

NSIP Meeting

Thursday – September 9, 2021

7 p.m. CST

Minutes submitted by Lisa Paris Weeks

Attendees: Matt Benz, Kristen Bieber, Vance Broadbent, Rusty Burgett, Brady Campbell, John Carlson, Lynn Fahrmeier, Cody Hiemke, Tom Hodgman, Ben Lehfeldt, Ron Lewis, Jim Morgan, Brett Pharo, Brenda Reau, Bill Shultz, Todd Taylor, Lisa Weeks, Tamra Kott

Agenda:

- Secretary Report
 - Ben Lehfeldt moved to accept minutes as written, seconded by John Carlson. Motion passed.
- Treasurer Report
 - Bill presented the 2022 Budget for review (attached).
 - 2022 Budgeted Income \$68,250
 - 2022 Budgeted Expense \$66,920
- Program Director Report
 - Presented by Rusty Burgett (report attached)
 - ASI Convention is January 19-22, 2022. Sheep Genetics USA, NSIP, and the Genetic Stakeholders Committee are planning a joint session for January 20.
 - Bill Shultz asked if Rusty is getting reimbursed by the host party for travel costs associated with speaking engagements. Rusty confirmed that his travel costs are getting covered.
 - No industry grants were needed to support NSIP in 2021. NSIP was self-supported.
- Technical Committee
 - Presented by Ron Lewis (report attached)
 - Dr. Andrew Hess and Dr. Andrew Weaver have joined the NSIP Technical Advisory Committee growing the committee to eleven members. Many of the members are junior scientists with a broad range of expertise including quantitative, molecular, sheep production, and health.
 - There are two proposed updates to the Hair Breed evaluation. The change in parameters is impacting the data in greater detail than genomics. For example, FEC EBV dropped by half on heritability.
 - New estimates of parameter values
 - New estimates of parameter values including genomic information
 - Matt Benz asked if other breed groups will be re-evaluated. A sub-committee has been formed to begin evaluating how to move forward with other breed group parameter updates.
 - For the Hair Breed Group, the October 1 data run will include the updated parameters with genomics. All future reports will list GEEBV's for this breed group. Rusty arranged to have each member receive the Sept 15 data run and the Oct 1 data run for a before/after review.
 - The US Hair Index (predicts ewe productivity) will be impacted by the change in parameters.

- Short term – delay reporting the index.
 - Medium term – Mimic current index and recalculate weighted factors.
 - Longer term – develop new index that aligns with a more economic basis.
- Fine Wool Index Report
 - Tamra Kott presented her work on the development of the Fine Wool Index for her Master's thesis.
 - Includes EBVs of Fiber Diameter, Staple Length, Fiber Diameter Coefficient of Variation, Curvature, Greece Fleece Weight, and Yearling Weight.
 - Ben Lehfeldt asked if there is an associated cost for adding the index to NSIP reports. Jim Morgan said there may be. LambPlan will need to add a column in the database.
 - The NSIP Executive Committee approved the data access for Tamra Kott's project.
- Sale Committee Report
 - Matt Benz summarized the NSIP sales for 2021.
 - The time Rusty spent on sale details was considerably reduced from 120 hours to 30 hours. Time primarily spent working with Willoughby's.
 - The committee is exploring other platform options for Center of the Nation sale in 2022.
 - There are two NSIP Influenced Replacement Ewe sales scheduled. The consignors would be required to provide the NSIP ID for the sires of ewes.
 - January 2022 – fall born ewe lambs
 - June 2022 – spring born ewe lambs
 - Matt requested a \$500 advertising budget. Cody motioned to allocate \$2500 for marketing and ads for NSIP sanctioned sales in the 2022 budget. Jim 2nd the motion and motion passed.
- Next Meeting is scheduled for November 11 @ 7 p.m. CST.
- Vance Broadbent motioned to adjourn, seconded by John Carlson.

