

## NSIP Meeting

Thursday – May 14, 2020

7 p.m. CST

Minutes submitted by Lisa Paris Weeks

Attendees: Matt Benz, Rusty Burgett, Brady Campbell, John Carlson, Lynn Fahrmeier, Cody Hiemke, Tom Hodgman, Ron Lewis, Brenda Reau, Reid Redden, Mark Roembke, Bill Shultz, Todd Taylor, Jake Thorne, Lisa Weeks

### Agenda:

- Secretary Report
  - John Carlson moved to accept minutes as written, seconded by Brady Campbell. Motion passed.
- Treasurer Report
  - Presented by Bill Shultz
  - Thirteen renewed memberships.
  - Reduced AR from 131 to 39.
  - Anticipate tight cashflow in second half of year. The grant from the Sheep Center outstanding. Brenda Reau will follow up on status.
  - John Carlson moved to accept the report, seconded by Jake Thorne. Motion passed.
- Executive Report
  - The suggestions and concerns identified during our review of the new MLA Contract are being reviewed by the lawyers.
- Program Director Report
  - Presented by Rusty Burgett (report attached)
  - Assisted new members with setting up Pedigree Master and submitting data.
  - Planning the launch of small Producer Groups with the primary goal of creating networking channels.
- Technical Committee
  - Presented by Ron Lewis (report attached)
  - To keep NSIP services up to date and competitive several aspects of the genetic evaluation services being provided to members merit attention.
    - 1-Reassess adjustment factors and parameter values for traits currently included in the genetic evaluation. Suggested action per board discussion: Re-center these factors and values.
    - 2-Incorporate repeated measures of traits, which are not currently being utilized, in the genetic evaluation. Suggested action per board discussion: Records going in and aren't being utilized. Useful data is being lost.
    - 3-Reassess the construction of contemporary groups including setting minimum threshold values where relevant (fecal egg counts). Suggested action per board discussion: Thresholds aren't being used so data doesn't check for disease challenge.
    - 4-Define genetic groups to delineate animals with unknown parentage used more recently from those used in the more distant past. Suggested action per board discussion: linked with #5, Measure genetic gains from unknown parentage.
    - 5-Redefine the genetic base (benchmark for comparison) for expression of EBV and indexes. Suggested action per board discussion: linked with #4, Entire database groups as one, need to delineate this group to benchmark the unknowns.

- 6-Reappraise the construction and content of indexes. Suggested action per board discussion: Need to review all indexes.
- LambPlan may be interested in partnering with NSIP to get #2 and #3 done.
- Items #4 and #5 are important to address for new members and people using non-NSIP animals.
- New Business
  - Decisions on whether to hold The Center of the Nation Sale and/or how it will be held will be made by June 15 as moved by Matt Benz, seconded by Brenda Reau. Motion passed. Rusty and Matt Benz will be point.
- Next meeting will be July 16 at 7 p.m. CST.
- Matt Benz moved to adjourn, seconded by Brenda Reau.

## **NSIP Treasure's Report**

### **2<sup>nd</sup> Quarter 2020**

**March 31 ended our 2<sup>nd</sup> quarter of our fiscal year and our P&L statement representing that period is also attached.**

**Our current assets include \$11,985 in the bank plus \$17,085 in receivables for a total of \$29,070. A year ago we had \$20,608 in the bank and \$9,163 in receivables for a total of \$29,771. The difference in cash and receivables is the timing of the billing for data fees and the time lapse between Rusty receiving payment and those checks being recorded by Larry at ASI. Overall our financial situation has changed little year over year.**

**Membership enrollment for the year stands at 90 paid members plus 11 new members with an average membership fee of \$276. These numbers are very close to last year's at this time except for the average membership fee which was \$236 in 2019. I see the \$40 increase as being significant.**

**We have had 4,026 billable records processed by Lamb Plan for a cost of \$12,480 in the first 6 months of our fiscal year.**

**Accounts receivable April 1<sup>st</sup> stood at \$2,173 under 90 days and \$11,408 over 90 days for a total of \$13,581. In May of 2019 we had a total of \$20,737 accounts receivables. We did write off \$1,900 in bad debt in the fall of 2019 and we expect that we will always have a percentage uncollectable debt each year. Overall I believe Rusty has made good progress in our receivables over the past year.**

