**SAC-2 Animal Science**

**Annual Meeting – February 10, 2023 (Virtual)**

**Meeting Report**

Participants

**Name Institution Email**

Hongwei Xin University of Tennessee hxin2@tennessee.edu

Robert Godfrey USDA-NIFA Robert.Godfrey@usda.gov

Mike Looper (Secretary) University of Arkansas looper@uark.edu

Neal Schrick University of Tennessee fschrick@tennessee.edu

Charles Rosenkrans (Chair) Clemson University cfrosen@clemson.edu

Ralph Noble Fort Valley State University ralph.noble@fvsu.edu

Wayne Greene Auburn University wgreene@auburn.edu

Dave Gerrard Virginia Tech University dgerrard@vt.edu

Tony Pescatore University of Kentucky apescato@uky.edu

William Dozer Auburn University bill.dozier@auburn.edu

Kim Linton University of Tennessee klinton1@utk.edu

Overview

The meeting was held virtually, and Charles Rosenkrans (Chair of SAC-2) started the meeting with individual introductions from participants.

Administrative Advisor, Hongwei Xin provided updates and comments relative to the group and valuable to all members involved.

Notably, Hongwei Xin provided information on the Excellence in Multistate Project nominations due February 28; and the Second U.S. Precision Livestock Farming Conference (USPLF2023) that will be held May 21-24, 2023 in Knoxville, TN. Hongwei also reiterated the importance of true collaborations in these projects; encourage faculty and advisors to facilitate fostering true multistate collaboration. Hongwei also reported that John Arthington has volunteered to serve as the monitor for S-1093 “Management systems for beef cattle reared in subtropical and tropical environments” (10/22-9/27).

USDA-NIFA representative, Robert Godfrey provided updates and comments relative to the group and valuable to all members involved.

Notably, NIFA is almost completely at full staff; all are working remotely with some telecommuting (2 days/pay period in the offices either in Kansas City or DC). Many staff are new, so processes may take more time as people learn their responsibilities. Budget for FY23 is $1.7 billion, an increase over FY22. Robert provided deadlines and updates on several RFAs. Listening session is planned for February 14 on “Laying hens/turkeys”; new program that will provide funds by end of fiscal year. He recommended the group to encourage early career faculty to participate in grant panel reviews.

Francis Fluharty was unanimously elected as the incoming Secretary for the upcoming year replacing Mike Looper that will serve as chair.

Charles Rosenkrans, Chair of SAC-2, guided the group through a review of each of the Southern Region projects. Charles will upload the minutes from the 2022 meeting.

**S-1074**

*Future Challenges in Animal Production Systems: Seeking Solutions Through Focused Facilitation*

Monitor: Todd Applegate

Administrative Advisor: Wendy Powers

Mike Looper reported on S-1074. The S1074 team has 28 faculty members from 20 participating states as January 2023. The group held a hybrid model annual meeting in Oregon, Ohio on April 22, 2022. Dr. Lingying Zhao at Ohio State University was elected as incoming secretary for S1074 for 2022 – 2023 at the project annual meeting. An add-on conference “Waste to Worth 2022” (about 60 presentations and 20 posters) was organized by the team from April 19-22, 2022. In addition, the project team organized a webinar on February 28th, 2022: Dr. Gary Anderson from South Dakota State University gave a presentation about his research work titled “Different Perspective: Design of Livestock Buildings. State of the Science Review on Methane Emissions from Manure Storages.” For the publication, the project team published 48 journal articles, 34 conference proceedings, and 67 extension articles during 2021-2022. The group is currently developing a new proposal “tentative title - Fostering Technologies, Metrics, and Behaviors for Sustainable Advances in Animal Agriculture” for renewing the project from 2023-2028.

Hongwei Xin asked if Wendy Powers would continue as advisor. Powers is now dean at Washington State University.

Wayne Greene suggested we remind all groups that have projects ending in 2023 establish a rewrite committee.

Dave Gerrard made motion to recommend approval to continue project

Wayne Greene seconded motion

Charles Rosenkrans called for vote of members

Motion passed unanimously

**S-1076**

*Fly Management in Animal Agriculture Systems & Impacts on Animal Health and Food Safety*

Monitor: Charlie Rosenkrans

Administrative Advisor: David White

Project S1076 concluded their fifth year with a meeting in January 2023, and due to timing of the evaluation, their fifth report had not been posted at NIMSS. Therefore, the review is based on their 2021 and 2022 annual reports and material posted on the official S1076 NIMSS site (https://www.nimss.org/projects/18522).

