

NSIP Meeting

Thursday – November 11, 2021

7 p.m. CST

Minutes submitted by Lisa Paris Weeks

Attendees: Matt Benz, Kristen Bieber, Rusty Burgett, John Carlson, Lynn Fahrmeier, Cody Hiemke, Tom Hodgman, Ben Lehfeltdt, Jim Morgan, Brett Pharo, Brenda Reau, Reid Redden, Bill Shultz, Jake Thorne, Todd Taylor, Lisa Weeks

Agenda:

- Secretary Report
 - Brenda Reau moved to accept minutes as written, seconded by John Carlson. Motion passed.
- Treasurer Report
 - Presented by Bill Shultz (report attached)
 - Jim Morgan moved to accept the end of year Profit & Loss and Balance Sheets, seconded by Ben Lehfeltdt. Motion passed.
 - Brett Pharo moved to accept the 2022 Budget, seconded by Jake Thorne. Motion passed.
 - Any accounts over 3 three years past due will be taken off equity position.
- Program Director Report
 - Presented by Rusty Burgett (report attached)
- Technical Committee
 - Ron Lewis was not able to attend meeting (report attached)
- Sale Committee Report
 - Presented by Matt Benz.
 - The committee has been busy planning NSIP Influenced sales. The January NSIP Influenced Ewe sale will be handled by Willoughby at a 3.5% commission. NSIP will get 0.5% of that commission.
 - The committee is exploring other platform options for Center of the Nation sale in 2022.
 - We will again do an online sale for rams & ewes using the same format and time as 2021.
 - The Spencer fairgrounds have been reserved.
- New Business
 - The 2022 Membership forms will be mailed out soon to membership.
 - A new field will be added for the user to list a referral name if applicable.
 - Appoint Nominating Committee for January 2022 elections at annual membership meeting.
 - The following board representatives are up for election and/or re-election: Maternal, Dorset, Katahdin, Suffolk, and Dorper.

- Additionally, Ben Lehfeltdt has asked to step down from the NSIP Executive Board due to additional obligations within ASI and Sheep Genetics USA.
- Cody Hiemke moved to appoint Alan Culham, Todd Taylor, and Lisa Weeks to the committee. Motion seconded by Ben Lehfeltdt and motion passed.
- Next Meeting will be the annual membership meeting scheduled for January 20 @ 3:30 p.m. PST at the ASI Convention in San Diego.
- John Carlson motioned to adjourn, seconded by Jake Thorne.

NSIP Treasure's Report

Bill Shultz November 11, 2021

Attached is the proposed and revised NSIP 2022 budget. I would like to ask for approval of the budget at our November meeting. Please take time to review the numbers and especially take note of the 2022 assumptions/footnotes.

I have also attached our end-of-year financial report which includes both a balance sheet and a profit/loss page. As a reminder our financials are prepared by Larry Kincaid at ASI and are fully audited. Of particular interest is the increase in our equity position to \$54,731 from \$29,810 at the end of FY 2020. I will provide a full analysis of our 2021 financial year at our annual meeting in January.

As always, if you have questions please do not hesitate to contact Rusty or myself.

Bill

Income	2020	2021	2022 budget
Enrolement	\$32,850	\$67,000	\$55,000
Data fees net	\$8,600	\$7,580	\$8,000
DNA Net	\$0	\$7,300	\$7,000
Sheep sales	\$3,500	\$5,400	\$5,000
	Total	Total	Total
	\$44,950	\$87,280	\$75,000
Expenses	2020	2021	2022 budget
Rusty	\$54,000	\$54,000	\$55,620
Insurance	\$5,500	\$5,700	\$6,000
Office/Travel	0	\$1,000	\$3,000
Credit Card/wire	\$1,000	\$1,200	\$1,500
Bad Debt write-offs	\$0	\$2,528	\$100
Sheep Sales	\$0	\$400	\$3,500
	Total	Total	Total
	\$60,500	\$64,828	\$69,720
Assumptions/footnotes for 2022 budget			
Estimated 2022 paid members 220 @ \$250 (2020.. 154 paid members; 2021.. 223 paid members)			
Estimated 2022 Data; 20,000 records invoiced... net to NSIP \$.40 per record (2020.. 19,100 records invoiced; 2021..18,952 records invoiced)			
DNA 2022; estimated 2,000 processed at \$3.50 net to NSIP (2021.. 2,086 samples processed)			
Ron's \$10,000 Technical contract paid by ASI/SGUSA			
3% increase in Rusty's contract			
Estimated 2022 Sheep sale expenss includes \$2,500 for advertising			

