of ewes may affect status.

There can be confusion. Many sheep owners do not understand the difference between the Mandatory and Voluntary programs. So, if you are in SFCP (the voluntary Scrapie program) and you do not want to change the SFCP status of your flock, be sure that the ewe(s) being brought into the flock is from a flock with equivalent or greater status. Note, that if ewes from several flocks are transported in the same trailer, technically all ewes convert to the lowest status in the trailer. Sellers of sheep need to know which program they are in. If the seller is in SFCP, they need to know their current health status. Thanks.
This combination package of depth, width, length, soundness of feet and legs, femininity, and an A coat is now in production with excellent mothering and milking ability – raising “380” lambs.

Our consignment to the Midwest Stud Ram Sale will be bred the same way. Our consignment will consist of 6 RR rams – yearlings, fall born, and spring. We will also consign 6 RR ewes – yearlings, fall born, and spring. All lambs will be sired by New Design, Stacked, NDS 6730 as well as AI lambs by “380”, a Canadian outcross ram.

We have a promising group of ram and ewe lambs to select from. We will deliver free of charge to the Midwest Stud Ram Sale or can arrange delivery to many area’s of the country.

NSIP Flock – Voluntary Scrapie Program Certified – All sheep Genotyped

NDSU Animal Science Department · 100 Hultz Hall, Fargo, North Dakota 58105
Wes Limesand, Flock Manager · Sheep barn number (701) 356-3295 · sheepbrn@ndsuext.nodak.edu
Bert Moore · Office (701) 231-7651
Order NOW

We have beautiful white lambs and flashy colored ones.

It's our best lamb crop ever!

Lambs sired by:
Sonny (NDS 5553)
Uno (NDS 3537)
Patches (NDS 07-383)

Brood ewes & yearling ewes for sale. Ewe & ram lambs after weaning end of May.

GIVE US A CALL!

Our triplet lambs are doing as well as the singles & twins!

A thick brood ewe with one of her 2-week old twin lambs.

Taking top yearling ewes & rams to Midwest Stud Ram Sale in June

All rams will be RR; ewes will be RR or QR. Transportation to Sedalia is possible.

Tom & Maria Dosch, Frederick, SD
605-329-2478
email: ewemad@nvc.net • website: www.geocities.com/ewemad
# 2008 Katahdin Expo Schedule (Preliminary)
**September 26-27, 2008  Boonsboro, Maryland**

<table>
<thead>
<tr>
<th><strong>Thursday, September 25</strong></th>
<th>8:00 pm. to 9:30 p.m.</th>
<th>KHSI Hospitality at Four Points Sheraton</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Friday, September 26</strong></td>
<td>8:00 pm. to 9:30 p.m.</td>
<td>Registration and Refreshments</td>
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<tr>
<td></td>
<td>9:00 to 9:15 a.m.</td>
<td>Welcome</td>
</tr>
<tr>
<td></td>
<td>9:15 to 10 a.m.</td>
<td>An Overview of Sheep Research and Extension Programs in the Mid-Atlantic States</td>
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<tr>
<td></td>
<td>10:00 to 10:15</td>
<td>Morning break</td>
</tr>
</tbody>
</table>
|                            | 10:15 to 11:45       | Track 1: Genetic Improvement of Katahdin Sheep  
|                            | 12 noon to 1:30 p.m. | Lunch and Exhibits                      |
|                            | 1:30 to 4 p.m.       | Marketing Katahdin Sheep and Lambs      |
|                            | 5:00 p.m. to 6:30 p.m. | 2008 KHSI Annual Membership Meeting |
|                            | 6:30 p.m.            | Lamb and Goat Roast and Live Entertainment |
| **Saturday, September 27** | 8:30 a.m. to 10:00 a.m. | Morning Refreshments and KHSI coat inspector training |
|                            | 10 a.m. to 11 a.m.   | View Sale Offering                      |
|                            | 12 noon             | National KHSI Sale begins               |

## Advertisers Index (listed alphabetically)

- Blue Oaks Ranch, Robert & Ruth Bleau, California ........................................... 14
- Brokaw Farm Katahdins, Patrick, Brenda, & Lee Brokaw, Illinois ......................... 13
- Country Oaks Ranch, Mark & Sara Dennis, Louisiana ........................................ 7
- Dosch Katahdins, Tom & Maria Dosch, S. Dakota .............................................. 28
- Hound River Farm, Milledge Newton, Georgia .................................................... 2
- Jubilee Farm, Doug & Laura Fortmeyer, Kansas ................................................... 8
- Lambrecht Lamb and Land .................................................................................. 14
- Lazy B Livestock, Howard & Lavonne Brown, Oklahoma ........................................ 13
- North Dakota State University, Wes Limesand, N. Dakota .................................. 27
- Pecan Valley Ranch, Gaylin Ratliff, Texas ......................................................... 21
- Premier Supplies, Iowa ..................................................................................... 22
- Round Mountain Katahdins, Jim Morgan & Teresa Maurer, Arkansas ................. 11
- Shepherd Magazine, Ken & Kathy Kark, Ohio ...................................................... 9
- Sunset Ridge Katahdins, Greg & Matt McGinnis, Tennessee ................................. 15
- Warm Springs Katahdins, David & Nancy Maddox, Georgia .................................. 8
- White Post Farm, John & Steve Stromquist, Illinois ........................................... 22

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Get your Katahdins on the Web! Build a KHSI Breeder’s Page at the KHSI Website. Call 479-444-8441 for details.
An “Instant” Fence!

PermaNet™ 10/48/6

• A unique semi-permanent electric barrier for sheep, goats, cattle, llamas, pigs, predators and deer.

• Used at Premier when we need a fence for longer than a month but a permanent fence is too costly or may interfere with future plans. Very adaptable to hills and curves.

• Differs from other electric nets in height (48 in. tall instead of 35/42 in.); size of posts and steel ground spikes (larger and stronger); ability to be installed/removed rapidly (less—but still takes only minutes instead of hours/days. Needs no special tools or skills).

• To use successfully vegetation must be controlled by using a herbicide.

• $154 per 150 ft. roll. Other lengths, heights and vertical spacings of PermaNet are available.

Free Shipping
When ordering 1 or more rolls of net on our website. (Not available by phone.) Visit our website for details.

Ask for our 2 unique catalogs—both free!

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P. O. Box 778
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