	2020 Actual	2021 projected	2022 budget	
Enrolment	\$32,850 (154)	\$67,000 (220)	\$55,000 (220)	
Data fees net	\$8,600 (19,100)	\$8,000 (19,200)	\$8,000 (20,000)	
DNA Net	\$0 (0)	\$7,300 (2,084)	\$5,250 (1,500)	
	Total	Total	Total	
	\$41,450	\$82,300	\$68,250	
Expenses	2020 actual	2021 projected	2022 budget	
Rusty	\$54,000	\$54,000	\$55,620	
Insurance	\$5,500	\$5,700	\$6,000	
Office/Travel	0	\$1,000	\$2,000	
Credit Card/wire	\$1,000	\$1,200	\$1,500	
Debt uncollectable	(-\$500)	\$5,000	\$1,800	
	Total	Total	Total	
	\$60,000	\$61,200	\$66,920	
Assumptions for 2022 budget 2022 paid members 220 @ \$250 Data; 20,000 records processed net to NSIP (\$.40 per record) Does not account for uncollectibles 3%, wire & credit card fees DNA; 1500 processed at \$3.50 Uncollectables 3% of data fees invoiced Ron's Technical contract paid by ASI/SGUSA 3% increase in Rusty's contract Ram Sale revenue will be matched by increased costs of an expanded Center of the Nation Sale weekend agenda				

NSIP Program Director's Report
September 9, 2021

The last 2 months have been full of exciting activity for NSIP. Overall, the Center of the Nation NSIP Sale was a success. The sale committee will provide an update on the sale itself but the farm tours and educational event were well attended. Roughly 75 people attended the tours at the farms of Kyle Hurley and Kevin Goeken. Both are commercial producers who widely utilize EBVs in their selection of breeding stock. Approximately half of the attendees stayed for the Ranching for Profit School presented by Dave Pratt of Ranch Management Consultants. Many participants were new to the sale and NSIP so our partnership with Iowa Sheep Industry Association was successful in engaging a new audience.

Following the CNS, I attended the Katahdin Expo in Missouri where we had a standing-room-only crowd for the NSIP sessions. It was a great networking opportunity including breakout sessions with new and long-time NSIP members as well as prospective new members.

I was also invited to participate in the NC-214 Sheep Production Efficiency Research meetings. It was interesting to hear the support our land grant universities have for NSIP and the majority are active members. There are a lot of research projects currently in the works or awaiting decisions on funding that will have a direct impact on the evaluation we offer to the industry so I appreciate the opportunity to participate in those meetings. Additionally, several of us participated in the USDA – MARC stakeholder meeting where that desire to support NSIP and further the evaluation through collaborative research was continued.

Upcoming, I was asked to present ahead of the Wyoming state ram sale, which is the first time I've been asked to speak in Wyoming. I will also attend the Montana ram sale the same week to support our members. Next month, I will be speaking ahead of the National ram sale in Utah where several NSIP members will be participating.

We also have 2 webinar dates set, mainly for the Katahdin producers about the upcoming incorporation of genomic information and updated parameter changes. Those are scheduled for September 14 and 30 ahead of the first updated run and on October 6 after members have a chance to see their updated data.

We continue to receive TSU submissions for genotyping. As of September 1, we have received 1,990 samples. I have begun receiving samples for our next genotyping date as well which are not included in that total. It has been a continued learning experience for myself as well as our membership. I recently worked with a rep from Neogen Australia on the submission process for parentage re-runs which are used when multiple generations are present in one submission. Now that we have the process finalized, I will be updating the submission spreadsheet as well as creating a stand alone directions document on how to complete the form as well as a tutorial video demonstrating the process. As more breeds increase participation in the genotyping platform, these tools will be crucial. I would also like to host another series of "how-to"

webinars for basic data submission, genotyping and the DNA parentage implications for Pedigree Master.

In communications with our colleagues at LambPlan, they are proposing some backend database updates which will provide useful to NSIP in incorporating multiple data points for animals, allow for additional data points to be collected and in making future updates to the evaluation. Additionally, they are working on developing a web-based data submission portal. This new submission portal will not replace Pedigree Master but rather than emailing data backups for analysis, they can be directly uploaded and automated validation will occur. Both of these projects are still in the works so as we learn more and a release date is set, I will keep the group updated.

In the coming months, several of us will be working with representatives from Genetic Stakeholders and Sheep Genetics USA on the genetics programming during the 2022 ASI convention. The upcoming meeting will include approximately 5 hours of sessions devoted to genetics and selection in the sheep industry.

With so much momentum and excitement for genetics along with the work being done to advance the analysis, I believe NSIP is very well positioned going into 2022. I appreciate everyone's support of the program and look forward to the future direction of our group.

NSIP Technical Advisory Committee Report

Sept 2021

New members of NSIP Technical Advisory Committee

With approval of the NSIP Executive Board, two new individuals were invited and agreed to become members of the NSIP Technical Advisory Committee.