## NSIP Program Director's Report

May 14, 2020

These are certainly extraordinary times our industry and we all are facing right now. One potential silver lining is that with the majority of our members spending more time at home, we have had more people working on data input. I have spent numerous hours over the past month working with newer members or members that enrolled in the past but never submitted any data to get their Pedigree Master set up and data entered. I think another basic webinar session on Pedigree Master setup and basic data entry would be good to offer to the membership. We've had 24 new members enroll in NSIP and 2 members that took a several-year hiatus rejoin so we continue to attract more producers to the program.

With all the uncertainty right now, all of my travels for speaking engagements have been cancelled for the immediate time being. To fill some of that gap and to provide an additional networking opportunity to the NSIP membership, I would like to start a series of small producer groups. I would like to offer to all the NSIP members to participate if they would like and form several small groups of 5-6 members in each group. Each group would meet virtually via Zoom either monthly or bi-monthly and for each meeting, 1 member would volunteer to present a virtual farm/ranch tour of their operation. They can present either a slideshow of photos or take a series of videos using a camera or smart phone and share what makes their operation unique, what challenges they might face, why their market choice matches their breed and operation, etc. Then the group can share ideas, solve problems, offer solutions and generally network. I believe there is power in networking and groups like this can help us capitalize on the diversity we have in the sheep industry. If we could have 1 board member be present in each group, then we can open up a pipeline to having information flow from the members to the board of directors and vice versa. I would plan on participating in these meetings and helping to steer conversation when needed but would really like to take a backseat so that it doesn't turn into a lecture series but rather producers working with producers.

Finally, I receive constant requests for updates on the Center of the Nation NSIP Sale. I believe a decision should be made in the very near future on if the CNS will take place in person or transition to an online-only format for this year as it would help our members for planning purposes. As of right now, all expenses for the sale are refundable so there is no economic harm if the decision is made to transition online.

**NSIP Technical Advisory Committee Report**  
May 2020

**Collaborative research with the Animal Genetics and Breeding Group**

Because of the coronavirus pandemic, a study program with the Animal Genetics and Breeding Group (AGBU), in Armidale, Australia, regrettably needed to be curtailed. Both Napo Vargas Jurado, the post-doctoral student, and Ron Lewis returned to Lincoln, Nebraska, on March 24, 2020. Although cutting this program short was disappointing, strong connections with scientists in AGBU and the sheep genetics team at Meat and Livestock Australia were established. This has allowed continued collaboration on two research projects, both of benefit to NSIP, albeit from afar.

**Fecal Egg Count (FEC) EBV**

Based on the decision of the NSIP Executive and Board, steps are well underway to provide EBV for FEC at weaning and post-weaning ages in Western Range and Terminal Sire breed groups. Working with Daniel Brown at AGBU, the parameter values necessary to obtain such EBV were agreed and have been incorporated into the LambPlan genetic evaluation of NSIP flocks. Dr. Brown is currently testing the outcomes of the revised evaluation. Once complete, the results will be discussed with the Technical Committee before their release as part of standard reporting in these breed groups.

**Updates on genomics**

*Western Range.* As mentioned in a previous report, a grant was funded by the National Sheep Industry Improvement Center (NSIIC) to allow genotyping of Rambouillet sheep from NSIP flocks in the Fine Wool Consortium. Likely because of the coronavirus pandemic, final approval of that funding was delayed. From recent communications with NSIIC, however, the approval has been finalized with the contract documentation forthcoming.

*Terminal sire.* Mrs. Carrie Wilson, a scientist with the National Animal Germplasm Program and a PhD student at Colorado State University, has begun her investigations of the genetic structure of U.S. Suffolk sheep. Using genomic data, primarily on NSIP-recorded sheep, she has completed preliminary molecular analyses of heterozygosity—the most common measure of genetic diversity in a population—inbreeding, and effective population size. Her key finding thus far is there was no indication of a lack of genetic diversity within U.S. Suffolk sheep. The collection of DNA samples on the NSIP sheep genotyped was funded by a Let's Grow project.

