



Fall 2021 Newsletter



Letter from the President:

Hello,

I am so proud of what this organization has become in just one short year. Last summer, the EAPK was nothing more than an idea to formalize and further the potential for NSIP Katahdins in the sheep industry. After many hours of discussion, phone calls, administrative tasks, website building, and outreach, we have created a club that hosted its first successful Symposium and Sale with excellent attendance and results. I invite you to check out the details in the Symposium and Sale recap below. Thank you to all of you for your support, especially to Lee Wright, Dr. Weaver, and Nicole Valliere for helping to set up and tear down the event and being our local, boots-on-the-ground contact. And, to Dr. Chris Fletcher and Mandy Fletcher for completing the veterinary certificates for all of our buyers and sellers.

Next weekend is the VA Tech Forage-based ram test sale and field day in Glade Spring, VA. Please check out the details below, and make plans to attend if you are able. This will be my first year attending the sale, and I'm looking forward to seeing you all there. This is a great chance to purchase a performance tested ram to add to your flock.

As we prepare for breeding season on our farm, I have been utilizing the selection tools developed by Etienne Richards to assist with our breeding decisions. This has made the process much quicker and I'm feeling more informed than I have before with my breeding groups. Head to our 'new features' page below for more info.

Thank you all for your generous feedback on the symposium! Enjoy this newsletter, I hope you find many good pieces of information in here.

Brad Carothers,
President

New on the EAPK Website

[Transporting Sheep Safely](#)

[Selecting for Maternal Traits Drives Profit](#)

[New! Producer Profile - Beckie Hotz](#)

2021 VA Tech Forage Based Ram Test

9th Annual Field Day and Ram Sale

From Lee Wright, Superintendent at SWAREC

Don't miss an opportunity to purchase high quality, **performance tested** rams at this year's Virginia Tech Southwest Agricultural Research and Extension Center Field Day and Ram Sale on **Friday, September 24th in Glade Spring, VA**. 117 rams from 37 producers began the one-of-a-kind Forage-Based Ram Test on June 21. Post-weaning weight gain, FAMACHA scores and fecal egg counts have been collected biweekly over a 10-week test period ending August 31. Top performing ram lambs from many consignors will be offered for sale. In addition to data collected throughout the test, sale rams will be scanned for carcass traits and must pass a breeding soundness exam to be eligible for the sale. For more information on the Field Day, auction and bidding process, contact Superintendent Lee Wright at **lrite@vt.edu** or 276-944-2200. Sale flier, ram test data and videos will be available at:

www.apsc.vt.edu/extensionandoutreach/Sheep-Extension/sheep-programs/swarec-ram-test.html



Making Genetic Progress

Dr. Andrew Weaver, NC State Extension Small Ruminant Specialist

$$\Delta G = \frac{\textit{Accuracy X Selection Intensity X Genetic Variation}}{\textit{Generation Interval}}$$

As breeders of purebred livestock, attention to genetic progress should be at the forefront of our selection programs. The equation above summarizes the components that contribute to genetic progress. ΔG indicates change in genetics (Δ stands for change, G stands for genetics). Genetic progress can be improved by increasing those components in the numerator (Accuracy, Selection Intensity, and Genetic Variation) and decreasing those traits in the denominator (Generation Interval). Each component is described in greater detail below.

Accuracy: Accuracy values represent the relationship between the “estimated” breeding value and “true” breeding value. Increased accuracy results from greater records in the evaluation (individual and progeny records). Accuracy can also be improved through genomic testing. Parentage verification can ensure accurate sire and dam identification. Genomic-enhanced EBVs (GEBVs) provide improvements in trait accuracy as well. Remember, genomic data is only relevant as long as phenotypic records support it. A genomic test does not replace the need for data collection. Additionally, accuracy or genomics alone do not make an individual more genetically superior. They simply allow us to more accurately identify those individuals with superior genetic merit based on EBVs.

Selection Intensity: Selection intensity is reflected in the selection differential. The selection differential is the difference between the selected population for breeding and the average of the population. By selecting individuals further from the average, greater intensity is applied to selection and greater progress can be made. Breed percentile reports can be used to identify superior individuals within the breed for particular traits (Top 5% or 95th percentile for example) that will have a greater selection differential and allow for greater selection intensity.

