EST 2020

EASTERN ALLIANCE

FOR PRODUCTION

Katahdins

Summer 2021 Newsletter

Letter from the President:

Hello,
I want to start by thanking our Education Committee for putting together this quarterly newsletter, packed with such great articles, announcements, tips, and industry news. This is just a preview of the great content our committee has planned for our upcoming Educational Symposium. I find myself looking forward to seeing everyone's updates and advancements in the American sheep industry. I hope you enjoy this information and are able to apply what you learn in your flock. Please feel free to reach out to us if there is a topic you would like to see covered.

Now is the time to register to attend our First Annual EAPK Symposium and Sale, July 9-10 in Abingdon, VA. Our educational sessions are designed to appeal to both new and experienced producers, and will be relevant to your system even without being a member of NSIP. Hotel information and sheep consignment information can also be found on the next page of this newsletter. I want to remind everyone, that the sale format is a bit different than many others. All consigning and bidding will take place online, however, many of the animals will be at the symposium for bidder evaluation. It is not required to bring your consigned animals to the symposium, but we do encourage you to do so!

Early bird registration is still live on the EAPK website until **June 11th**, with a small price increase after that date. The deadline to consign sheep is **June 26th**. Lot substitutions can be made until **July 6th**. We are all very excited to see you in Abingdon next month!

Brad Carothers,
President

New on the EAPK Website

Mark your Calendars for the Symposium and Sale 7/9-10

Looking for Stock? Try our Membership Directory

Blog Post: Selecting for Parasite Resistant Katahdins

Blog Post: Drug Withdrawal Times for Sheep

EAPK First Annual Symposium and Sale

July 9-10th

Abingdon, VA

Register HERE

Find Hotels HERE

Consign Sheep HERE

View Sheep and Register to Bid HERE

(keep checking back as consignments are added through the end of June)

Educational Symposium Schedule

EAPK Educational Symposium

Friday July 9th, 2021

10:00 am – 12:00 pm – Using on farm data: collection, analysis, and selection.

- Weights and Growth – Brad Carothers, Old Slate Farm – Mount Vernon, Ohio
- Maternal Traits – Isabel Richards, Gibraltar Farm – North Brookfield, New York
- Parasite Resistance – Roxanne Newton, Hound River Farm – Hahira, Georgia

12:00 pm – 2:00 pm – Lunch Break

12:30 pm – 1:30 pm Producer Panel Q&A

- Lee Wright, Rolling Spring Farm – Glade Spring, Virginia
- Kathy Bielek, Misty Oaks Farm – Wooster, Ohio
- Mandy Fletcher, Beyond Blessed Farm – Abingdon, Virginia
- Robert Walker, West Fork Farms – Alpine, Tennessee
- Etienne Richards, Gibraltar Farm – North Brookfield, New York

2:00 pm – Utilizing EBVs and genomics to aid selection decisions for commercial producers

- Dr. Scott Greiner, Virginia Tech Extension Beef and Sheep Specialist .

3:00 pm – Utilizing EBV's and genomics to aid selection decisions for NSIP producers.

- Dr. Andrew Weaver, North Carolina State Extension Specialist, Small Ruminants

4:15 pm – Annual Membership Meeting

Selecting Your Next Breeding Ram

By: Tom Hodgman and Roxanne Newton

Achieving genetic progress and meeting your production goals depends in large part on selecting the right breeding ram for your flock. No animal has a greater influence on genetic progress (or lack thereof) than your breeding ram. Selecting a new sire should be considered an investment in the genetic future of your flock. We all know that the ram provides 50% of his genetics to his offspring and we often hear the phrase that “your ram is half your flock”, so careful selection is important.

For many breeders, it all starts with the phenotype. That is, the physical appearance of the animal, but technically it also includes its birth type, rearing type, and various weights and measurements which can be used to evaluate its performance relative to its peers. Just remember that appearance is roughly 80% environment (nutrition) and roughly 20% genetic. In production flocks, structural correctness is important. This is especially true for traits that have a direct impact on function and longevity such as sound feet and legs and a proper bite. And of course, for rams a breeding soundness exam, or at the very least, a basic inspection of his testicles - checking for uniformity in size, presence of lumps, their size, and firmness - should always be done.