*Hair sheep.* An additional 1,395 Katahdin sheep were genotyped as part of a USDA Organic Agriculture Research and Extension Initiative led by Joan Burke. This increases the repository of genotypes to over 2,500 animals, about half of that planned in the project. Once the full sets of genotypes become available, several analyses will be conducted including obtaining genomic enhanced EBV for a suite of traits in NSIP. Such will be a test-case for genomic evaluation of a U.S. sheep breed.

**Maintaining NSIP services**

To keep NSIP services up-to-date and competitive several aspects of the genetic evaluation services being provided to members merit attention. These include:

- Reassess adjustment factors and parameter values for traits currently included in the genetic evaluation.
- Incorporate repeated measures of traits, which are not currently being utilized, in the genetic evaluation.
- Reassess the construction of contemporary groups including setting minimum threshold values where relevant (fecal egg counts).
- Define genetic groups to delineate animals with unknown parentage used more recently from those used in the more distant past.
- Redefine the genetic base (benchmark for comparison) for expression of EBV and indexes.
- Reappraise the construction and content of indexes.

Although not novel, these items are core to the genetic evaluation services provided by NSIP to its members. Devising a plan to address these items, which includes identifying funding resources, is considered key.

Ron Lewis  
NSIP Technical Committee Chair  
May 13, 2020



NSIP Program Director's Report  
March 12, 2020

Membership renewals and new membership forms keep coming in on a regular basis. As members start thinking about submitting data, they are getting their memberships renewed. We've received less than 100 membership renewals and several long-term members are on the list of those that have yet to renew. It's become evident that relying only on electronic communications is not an effective manner to get pertinent information to the membership. Therefore, with the guidance of the Executive committee we've decided on a new invoicing policy. From now on, I will invoice all members for data fees electronically, then, any invoices that have not been paid within 30 days, I will print and mail a hard copy. If that hard-copy invoice has not been paid within 30 days, those members will be removed from the valid to run list and will not be able to submit any more data for analysis until their account is settled. This policy will allow those who would like to pay via credit card the opportunity but will also address the situation of people not seeing/overlooking the electronic invoice. Also, at the end of the year, I will mail out a membership renewal form to all members, which will hopefully encourage sending those forms in within the first 60 days of the calendar year. The increase in postage and printing supplies will cost NSIP around \$200 per year but I expect it to drastically reduce the \$20k plus of accounts receivables we carry in any given month.

Recently, MLA has asked that we transition from paying invoices to Australia from quarterly to paying monthly. With this transition, cash flow throughout the year must improve for NSIP as we will have a much shorter window to collect those fees from our members before having to pay MLA. Additionally, the international wire transfer fee is about \$50 per transaction so our wire transfer expense will go up by about \$400 for the year. This is potentially negotiable and I will continue to work with SheepGenetics on this topic.

I will be working with the website committee to re-vamp the NSIP website. I've received several comments how content is difficult to find and the page is cumbersome to navigate. As I generate more educational content and resources, it is getting rather cumbersome so I've reached out to Michelle Canfield, the website committee chair on guidance for how to go about this process.

I've spent several hours over the past few months re-organizing the Quickbooks of NSIP. I've gone through all open accounts and mailed out hard-copy invoices to all members who have unpaid invoices. Unfortunately, there wasn't an automated way to do this so it involved going through one account at a time to get everything caught up. However, it should be much easier to stay on top of now that old accounts have been removed and everything is now current. Now that this process is completed, I will update the membership lists and the maps on the NSIP website with the current information.

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The developers have fixed several bugs in the online searchable database, built a new updated upload tool for me to use and re-organized the physical structure of the database. Now, they will begin the process of the upgrades we've requested which are: including accuracy values, more in-depth query tools, automated percentile reports and including the certification program.