Genetic Variation: Genetic standard deviation describes the variation in genotypes for a given trait. Traits with more variation give us more opportunity to identify and select superior individuals. However, this component is relatively constant for a population and difficult to change.

Generation Interval: The generation interval is the average age of the parents when the offspring are born. To increase genetic improvement, generation interval needs to be decreased. Therefore, greater utilization of ram lambs and breeding ewe lambs can be very beneficial. Genomics can assist in more accurately identifying those ram lambs to use. Ram lambs and ewe lambs should be managed in a way that improves their early reproductive success.

When making breeding decisions this fall, consider these components in your selection program. Understand tradeoffs may be necessary in some components to improve other components. For example, accuracy may need to be sacrificed in order to improve selection intensity and decrease generation interval. Providing the commercial industry with breeding stock that has superior genetics for economically relevant traits is an important role for purebred breeders and necessary to move the sheep industry forward.

Timely Tip: Biosecurity on the Farm

By: Isabel Richards

We all know that diseases can be introduced to the farm by bringing in new animals, and there are multiple ways to minimize the risk of diseases directly transmitted from one animal to another. Do not forget, though, that some disease-causing organisms are able to survive and remain infective for a long time in the environment and therefore can enter your farm by other means. **Ideally have shoes and clothing that you do not wear to other farms, auctions and other places frequented by farmers.**

Ask visitors that will be interacting with your sheep to disinfect their shoes and change their clothes before visiting. Remember to thoroughly clean and disinfect any used animal equipment before you start using it. **Feed delivery trucks visit many farms; try to set things up so they do not have to drive in areas where your sheep walk or graze.** Free roaming dogs, wildlife and birds can also introduce diseases to your farm.



NEW FEATURES

New: NSIP Breeding Selection Tool

There is now a suite of tools that can assist NSIP members with decision making and analyzing their data. It was developed by EAPK member and NSIP breeder Etienne Richards for use by other NSIP breeders. This month we are focusing on the Breeding Selection Tool. This tool enables you to pull in data on all the rams and ewes that you are planning to use and provides you with a list of pedigree EBVs as well as the inbreeding coefficient for each potential breeding. Using this data, you can then select which rams to breed to which ewes. Once you make your preferred selections you can compare the potential offspring to previous years' pedigree EBVs and see if there are adjustments that you would like to make. There is an instructional video that will show you how to use this tool that can be found here:

<https://youtu.be/LSaRjGuG1I0>. The Breeding Selection Tool can be found here: <https://nsip.gibraltarfarm.com/unsip/index.xhtml>.

New: Producer Profiles

One of our goals has been to get to know fellow EAPK members through a series of producer profiles. We are very fortunate that one of our members, Beckie Hotz, has joined the Communications Committee and agreed to take on this project.

Beckie is an EAPK member living in New Jersey. She manages her flock of 35 sheep on 25 acres using management intensive grazing. Beckie applies her background and knowledge in biology, soil and plant health, to raising and finishing lambs on grass. We asked Beckie if she would write the first profile on her own farm to introduce herself as well as the project. That's never an easy task, but Beckie graciously agreed. Her profile, and future profiles, can be read on the blog section of the EAPK website.

The plan is to randomly select EAPK members to profile, so if you're contacted by Beckie, please consider sharing your story. To read Beckie's profile, [click here](#).



Timely Topic: Selecting for Maternal Traits Drives Profit

An excerpt from the EAPK blog

By: Lynn Fahrmeier

In addition to being a shedding hair breed, Katahdins have always been viewed as an easy keeping maternal breed. We also know that **the number one predictor of profitability in a ewe flock is the “Pounds of Lambs Weaned per Ewe Exposed.” Maternal traits, more than growth traits, drive this metric.** Katahdin breeders should actively select for improving the maternal traits in the breed.