Too many shepherds base their decision on physical appearance alone and overlook even the most basic of production data. Although an emphasis (perhaps an overemphasis) on the birth type of the animal is fairly common, a review of the reproductive history of his dam or paternal granddam would be much more informative. Other basic production data can be useful as well.

Controlling for sex, mother's age, litter size, and rearing environment.

nter date of birth & weight, 60 day weighing date & weight, and adjustment factors using codes shown below.
ge, average gain and 60 day weights are calculated by the spread sheet. Enter data only in outlined cells.

Lamb Sex	Code	Ewe Age	Code	Litter Size & Rearing Environment	
Female	1	One	1	Singleton	1
Male	2	Two	2	Twins	2
Wether	3	Three - Six	3	Triplets	3
		Seven & +	7		

Lamb #	DOB	Wt.	Weigh Date	Wt.	Sex	EweAge	LitterSize	Rearing	Age	Ave Gain	60 day	Adj Wt
Example												
xample	8/14/04	8	10/19/04	48	2	3	1	2	66	0.61	44.36	46.14
19	8/20/04	8	10/15/04	42	2	3	1	2	56	0.61	44.43	46.21
14	8/14/04	7	10/12/04	48	1	3	3	1	59	0.69	48.69	52.59
15	8/21/04	8	10/17/04	39	1	7	1	2	57	0.54	40.63	48.76
16	8/16/04	9	10/18/04	41	1	3	2	2	63	0.51	39.48	46.19
17	8/19/04	10	10/10/04	46	1	7	3	2	52	0.69	51.54	64.42
24	8/14/04	9	10/16/04	55	2	3	1	1	63	0.73	52.81	48.06
25	8/14/04	8	10/13/04	47	2	7	2	1	60	0.65	47.00	47.00
26	8/19/04	7	10/22/04	64	2	3	3	1	64	0.89	60.44	59.23
27	8/16/04	8	10/16/04	61	2	7	1	2	61	0.87	60.13	65.54
36	8/21/04	9	10/16/04	56	2	3	2	2	56	0.84	59.36	62.92
37	8/15/04	10	10/6/04	52	2	7	3	2	52	0.81	58.46	66.65

Taking an “old school” approach by calculating 60 day adjusted weaning weights and average daily gains provides a measurement that’s easy to understand and allows direct comparison among lambs. Ask to see the raw data behind any ram you are considering purchasing (or planning to bid on). While you’re at it, ask for the average weights or fecal egg counts, for example, for his entire contemporary group.

Using estimated breeding values (EBVs) to determine which ram is best suited for your flock starts with understanding the strengths and weaknesses among your brood ewes. It's not realistic to expect one ram to fix all of the limitations in your ewe flock. Rather, an incremental approach is often needed. Starting with your production goals, think about what is most limiting in your flock. What's holding you back? Is it challenges from parasites on pasture, more rapid growth to market weight, or simply not enough lambs born per ewe? It helps to identify 2 or 3 traits that you think you need to improve on then review the current NSIP percentile report to see what the range of possible EBVS are and importantly what's the average EBV (i.e., the 50th percentile) for that trait. Keep those parameters in mind when you're perusing a sale catalog or sifting through the data on a series of candidate rams, you'll be a lot more focused and less distracted by all the other data. The Eastern Alliance has a series of fact sheets that can help you understand what the various EBVs tell you and how to put them to work.

Selecting a ram is one of the most important decisions we make as shepherds. Even more so when we only use one ram per breeding season or plan to expand our ewe flocks by retaining ewe lambs. A thorough review of possible sires for production-oriented flocks should include visual inspection as well as any raw data that the breeder has collected. Finally, NSIP breeders will be happy to share their animal's latest EBVs to further help you with your decision.


Ram lambs on test at SWAREC

Editor's Note: *Numerous quality rams with production data and EBVs will be available at upcoming sales. Follow these links to learn more:*
1st Annual EAPK Symposium & online Sale 7/9-10
2021 NSIP Online Sale 7/14
Virginia Tech SWAREC Ram Test and Sale 9/24

Timely Topic: Tis the Season - For Parasites!

The parasite which causes the most problems in the US and much of the world is the Barber Pole Worm or Haemonchus Contortus. There are other parasites, of course, which can cause scours or ill thrift, but Haemonchus is the most prolific and dangerous. It feeds on blood and can cause anemia and even death. It is the parasite we refer to here. Factors influencing levels of parasite infections include:

- **Season or time of year** – the Barber Pole worm is most active during the warmer, more humid times of the year.