Activities: Both annual meeting minutes/reports were informative. At the 2022 virtual meeting hosted by Oklahoma State University, they had 57 participants from more than 35 organizations. The project committee is commended for embracing a wide range of participants including research scientists from academia and USDA, Extension scientists, and industry partners and scientists. The group has developed an outstanding website hosted on wix ( https://www.veterinaryentomology.org/s1076-project ). That website includes excellent information and is presented in a very logical and public-friendly manner. That site clearly demonstrates the project participants commitment: having been awarded the “Excellence in Multistate Research Award” for their previous version of the project. One of the expectations of a multistate project is that the project participants actually work together to solve the proposed questions and to develop educational materials as a team. Group S1076 has succeeded at both of those goals. On the agenda for the January 9-10, 2023 meeting that was held in Orlando Florida, they had scheduled time to organize a rewrite committee.

Suggestions: While the group appears to be collaborative and productive, the official site and annual reports were lacking critical information. The review committee would like to read clearly stated accomplishments and impacts for each of the five project objectives, and indications of collaborations across organizations. In addition, the review committee would like to see the annual list of publications associated with each objective of the project. And finally, the wix website is outstanding, but for the ease of reviewers (department chairs/heads, upper administrators, USDA personnel, and legislative staff) we recommend that an active weblink to the wix site be prominently shown on the NIMSS site.

Recommendation: Overall, the review committee recommended continued funding and support of multistate project S1076.

Charles Rosenkrans made motion to recommend approval to continue project

Dave Gerrard seconded motion

Charles Rosenkrans called for vote of members

Motion passed unanimously

**S-1081**

*Nutritional Systems for Swine to Increase Reproductive Efficiency*

Monitor: Dave Gerrard

Administrative Advisor: James Matthews

Dave Gerrard reported on S-1081. S-1081 Nutritional Systems for Swine to Increase Reproductive Efficiency (8) meets in conjunction with NCCC42 Committee on Swine Nutrition (13). The current objectives are to: 1) determine the effects of boron supplementation on sow reproductive performance; 2) determine the effect of phytogenic feed additives on sow reproductive performance; and 3) determine the effect of altered gestational feeding of sows on sow productivity and longevity as well as offspring robustness. For years, the groups met shortly after the first of the year, and this past year they met on January 5-6, 2022. Given the dates of last year’s SAC2 meeting, a report of this project was given last year. However, the committee has decided to move their meeting later in the year (May) to Des Moines, IA. To that end, the report submitted last year was in effect also a report for this year. The project expires in 2023 but based on historical performances, I move the project be continued/approved.

Dave Gerrard made motion to recommend approval to continue project

Ralph Noble seconded motion

Charles Rosenkrans called for vote of members

Motion passed unanimously

**SCC-81**

*Sustainable Small Ruminant Production in the Southeastern US*

Monitor: Ralph Noble

Administrative Advisor: Ralph Noble

Date: January 10, 2023

1. What stage / year is project in?

Completing first year of 5-year project.

1. Is satisfactory progress being made? Yes
* 5 Objectives fulfill through collaboration of
* 10 institutions 🡪 6 – 1890s, + 3-1862 + 1-ARS station
* 8 Collaborators 🡪 1 – 1890 + 7 - 1862
* 25 individuals
* Publications:
* 10 station reports presented at the annual meeting in Raleigh, NC 1/22/2023.
* 18 peer review journal articles
* 35 abstracts and proceedings
* 10 popular press articles
1. Should project continue? Yes

The project is serving an important purpose and there are several new collaborations; exciting time for this project. Recommends support for continuation.