NSIP Program Director's Report
November 2021

Since our last meeting, I traveled to speak at the Wyoming Ram Sale and visited the Montana Ram Sale while on the road, followed by the National Ram Sale in Utah. All 3 events went very well with good sale prices and great networking opportunities with current and prospective NSIP members. I also worked with representatives from the United Suffolk Sheep Association about their upcoming updates to the registration program and the ability to record performance data to be integrated into the NSIP evaluation. Additionally, I participated in the Zoom follow up meetings with Katahdin members following the release of the first G-EBV evaluation and worked with several members on data recording and software issues.

In recent weeks, I have been regularly interacting with personnel at MLA/LambPlan/AGBU and Neogen about the parentage and genetic condition evaluation. Armidale recently suffered a very large storm and the AGBU personnel were not allowed on campus during cleanup and repairs. I was told they suffered some damage to their servers during the storm. All of this has led to delays in reporting of the results from the evaluation. Additionally, I am attempting to coordinate a data transfer between AGBU and Neogen AU in order to have the Katahdin reference population animals added to the Neogen database. Currently, when I process a genotyping order through the Neogen site, their database does not know the reference population animals exists which causes validation errors when those reference animals are the potential parents of new animals being genotyped. Progress was stalled with the recent storm in AU.

Attached along with this report is a P&L from the NSIP Quickbooks. After working with the accountant earlier this year, the chart of accounts has worked much more efficiently. The data tracked very closely matches that of Larry. A few differences to note:

- My figure for database fee income is slightly higher. At the end of last year, Larry kept the books open for an extra month to re-classify some income for FY20 that was received after the close of the FY. I recorded that in FY21 since that was when I received it.
- I do not receive the figures from Larry for the bank/wire fees so I do not regularly record those and they are not included in this list of expenses
- The extra database fee income coupled with the missing bank/wire fees explains the difference in net profit between my report and Larry's
- As always, there will be a slight discrepancy in data fee income and expenses based on timing of when invoices were issued to the members, when NSIP pays invoices to MLA and when NSIP receives the income from the membership.

Upcoming, I will travel to Kansas City to participate in the Sheep Genetics USA meeting and I have also been invited to speak at the Tennessee sheep producers annual meeting in December. Just FYI, I am officially on call for Jury duty in the month of December but I have not been called in yet so do not foresee any major disruptions in service.

NSIP Technical Advisory Committee Report
November 2021

Genomic evaluation implemented in hair sheep

For the first time in U.S. sheep, a commercial genomic evaluation was run and released in early October 2021 in hair sheep. It was built on a solid scientific footing benefiting from an Organic Agriculture Research and Extension Initiative project funded by the USDA National Institute of Food and Agriculture (NIFA).

Genomic information was collected using the GeneSeek Genomic Profiler (GGP) Ovine 50k array on nearly 5,000 Katahdin sheep born between 2016 and 2019. These animals also had performance data in NSIP. Working closely with Sheep Genetics and the Animal Genetics and Breeding Unit in Australia, the value of incorporating genomics into the NSIP evaluation was tested. The benefit was undeniable. Particularly in younger animals with less performance information available, the accuracy of their evaluation improved substantially (nearly doubling for some traits).

Parameters (e.g., heritabilities, correlations) that underpin the genetic evaluation were also re-estimated. With much more data now available on hair sheep (over 85,000 recorded animals), and with those parameters not re-evaluated for over a decade, such an update was due. For many traits, there was little change in their heritabilities (e.g., weaning weight, post-weaning weight, weaning fecal egg count). However, for others, the change was larger (e.g., post-weaning fecal egg count, numbers of lambs born and reared), with the heritabilities nearly halved in size. There were also changes in the size of the genetic correlations among these traits. With these updated genetic parameters, the information gleaned from performance records could be used more aptly in the genetic evaluation.