- **Location** – in the deep South, parasites are more of a challenge in spring and fall, going mostly dormant during the hot, dry summers. By contrast, in the North East, parasite numbers typically build through the summer with the greatest challenge in late summer. Learn the typical pattern in your area from your county Extension office, your veterinarian, or local fellow shepherds.

- **Temperature and rainfall** – the Barber Pole worm eggs need temperatures over 65 degrees for at least four days in order to hatch and grow to the infective stage. Moisture is necessary for the larvae to travel up and down the grass blades. If it's too hot and dry, the larvae can't move up the grass. Be especially careful 2-3 weeks later after a rainfall following a long hot dry period when there will be a flush of infective larvae.

- **Stage of production** – late gestation and lactating ewes and young lambs are most susceptible and typically shed the most worm eggs. Dry ewes and mature rams typically have very low fecal egg counts (FEC).

- **Pasture quality** – the number of animals, their stage of production, and how often they are moved all have a major impact on the quality and quantity of forage available, as well as the number of worm eggs and larvae that they are exposed to.

- **Nutrition and Body Condition** - Animals fed a diet that meets or exceeds their nutritional requirements, especially protein and energy, have better resilience against parasites. Thin, underfed animals are more susceptible to parasites

- **Management** – avoid grazing below 4". Moving animals every four days or less helps reduce exposure. Annual forages can help break the parasite cycle. Multispecies grazing (cattle or horses, not goats or camelids) can reduce stocking density and help "clean" pastures. Wean lambs in a pasture that has a low parasite egg load, and if possible, avoid pastures used for lambing as they tend to be heavily contaminated.

- **Stress** – stress negatively impacts the immune system making stressed animals more vulnerable to parasites. Be especially aware during stressful times such as lactation for ewes or weaning for lambs, but also times of poor nutrition, transportation, relocation, heat stress, etc.

- **Genetics** – animals vary in their genetic resistance to parasites. FEC EBVs help identify animals that are more resistant or more susceptible to parasitism. More information on selecting for parasite resistant Katahdins can be found on the EAPK Blog.

Drug Withdrawal times for Sheep

an excerpt from the EAPK Blog

By: Isabel Richards

Whenever we sell animals, be it at auction, privately as feeder lambs, breeding stock, or even just pets and lawnmowers it is our responsibility to make sure that the animals we are selling will not enter the food chain with illegal drug residues in their tissue. Animals that are sold at auction need to be ready to slaughter as many enter the food chain within hours or days after being sold. Private sale feeder lambs, pets, and breeding stock animals can be sold before their drug withdrawal times are over as long as you tell the buyer and they are okay with taking responsibility. Be sure to include the information on the bill of sale too, for your protection. The animal you are selling might not be intended to go to slaughter any time soon, but accidents happen and circumstances change, so buyers need to be aware of the animals have drug residues in their tissue.

Animals are randomly tested for drug residues at slaughter by the food inspection service officers. Animals that test positive for violative residues are detained and reported to the FDA for enforcement action. You can learn more about the possible consequences of allowing animals with violative residues to enter the food chain at: https://www.fda.gov/animal-veterinary/compliance-enforcement/drug-residues

Keeping careful records of all drug treatments, and checking them before sales, is the best way to prevent inadvertent sales of animals with violative drug residues. You can see the recommended records to keep at: https://www.fda.gov/animal-veterinary/animal-health-literacy/adequate-drug-treatment-records-help-ensure-food-safety

Read the entire article

Timely Tip: Proper Use of Dewormers

Overuse or improper use of dewormers can lead to anthelmintic resistant worms. Here is a link to the ACSRPC Fact Sheet on dewormers.