Ralph Noble made motion to recommend approval to continue project

Neal Schrick seconded motion

Charles Rosenkrans called for vote of members

Motion passed unanimously

**SCC-84**

*Selection and mating strategies to improve dairy cattle performance, efficiency, and longevity*

Monitor: John Arthington

Administrative Advisor: Neal Schrick

Charles Rosenkrans reported on SCC-84. The project held their annual meeting on October 17-19, 2022 in East Lansing, MI. Twenty-seven participants (faculty, post-docs, and students) from eight institutions were present with virtual reports from Neal Schrick and Frank Siewerdt. For the last year, the project reported a total of 25 publications. Many of these involved multistate collaborations. Albert De Vries will repeat as chair, and Brad Heins will lead the rewrite efforts. From their report, the major impacts of this SCC84 group are be summarized as follows: (i) development and implementation of national genetic evaluations for new traits, (ii) development of crossbreeding rotations for dairy farm profitability and feed efficiency, (iii) better understanding of the genetic control of health traits for calves and cows, (iv) improvement in genomic evaluation for future traits, and (v) training of graduate student in dairy cattle genetics. Collaborated with the National Animal Germplasm Program (NAGP) Dairy Committee, Animal Genomics and Improvement Laboratory (AGIL), and the Council on Dairy Cattle Breeding (CDCB) to improve genetic variation of dairy and optimize economic merit indices.

Charles Rosenkrans made motion to recommend approval to continue project on behalf of John Arthington

Neal Schrick seconded motion

Charles Rosenkrans called for vote of members

Motion passed unanimously

**SERA-41**

*Improving Production Efficiency of the Beef Cow Herd in Southern Forage-Based Systems*

Monitor: Neil Schrick

Administrative Advisor: Cliff Lamb, Mark McCann

Project members met at SSAS meetings in Raleigh, NC recently (January 22, 2023). During the meeting, it was noted that the project ends in 2024 and discussion was initiated about a re-write of the project. Furthermore, the 2023 SERA 41 Symposium (Challenges to the adoption rate of research-proven practices in Southeastern cow-calf herds) was held immediately prior to the project meeting with speakers discussing several topics related to adoption of research findings and recommendations by beef producers in the southeast. Project members also discussed topics for the 2024 Symposium which will continue via email after the meeting.

Recommendation: Continue support for the current project and recommend the project members organize a potential writing committee to complete the re-write in a timely manner. Reach out during the re-write to include new participants if available. Neil Schrick indicated that the project continues to be Extension strong; has encouraged group to bring in research component.

Neil Schrick made motion to recommend approval to continue project

Wayne Greene seconded motion

Charles Rosenkrans called for vote of members

Motion passed unanimously

**S-1086**

*Enhancing Sustainability of Beef Cattle Production in the Southern and Central US through Genetic Improvement*

Monitor: Mike Looper

Administrative Advisor: James Matthews

Mike Looper reported on Multi-State Project S1086. The project held their annual meeting in McGregor, TX at the TAMU Research Station on May 24-25, 2022 with 12 participants from 7 institutions. For the last year, the project reported a total of 3 refereed publications and 4 abstracts/presentations. Many of these involved multistate collaborations. New officers were elected, and the University of Arkansas was identified as the location for the 2023 annual meeting, May 24-25. From their report (https://www.nimss.org/seas/51936), the major impacts of this S1086 group are be summarized as follows: (i) udder/teat scores of Brahman cows at weaning appear to be more useful metric as they were more strongly associated with calf weaning weight than those measured mid-lactation in Brahman cows, (ii) sound feet are important components in cattle production systems and can influence nutritional aspects of cattle, (iii) hoof soundness was reported to have effects on breeding and reproductive success and both body weight and body composition, (iv) hair shedding scores, although subjective, are well within the reach of both commercial and seedstock breeders, (v) hair coat shedding had an effect on ipsilateral uterine artery development and pulsatility during gestation in Angus cattle, (vi) hair coat shedding scores must be considered differently in cattle with more than ¼ Bos indicus, as they do not grow or shed a winter coat similar to Bos taurus cattle, (vii) beneficial effect of Brahman genetics is dependent on the magnitude of environmental heat stress, (viii) breed groups with 75% and 100% Brahman genes had superior resilience to heat stress, breed groups with 25%, 34.5% and 50% were intermediate between Brahman and Angus group and the purebred Angus group had the lowest heat stress resilience, and (ix) cow herd performance was affected by month of first shedding in crossbred Angus cows with shedding score varying by cow age and influencing calf birth weight and cow prebreeding and weaning BCS. Collaboration opportunities including the potential for joint grant applications were explored, and an upcoming rewrite of the project objectives was discussed.

Mike Looper made motion to recommend approval to continue project

Ralph Noble seconded motion

Charles Rosenkrans called for vote of members

Motion passed unanimously