Dr. Andrew Hess recently joined the Department of Agriculture, Veterinary & Range Sciences at the University of Nevada-Reno as an Assistant Professor. Originally from the Reno area, he has returned to his undergraduate alma mater as a faculty member. As noted on his website (<https://www.unr.edu/avrs/directory/hess-andrew>), Dr. Hess is providing the bioinformatics expertise to understand and utilize causative variants to improve both the ability and the speed of determining the genetic worth of an animal. He also has responsibilities for the Rafter 7 sheep flock, which was originally developed by the University 30 years ago and is now located at their Great Basin Research and Extension Center.

Dr. Andrew Weaver joined North Carolina State University's Department of Animal Science as an Assistant Professor and Extension Small Ruminant Specialist (<https://cals.ncsu.edu/animal-science/people/andrew-weaver/>) late in 2020. He grew up in central Michigan where he was active in 4-H youth livestock programs. Dr. Weaver's research and extension interests focus on using genetic tools and management practices to improve parasite resistance, performance, and end-product value of small ruminants in the Southeast. Dr. Weaver has already been closely engaged with NSIP; in collaboration with Katahdin Hair Sheep International, he was the organizer of a webinar series on genomic-enhanced EBV (GEBV) earlier this year (<http://nsip.org/genomic-enhanced-ebvs/>).

With the additions of Drs. Hess and Weaver, the membership of the NSIP Technical Advisory Committee grows to eleven, with a mix of quantitative, molecular and sheep production and health expertise. Valuably, many of the members of the committee are early career scientists who will undoubtedly inspire research, development, and outreach efforts within the US sheep industry for many years to come.

Implementing new parameter values and genomic prediction in hair sheep genetic evaluation

On Aug. 3, 2021, the NSIP Technical Committee presented its recommendations for changes to the hair sheep genetic evaluation to the NSIP Executive Committee. Based on a comprehensive evaluation of the impact of the revised parameter values and incorporating genomic information to predict GEBV, the recommendation was to move forward with implementing the changes. This recommendation was approved by the NSIP Executive Committee with plans to apply with the Sept. 30, 2021, data submission to Sheep Genetics.

As noted in earlier NSIP Technical Committee reports, the revisions proposed to the hair sheep genetic evaluation have led to anticipated changes in the values of EBV and in their accuracies. Therefore, as part of the implementation process, it was agreed to schedule a series of outreach events (webinars) both prior to and after the first set of results are released. This is to prepare breeders for these upcoming changes, and to address questions that may arise once the new results are received. Rusty

Burgett has scheduled the first pair of those webinars for 7 p.m. central time on Tues., Sept. 14, and on Thur., Sept. 30, 2021.

Additional proposals and needs

The recent analyses of the NSIP hair sheep data flagged the need to re-estimate the parameter values in the other breed groups (maternal wool, terminal sire, western range). A subcommittee of the NSIP Technical Advisory Committee met on Aug. 4, 2021, to layout a framework for these analyses. The challenge is to identify and secure the resources to progress such work (e.g., time, funds).

The recent hair sheep evaluations also identified a need to reassess the indexes currently provided to NSIP breeders. With the redesign of the US Hair Sheep Index the most pressing, a short, medium, and long term plan was proposed to the NSIP Executive Committee and breed representatives during a teleconference held on Sept. 2, 2021. The long term plan proposed was to develop a flexible bioeconomic (full lifecycle) model to reflect the revenues and expenses of US sheep production systems. Its outcome would be use would be to determine the economic contributions (values) of current and potentially new traits specific to each breed group. Those economic values would then be used in the design of a series of optimized economic selection indexes. Achieving that aim would entail the joint effort of the NSIP Technical Committee and a graduate student, perhaps with assistance of an external consultancy. The medium term plan proposed, specific to the US Hair Sheep Index, would be to reconstruct the current index, which predicts merit for total weight of lamb weaned, using updated parameter values. The short term options discussed was either to continue or to suspend reporting the current US Hair Sheep Index until a suitable replacement was in place. As with re-estimating the parameter values, pursuing the long and medium aims depends on the securing the necessary resources.

With incorporation of genomic information by NSIP, which is both exciting and valuable, has come a cascade of other needs within the genetic evaluation. The construct of the NSIP Technical Advisory Committee is well suited to facilitate addressing those needs. The collective challenge is to find the resources to support fully embracing these new opportunities.

Ron Lewis
NSIP Technical Committee Chair
Sept. 8, 2021