- Only use ORAL dewormers approved for sheep
- Use targeted selective treatment (TST) – deworm only the animals that require treatment based on FAMACHA and Five Point Check
- Use the right dose of dewormers – weigh your lambs
- Use combinations of dewormers – use at least two dewormers from different classes. Give consecutively using separate syringes - do not mix drugs in the same syringe

Timely Topic:
Parasite Biology

Understanding basic parasite biology can help when making decisions on pasture management and animal care. The parasite referred to here is the Barber Pole Worm or *Haemonchus contortus.*

- Adult worms and L4 larvae feed on blood in the abomasum, causing anemia and can be fatal in large numbers
- *Haemonchus* is a highly prolific egg producer – a single female can produce 5000 to 10,000 eggs per day
- The life cycle takes a minimum of 3 weeks or 22 days but is very temperature-dependent and can take much longer at colder temperatures:

  - Eggs are shed in manure, then develop into larvae inside the manure pellet.
  - 4-10 days - minimum time for eggs to develop into L3 (infective) larvae
  - 18 days - minimum time for infective larvae eaten by sheep to mature and start laying eggs
  - Temperatures over 64 degrees with adequate moisture are needed for eggs to hatch and develop into infective larvae (called L3)
  - 5 days - maximum time worm eggs can live awaiting suitable hatching conditions
  - 1-4 months - time for about 90% of infective larvae to die on pasture - 1 month (very hot) to 4 months (cold)
  - L3 Larvae need vegetation to survive and infect sheep (they travel up and down the grass blade in a film of water); there is little or no transmission on dry lot
  - Once ingested L3 larvae can go into hypobiosis if conditions for parasites on pasture is not ideal and resumes development once conditions are more favorable. This often happens when animals are infected in late fall and leads to high FEC numbers in animals in the spring before infection on pasture is a concern.

Here is a link to an excellent short video on parasite biology. It was produced in Australia, so the two new anthelmintics mentioned are not available in the US, but the other information is relevant. https://www.youtube.com/watch?v=Ly8jwhLF9yU

Announcements:

Free Fecal Egg Count Analyses

If you are an NSIP producer in the Northeast or an NSIP producer anywhere in the U.S. who has sold or sells sheep in the Northeast, **fecal egg counts can be done at no cost to you except shipping if you participate in the USDA-SARE project on parasite control at the University of Rhode Island.**

For information on how to participate in this program, send an email to urisheepandgoat@etal.uri.edu or download the 2021 flyer.

EAPK Members in the News!

EAPK Director Lisa Weeks was recently named to the Executive Board of ASI serving Region II which includes Alabama, Arkansas, Delaware, Georgia, Florida, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. **EAPK is proud that one of our own will be representing and advocating for sheep producers in our region and across the United States.** ASI promotes and supports the sheep industry by working on legislative, science and technology, animal health, and resource management issues. Congratulations, Lisa!

Timely Tip: Production loss from parasites

Parasites hurt production in more ways than just lamb deaths.

- Reduced milk production in ewes
- Slower lamb growth
- Appetite suppression
- Reduced fertility
- Less immunity to other diseases
- Poor coat quality and slower shedding
- Lamb deaths

SWAREC Ram Test Update

From Lee Wright, Superintendent at SWAREC

Greetings EAPK Members,

Just a quick update about this year's VA Tech Southwest AREC ram test. This year we had 39 consignors from 9 states, nominate 200 ram lambs! We, unfortunately, can't handle this many animals in our testing program but will be receiving 127 rams to begin the test on June 1, 2021. We once again anticipate many quality rams to be here on the test, and in our **Ram Sale scheduled for Friday, September 24, 2021**. A portion of these rams will have NSIP data available along with test data. Stay tuned to our website for updates and details regarding the test and sale.

Upon arrival on June 1st, consigned ram lambs are weighed, vaccinated for clostridial diseases and sore mouth, have feet trimmed and soaked, and scrotal measurements were taken. Additionally, rams are dewormed with three classes of anthelmintics and fecal samples collected to determine the presence of parasites (FEC). A 3-week adjustment period will be used to acclimate rams to pastures and a supplemental concentrate diet. Following the adjustment period, rams will be allocated to test groups and forage paddocks based on age and weight. The structured performance test will be initiated 21 days after delivery.

At the start of the test period, all rams will receive an oral dose of Third stage *Haemonchus contortus* larvae appropriate for their body weight. While on the test, weights, FEC, and FAMACHA scores will be taken at 14-day intervals. During the test, rams will have continuous access to fescue paddocks, and receive supplemental concentrate feed at a rate of 2% body weight daily. The following performance measures will be determined to collectively assess growth and parasite resistance: Test Average Daily Gain (ADG), Weight Per Day of Age (WDA), ADG Ratio = individual ADG/test group, WDA Ratio = individual WDA/test group average, Fecal Egg Counts and FAMACHA scores.