There is a lot of genetic variation in the Katahdin breed and even within most flocks. Our challenge as breeders is to identify that variation as accurately as possible. That is where EBVs come into play. **Using EBVs and now GEBVs will be the most useful for maternal traits.** Using DNA samples will give you the biggest benefit in increased accuracy of young animals in the maternal traits. This is because we can't get an idea how a ewe lamb is going to perform until she is 3-4 years old. **And we can't measure the maternal traits of a ram until his daughters are 3-4 years old. But with genomics and multi-generational analysis we can have a more accurate estimate of an animal's genetics sooner, before we make selection decisions.**

Katahdins fit into commercial flocks well as a maternal breed that can be crossed with terminal sires to match the market that a producer is selling into. It is maternal traits that drive profit in the commercial lamb industry followed by low ewe maintenance cost. Katahdins are uniquely situated to help expand the commercial sheep industry in the U.S. if we do not forget about the importance of selecting for maternal traits. [Read the entire blog here.](#)



EAPK First Annual Symposium and Sale Recap

EAPK's 1st Annual Symposium and Sale were a great success! Seventy-four producers from 11 states attended the event held at the Washington County Fairgrounds in Abingdon, Virginia on July 9 and 10th, 2021. A survey of participants following the event showed an approval rating of 4.5 out of 5 for content, speakers, refreshments and sale. Educational sessions were held Friday morning and afternoon, with a producer panel over the lunch hour. A delicious catered barbecue lunch was provided by Bone Fire Smokehouse. The first annual EAPK business meeting ended the day. The online sale on Saturday had an unusual format in that the animals were offered for sale via Willoughby's online auction but most were available on-site for inspection by potential buyers. The sale was extremely successful with total sales of \$42,533 for 38 animals. Rams averaged \$1100, while ewes averaged \$1200. The Eastern Alliance is grateful to the many producers, both commercial and seedstock, who attended the Symposium and those that purchased performance tested animals. A special thank you goes out to all the EAPK members who worked to make the symposium and sale possible. We are pleased with the success of our first event and look forward to another exciting Symposium next summer. [Click here](#) for the entire report and to view additional photos of the event.



Timely Topic: Body Size, How Big is Enough?

By: Dr. Charles Parker

Is there an ideal size for Katahdin ewes? The breed standard describes a medium-sized sheep, but no specific weights are mentioned. Below, Dr. Charles Parker offer some thoughts. Although the example he gives relates to the ethnic market, the same formula can be used for any desired lamb market weight.

For the show ring, many feel that “bigger is better!” The story is different for profitable commercial sheep production, and therefore for seedstock breeders.

There are multiple biological relationships that determine optimal breeding ewe size, but the first and most direct factor is ideal lamb market weight. Research data indicates that the optimal finished lamb market weight will be two-thirds the mature weight of the dam. Therefore, optimal market lamb weight establishes the ideal ewe size.

The growing ethnic market is having a direct impact on current, and most likely future, lamb market weights. Variable ethnic holidays through the year generally require market lamb weights within the range of 60-100 pounds. To reach this market, for example, a desired finished market lamb weight of 80 lbs would require at least a 120 lb mature ewe weight ($80 \text{ lbs} / .67$), while a 100 lb market lamb would require an optimal mature ewe weight of 149 lbs ($100 \text{ lbs} / .67$). Note: there should be some increase of optimal body weight for ewe flocks with expected lamb crop percentages above 200 percent (i.e., those ewes producing more than twins), a common goal for Katahdin flocks.

Body size is an important economic aspect for profitable flock production. Feed requirements are the most costly flock input and are highly related to body size. Matching your ewe size to your lamb market allows greater efficiency. “Bigger is not always better!”



Timely Tip:
Evaluating Nutritional Efficiency
By: Dr. Charles Parker

The formula $1/\text{age} \times 100$ provides a relative maturity value based on body condition and age, and related to nutrient efficiency. It provides a numerical value in days recorded when the individual

has reached an optimal body condition (or degree of finish). For example, a ram lamb who reaches an optimal body condition at 80 days would have an efficiency rating of 1.25 ($1/80 \times 100$), while one who reaches the same body condition at 150 days would have an efficiency rating of 0.67 ($1/150 \times 100$). The earlier this condition score is reached (in days of age) at a desired body weight, the greater the nutritional efficiency.



Announcements:

EAPK Members Win KHSI Board of Directors Election

EAPK members **Mandy Fletcher** (VA) and **Karen Kenagy** (OR) were recently elected to the KHSI BOD at the Katahdin Expo in Mexico City, MO. Thanks in part to the support they received from our membership, Mandy and Karen will now join three other EAPK members, Robert Walker, Dan Turner and Larry Weeks on the seven-member KHSI board. In addition, the new KHSI BOD elected Robert Walker as President. We are excited by what these exceptionally accomplished, production-oriented shepherds will contribute to our breed association and its members. Stay tuned for more information on committee assignments and the work they've got planned for the upcoming year.