I have spoken to Willoughby Sales about hosting online sales. They are willing to work with us on a fee structure and they have proposed we can charge a \$25 consignment fee, which would come to NSIP and Willoughby, would operate on a commission basis charging a 10% base commission. As sale proceeds go up, commission withheld decreases. Additionally, they will be providing me with a quote to for them to manage the Center of the Nation sale. I have a call scheduled with Dan Willoughby Thursday afternoon so I will present that quote to the board during our meeting. I also am awaiting a response from the Heartland Sales group and I have a meeting next week with the owners of the Spencer sale barn to see if they would be interested in working the CNS.

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## NSIP Technical Advisory Committee Report

March 2020

### Updates on genomics

There are several projects underway that begin to allow (encourage) the incorporation of genomic information into the genetic evaluations provided through the partnership of NSIP with Sheep Genetics.

Much of the focus involves use of a new genotyping platform recently released by Neogen GeneSeek. The GeneSeek Genomic Profiler (GGP) Ovine 50K Infinium array is a moderately dense genotyping platform with 50,000 genetic markers (also known to as single nucleotide polymorphisms or SNP). It was designed in part with U.S. breed-types in mind. Sixty-four DNA samples from each of Rambouillet, Suffolk and Katahdin sheep, primarily rams, collected in NSIP flocks were used to help tailor the platform to our breed-types.

The GGP Ovine 50K array includes genetic markers useful for verifying an animal's sex and parentage, as well as genotypes on several genetic conditions. By complementing the pedigree and performance information we already collect with that available at the genomic level, with this platform we also have the opportunity estimate breeding values—so called genomic-enhanced EBV—more accurately. Perhaps it is worth reiterating that this genomic information adds to but certainly does not replace the phenotypic data collected on-farm. On-farm recording in fact becomes even more important when incorporating genomics into genetic evaluations.

- *Western Range.* The National Sheep Industry Improvement Center funded a project that will allow us to genotype 610 Rambouillet sheep from NSIP flocks in the Fine Wool Consortium using the GGP Ovine 50K array. As a collaborative project of the NSIP Technical Committee, we are in the process of identifying the subset of samples from our DNA repository on Rambouillet sheep to genotype. These samples were collected with support of a Let's Grow project grant.
- *Terminal sire.* As part of a collaboration with National Animal Germplasm Program (NAGP), with funding from the USDA-ARS Innovation fund, DNA samples on 180 Suffolk sheep recorded in NSIP were recently genotyped using the Illumina OvineHD Beadchip, which has about 600,000 genetic markers. These will be added to genotypes we collected earlier using this same platform, and will contribute to Mrs. Carrie Wilson, a NAGP scientist and PhD student at Colorado State University, doctoral research project. Like with the Rambouillet samples, these Suffolk samples were collected with Let's Grow project funding.
- *Hair sheep.* In a project led by Dr. Joan Burke (Understanding Parasite Resistance in Organic Livestock and Using a Systems Approach for Control), funded through the USDA Organic Agriculture Research and Extension Initiative, we have genotyped 1,168 Katahdin lambs using the GGP 50K array, with another 1,388 samples being submitted shortly. Once those combined sets of genotypes become available, we will be able to run a genomic evaluation in Katahdin as our first test-case for obtaining genomic enhanced EBV in a U.S. sheep breed. Although it will be premature to release those results commercially quite yet (approximately 5,000 genotypes will be available by end of the project), we will have the opportunity to compare EBV, and as importantly their accuracies, with and without genomic information to gain a sense of the opportunities that lay ahead.



### **Collaborative research with the Animal Genetics and Breeding Group**

As a collaboration with the Animal Genetics and Breeding Group (AGBU), Drs. Napo Vargas Jurado, a post-doctoral student at the University of Nebraska-Lincoln, and Ron Lewis are working alongside Dr. Daniel Brown and his colleagues in Armidale, Australia, from January to May 2020. They are focusing their efforts on two projects, both with funding from the USDA:

- Understanding Parasite Resistance in Organic Livestock and Using a Systems Approach for Control; and,
- Establishing Innovative Strategies to Incorporate Crossbred Data into Genetic Evaluation of Sheep in the United States.

Further details about the objectives of these two projects are provided in the Appendix. Air travel to Armidale was funded by a Let's Grow project awarded to NSIP.

Ron Lewis  
NSIP Technical Committee Chair  
March 10, 2020