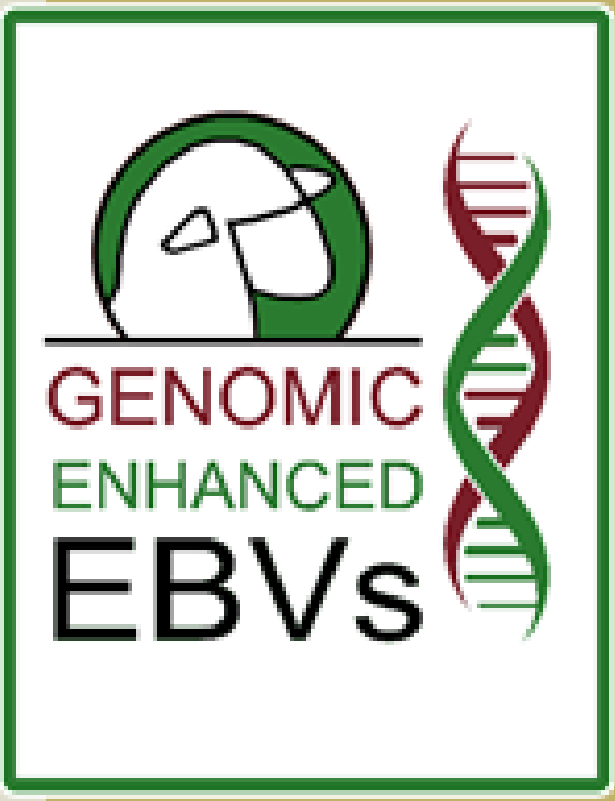
At the conclusion of the test, the **top performers will be offered for sale. Join us on September 24th for our annual Field Day and live auction of quality performance-tested rams!**

DNA Sampling for Katahdin Genomic Starts Off Strong

By: Tom Hodgman - NSIP Katahdin Breed Rep. and Rusty Burgett - NSIP Program Director

Tissue sample collection and submission for genomic-enhanced estimated breeding values (GEBVs) is off to a strong start. For several months now, Katahdin breeders enrolled in NSIP have been learning all they can about genomic technology and how it can help with their selection strategies giving them an important tool to increase the accuracy of their estimated breeding values (EBVs). With much anticipation, on May 1st, the first batch of DNA samples were shipped by NSIP to Neogen in Nebraska for genotyping. From the start, Katahdin NSIP members demonstrated their commitment to this advancement in genetic selection by submitting tissue samples from over 900 individual sheep. Soon to be the first sheep breed to have GEBVs in the U.S., Katahdins are once again breaking barriers and helping to advance the sheep industry.

The success of our first batch of DNA sampling is thanks in large part to 20 dedicated breeders from 12 different states. This first submission was a bit complicated with the initial step of determining genomic-based parentage. In short, participating flocks provide tissue samples from potential ("Nominated") sires and dams then allow the genomic analysis to make the parentage assignments for each lamb with a DNA sample. In this first batch, Katahdin NSIP breeders recognized the importance of building their "genomic pedigrees" and submitted DNA samples from dozens of sires and dams. In addition, a significant number of current sires and dams from several member flocks have already been genotyped during the development of the 5000 sheep genomic reference population for our breed. Those genotypes will be available for the determination of parentage as well.



The Katahdin genomic reference population was built based on DNA samples from lambs (and their sires) collected during the parasite resistance research project spearheaded by Dr. Joan Burke primarily during the years of 2017 through 2019. No sampling was done in 2020, so we have been actively encouraging all NSIP flocks to collect tissue samples from sheep born during that "gap" year. We appear well on our way to filling that gap with over 200 samples submitted from sheep born in 2020. We are tentatively planning to submit a second batch of samples on July 15, 2021. Katahdin NSIP breeders who have not yet submitted this year (late lambing flocks for example) are likely to make up a significant portion of the next round of genotyping.

As we await results from genotyping as well as some final updates and validation steps in the process of developing GEBVs for Katahdins, additional educational programming is being planned. Stay tuned for announcements regarding dates and times for these events. Katahdin breeders appear motivated to further advance our breed and it looks like genomics will provide them with a powerful tool to do just that.