NSIP Update: Genomic Evaluation Goes Live in October

From Rusty Burgett, NSIP Program Director

After years of research, thousands of Katahdins with data and genotypes, and the help of dozens of producers, the Single-Step Genomic Evaluation through NSIP will produce its first run of Genome-Enhanced Estimated Breeding Values (G-EBVs) on the October 1, 2021 data analysis date. This technology utilizes genetic markers at 50,000 different locations across the sheep's genome to determine an accurate pedigree, correctly identify precise genetic relationships among animals, and greatly enhance the accuracy of traits/EBVs measured in NSIP.

In addition to incorporating genomic information into the NSIP evaluation, the technical committee, along with research colleagues in Australia, have updated the input parameters such as heritability and genetic correlation estimates for the Katahdin breed. These updated parameters will also be implemented on the October 1 data run. Incorporating the genomic information as well as updated input parameters into the evaluation means that the EBVs on current sheep have the potential to vary somewhat.

Dr. Ron Lewis, University of Nebraska-Lincoln and NSIP Technical Advisor will present two webinars/meetings to explain the upcoming changes as well as present the results from the test runs illustrating expected changes in EBVs and the associated accuracy values. All Katahdin producers enrolled in NSIP are invited to participate in these meetings. After the October 1 data run, a follow-up meeting is scheduled that will allow all members to view their results following the initial data run, see how their current animals may have changed and ask questions about the results.

To keep building the genomic reservoir, the next batch submission date for genotyping through NSIP is scheduled for September 15. Instructions and submission forms can be found under the Resources tab on the NSIP website. Please have all samples mailed in by that date to be included in the next data run.

If anyone has questions about the NSIP evaluation, please don't hesitate to contact Rusty Burgett, NSIP Executive Director at info@nsip.org.



KHSI Board of Directors Update

From Robert Walker, President of KHSI



Greetings from your new KHSI President. It is humbling to be chosen by your peers for anything and this is no exception. From the first Expo I attended, previous KHSI Presidents were recognized for their time, energy and service to the breed and its members. Little did I know I would be getting that same opportunity, and it is an honor!

KHSI, like Eastern Alliance, needs volunteers to survive. The opportunity to serve is a worthy one. I want to encourage everyone to consider serving on the board or on a committee. This is my sixth and final year on the KHSI board. I have gotten to know so many people that I would have never met without my experience on the board, and I am truly thankful for those friendships that will last a lifetime. Eastern Alliance will have our first two Board openings at our next summer Symposium, so think about serving and throw your name in the hat, and consider serving on committees, too.

The Katahdin breed continues to excel in both popularity and its impact on the U.S. Sheep Industry. As producers and promoters of this breed, it is important that we recognize the diversity and potential of Katahdins. From backyard hobbies to the commercial producer with a thousand head, or from the show ring to the NSIP, we are all utilizing this breed for its unique, diverse potential. Although we all may have different goals for our own operations, please remember there are 1499 other Katahdin producers out there whom we need to work alongside of to achieve success for us all. We are all connected, so keep that in mind when dealing with new shepherds or handling any issues that may arise.

In August, KHSI hosted our 17th Annual KHSI Expo in Mexico, MO. Huge thanks to all the volunteers who made this event happen, especially the KHSI Expo and Sale committees and the speakers for all the hard work that goes into planning this event every year. The education sessions were well attended and covered a diverse range of topics from fencing to marketing, body condition and feeding, grazing and NSIP. We also got an update on the genomics project in which Katahdins became the first breed to utilize the technology available to improve the genetic accuracies in the sheep industry. A speaker said it best: "25 years from now, the sheep industry as a whole will look back at what the Katahdin breed did in 2021 and the milestone they reached for the entire sheep industry." A huge shout out to the members of Eastern Alliance who played a huge part in the genomics project and for the excitement that is right here right now. I know KHSI had an idea of changing our motto, but to be honest, it is just now coming to light: Katahdins, A Breed whose Time has Come!