Since 2019, genomic information was collected on over 1,000 additional Katahdin sheep, along with performance records. Joined with the data already at hand, the genomic evaluation was run with the results reported to Katahdin producers. On Oct. 11, 2021, the NSIP Technical Advisory Committee held a webinar with hair sheep producers to fully discuss these new results.

The key outcome of this effort is the provision of cutting-edge genetic tools to NSIP producers to assist them in making more reliable selection decisions.

Improving robustness and climatic resilience in U.S. sheep populations through genomics

The opportunity to extend the integration of genomic technologies across the entirety of the U.S. sheep industry has materialized. A project was recently funded through USDA NIFA that focuses on improving the robustness and climatic resilience of U.S. sheep flocks through genomics. This new project is scheduled to begin in January 2022. It involves close collaboration with NSIP producers and three USDA Agricultural Research Service centers. A summary of the project is attached as an Appendix.

Ron Lewis
NSIP Technical Committee Chair
Nov. 10, 2021

Appendix
Improving robustness and climatic resilience in U.S. sheep populations through genomics
(USDA NIFA Award No. 2022-67015-36073)

Project summary

The sheep industry contributes nearly \$6 billion annually to the US economy, with growing ethnic diversity strengthening demand. Sheep farms outnumber dairy cattle, pig, and broiler enterprises, with distinctive breed-types dispersed across climatically-diverse regions and management systems. Breeding robust animals that perform well under these conditions is paramount to the industry's sustainability. However, robustness and climatic resilience traits are largely absent in US sheep genetic evaluations. The overarching goal of this project will be to develop the background knowledge and tools needed for successful implementation of genomic selection for robustness and climatic resilience in the major US sheep breed-types (hair, semi-prolific, fine-wool, terminal-sire). Furthermore, it will provide training to the next generation of scientists with interest in sheep breeding, which is greatly needed to ensure continued competitiveness and advancements in this important agricultural sector.

The funding from this project leverages resources from experienced sheep breeders in various US climatic regions, two land-grant institutions, and three USDA ARS centers. It also utilizes existing and committed genomic and phenotypic datasets for four main US breeds (i.e., Katahdin, Polypay, Rambouillet, Suffolk), with contributions from national sheep organizations, breed associations, and sheep producers. The activities planned include generating crucial information necessary for introducing genomic technologies into the US sheep industry. Reference databases will be built combining genomic data and performance records. The genetic diversity present in these US breeds will be determined. Through genome-wide association studies, genetic markers for indicators of robustness and climatic resilience in sheep will be sought. Advanced methods to improve the prediction of genetic merit for both novel and traditional traits will be established. Two PhD-level students will be trained. Throughout the project, key results will be communicated to industry stakeholders to facilitate the implementation of project outcomes.

As major outputs, genomic-based populational parameters will be estimated. Novel robustness and climatic resilience traits that can be pragmatically measured in industry flocks will be defined. New analytical pipelines and resources will become available to the US sheep industry. Guidelines for the optimal implementation of genomic selection for these traits will come online at a national scale. As the overarching goal, stakeholders and the next generation of sheep industry leaders and scientists will become conversant in the role of genomics in sheep breeding, and the importance of selection for improved animal robustness and resilience. The anticipated societal impact will be improved welfare and well-being of sheep raised in variable climatic conditions and increased productivity and long-term economic viability of the US sheep industry, with contributions to ensuring global food security.

Project team

Dr. Ron Lewis (University of Nebraska-Lincoln; Project Director; email: rlewis5@unl.edu)

Dr. Luiz Brito (Purdue University; Co-Project Director; email: britol@purdue.edu)

Dr. Joan Burke (USDA ARS Dale Bumpers Small Farms Research Center; Co-Investigator)

Dr. Brad Freking (USDA ARS US Meat Animal Research Center; Co-Investigator)

Dr. Tom Murphy (USDA ARS US Meat Animal Research Center; Co-Investigator)

Dr. Bret Taylor (USDA ARS US Sheep Experiment Station; Co-Investigator)