Timely Tip: Choosing Replacement Ewes

Selecting replacement ewes begins at the kitchen table. First, using your barn records, identify those ewe lambs that come from your best ewe and sire lines based on the production data you have collected and their EBVs. Then determine which have the physical appearance and conformation you prefer. Exclude any with structural defects, unacceptable coats, poor growth, or high FAMACHA scores. It's easy to have your eye on the "pretty ones." Unfortunately, they're often the ones born or raised single and may contribute little in improving maternal productivity or flock profitability.

Two EAPK members running for KHSI BOD

Be On the Lookout: KHSI members will be receiving ballots for two openings on the KHSI Board of Directors around mid-June. Please consider supporting EAPK members Mandy Fletcher (VA) and Karen Kenagy (OR).

Mandy Fletcher Bio

My name is Mandy Fletcher and I am running to serve as KHSI Director. In 2008, my husband Chris and I purchased land and started Beyond Blessed Farm. We started with a flock of 10 commercial ewes and have now grown to 120 registered ewes. Since 2011, we have been purchasing and consigning breeding rams at the Virginia Tech Forage-based Ram Test and incorporating these superior genetics into our flock. Each fall we volunteer at the VT test sale; I assist with the clerical work, while Chris provides health certificates for the sale animals.

We are focused on selecting for maternal traits, growth, and parasite resistance with minimal inputs. We participate in the National Sheep Improvement Program (NSIP), utilizing it for genetic selection, flock improvement, and breeding stock sales. In addition, our farm offers USDA inspected pasture-raised lamb at our local Farmer's Market and specialty meat shops.

I am honored to currently serve as President of the Virginia Sheep Producers Association and as a member of the Virginia Sheep Industry Board of Directors. Last year we organized and presented our first-ever virtual Virginia Shepherd's Symposium due to COVID-19! Last Fall we joined the Eastern Alliance for Production Katahdins, and I currently serve on the EAPK Sale committee.

For 5 years I worked as the conservation education specialist at Holston River Soil and Water Conservation District - educating others about protecting and preserving our natural resources. In my current position as a regional program assistant for Virginia State University's Small Farm Outreach Program, I foster small and limited resource farmers providing education on production and animal health. Recently I developed a program for aiding sheep producers in Southwest VA with a focus on providing equipment and assistance with data collection to increase the genetic performance of their flocks.

My passion is serving others – and I would be honored for the opportunity to serve as a KHSI Director and be able to give back to the membership. Through the years many people from KHSI and beyond have given help and advice and have welcomed me in with open arms. I am beyond grateful and hope to pay it forward.

Two EAPK members running for KHSI BOD

Karen Kenagy Bio

I'm Karen Kenagy (KRK Katahdins) from the Willamette Valley of Oregon where we've been raising grass-fed Katahdins for 20+ years. Along with my husband Seb, we manage our 125 ewe flock on 40 acres of lush pasture in a forage-based management system, lambing two to three times a year.

I enjoy teaching people about raising and caring for sheep wherever I happen to be: at state and county fairs where we set up signs, photo displays, sheep hides, flyers, and educational materials; through our regional Pacific Coast Katahdin Hair Sheep Association (PCKHSA); or when I host an annual Lamb Day at our farm. Through these venues, we've been able to educate Katahdin producers and KHSI members in our area through hair coat inspection training, grazing demonstrations, and lamb care presentations. I also teach rotational grazing with easy portable fencing. It has been a rewarding way to help new farmers learn how to manage their sheep and their pastures.

Some of my personal flock breeding goals are improving parasite resistance, retaining excellent mothering and milk, good conformation, and producing lambs that fit both my market and that of any management system in the US. I love using genetics to build sheep that work for commercial producers and that make people happy and profitable.

In addition to being a member of KHSI and EAPK, I serve as Vice President of the Pacific Coast Katahdin Hair Sheep Association and am an active member of Oregon Purebred Sheep Producers, Oregon Sheep Growers Assoc., ASI, Oregon Grasslands Council, NSIP, and the OPP Society.
As a Board member of KHSI, if elected I would focus on breed promotion, education, and youth development. My passion and experience working with young people will also allow me to attract and engage more youth in raising production Katahdins.

Don't forget to register for the Symposium! Early Bird pricing thru June 11th!

Board of Directors

Brad Carothers - President
Tom Hodgman - Vice President
Kathy Bielek - Secretary
Roxanne Newton - Treasurer
Lisa Weeks
Robert Walker
Lee Wright

KATAHDIN HAIR SHEEP INTERNATIONAL

NSIP National Sheep Improvement PROGRAM