It's an exciting time to be a Katahdin producer!

KHSI NSIP Committee Update

From Dan Turner, Committee Chair

The world of Katahdins is certainly filled with activity and excitement. Katahdins continue to make gains in popularity as indicated by the growth in KHSI membership and the increasing number of registrations, transfers and income. Registrations are already outpacing the 2020 level and may set a new record in 2021.

KHSI has been generous this year in providing financial support to regional groups to assist them in providing top-notch programs for their membership. Keep an eye out for any opportunity to support and become involved in regional Katahdin groups.

The KHSI Expo was held in Mexico, Missouri in early August, with good seminars about NSIP, parasites, nutrition, fence building and more. There was a special award presented to Teresa Maurer and Jim Morgan for their outstanding work, service and dedication to KHSI and Katahdin breeders. Please always remember their contributions and take a minute or two and share your appreciation with them.

New members elected to the KHSI board were Mandy Fletcher and Karen Kenagy, one from each end of the country. Robert Walker was elected President; Dan Turner - Vice-President; Cindy DeOrnellis – Secretary; and Howard Covington – Treasurer. Retiring from the board were President Jane Smith and John Dyer. If you get a chance, please thank these people for their service.

The Expo was capped off with the Katahdin sale and this was a good one. Total sales topped \$100,000 with an average of \$1,165 per head for the 87 lots sold. The sale was conducted both live and online. Prior to the sale there was a printed sale order and an additional list which included all of the NSIP enrolled animals and their EBVs.

In other KHSI Board business, hair coat inspection training is now being offered online. This has been a multi-year project and is finally being released to the public. The BOD also voted to hire a website company to revamp the KHSI website. So, look for new and exciting changes in the year to come.

Timely Tip: The Importance of Balance

A challenge for producers who want to advance genetically is to first identify the traits in their ewe flock that are below desired levels and then focus selection on improving those traits while not losing ground on other traits. Many producers apply selection pressure across multiple traits simultaneously, an approach often referred to as Balanced Trait Selection.

While typically slower than single trait selection, when successfully applied, this strategy results in animals that are at or above the breed average for all or most traits. Balanced trait selection helps prevent overemphasis on individual traits and is appropriate for both experienced and inexperienced NSIP producers. For more information on Balanced Trait Selection, [click here](#).



American Sheep Industry Report

Lisa Weeks – Region II Director

The American Sheep Industry has been busy navigating through many challenges that resulted from the COVID-19 pandemic, the loss of the second-largest lamb processing plant to bankruptcy, and a record drop in the pelt market. ASI successfully lobbied the USDA to purchase a total of 279,700 lbs. of lamb shanks in August and September of 2020 totaling \$2.7 million in American lamb sales. ASI and its state affiliates worked collectively to appeal for support through the USDA's Coronavirus Food Assistance Program providing sheep producers more than \$156 million to alleviate losses on their flocks, lamb, and wool.

Potential contagious disease outbreaks like Foot and Mouth Disease (FMD) and how they could impact movement of animals and animal products continue to be a source of concern for the American sheep industry. In order to better prepare before an outbreak, ASI has voluntarily developed the Secure Sheep and Wool Supply Plan (SSWS) to better position sheep operations that have no evidence of FMD infection to move animals to other premises under a movement permit and to maintain business continuity. Learn more at SecureSheepWool.org.

Legislative issues currently being supported through ASI's lobbying efforts include: H-2A labor issues; electronic logging; predation; fair trade for US lamb producers; fighting the removal of the U.S. Sheep Experiment Station in Dubois, ID; and pairing with Wildlife Services to advocate for grazing on federal land.

The demand for American Lamb is at an all-time high. Are we, as producers, gearing up to supply that demand?

ASI Convention: January 19-22, 2022 San Diego, CA – See you there!





Greg Stewart's livestock guardian dogs in training

Upcoming Genomic EBV Webinar Dates

with Dr. Ron Lewis, University of
Nebraska-Lincoln and NSIP Technical Advisor

Tuesday, September 14
Thursday, September 30
Wednesday, October 6
7:00 p.m. central time.

Zoom Meeting Link for Webinars:

<https://us02web.zoom.us/j/83353961275>

Board of Directors

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

