

National Research Support Project-9 National Animal Nutrition Program

August 29, 2014

EXECUTIVE SUMMARY

The work of National Animal Nutrition Program (NANP), supported by a National Research Support Project (NRSP-9), was initiated in 2010 and has been established with a solid foundation and thoughtful planning for the future. The project's accomplishments and impact during its first three years were outlined in previous reports. This summary outlines the activities, accomplishments, and impacts during Federal Fiscal Year 4. Specific details are provided in the sections that follow this Executive Summary.

**Year 4
10/01/2013 to 09/30/2014**

Activities: The Coordinating Committee held 7 monthly conference calls during the first 11 months of Year 4, which included a virtual half-day conference meeting. An 8th conference call is scheduled for September 25, 2014. In addition, a 2-day, on-site meeting was held in Washington DC in June, 2014. The minutes of these meetings are shown below. Members of the Coordinating Committee, Feed Composition Committee and Modeling Committee continued to be actively involved and the Committees continue to work toward their specific goals.

Accomplishments: This past year, we vetted scientists and presented them to NRC as potential members of the new NRC Nutrient Requirements of Dairy Cattle and as reviewers for the NRC Beef Report. Our suggestions were implemented in total for the membership of the NRC Dairy Cattle Committee. The NANP/NRSP-9 website was expanded and the feed composition database was populated with data from the existing NRC swine, dairy, and beef tables along with other current feed composition data. Dr. Huyen Tran was hired following a national search to assist in populating the Feed Composition database and to serve as feed database coordinator. Dr. Robin White was hired following a national search to work with the Modeling Committee and to serve as modeling curator. A database for storing animal performance data has been established and animal performance data has been uploaded to the web site. A user feedback forum has been developed and guidelines were established for use of the forum. Two manuscripts are under development describing a generic model software interface that could be used across species and to delineate nutrient and animal information that should be reported in the literature so those data can be used by researchers for further development of nutrient requirement models. Plans were developed, then revised, to determine length of terms on committees and rotation of members (see at end of report). Most importantly, a Strategic Plan for the NANP was developed by the Coordinating Committee (see at end of this report) to focus its efforts and to be able to measure progress toward meeting stated goals. In addition, plans are materializing for a National Summit to address animal nutrition's role in environmental, human, animal, and economic health. A brochure highlighting the impacts of the NANP/NRSP-9

program was developed and a poster presentation was given at the Comparative Nutrition Society meeting to further highlight the accomplishments of NANP/NRSP-9. A booth exhibited the activities of NANP/NRSP-9 at a major research conference – the Joint Annual Meeting of ASAS and ADSA in July, 2014. A web-based network of scientists involved in nutrition and related areas of research is being developed by the Coordinating Committee to facilitate interactions among researchers.

Impacts: The NANP/NRSP-9 project has been extremely well received by stakeholders in research and teaching, industry, and government. The two subcommittees (Feed Composition and Modeling) are making excellent progress toward meeting their objectives thanks to the employment and involvement of the feed database coordinator and modeling curator, who joined the effort this past spring. The expertise that we employed to facilitate the major undertakings of developing a global feed information system and modeling technologies in support of the research community has produced excellent results. The NANP/NRSP-9 website that hosts this information (www.NANP-NRSP-9.org) is used heavily by researchers around the world. Information from this effort will be of tremendous benefit to NRC committees who prepare the NRC nutrient requirement reports, to the feed industry, and to the entire nutrition research community. The planned summit will assist the research community in identifying needs and priorities. The web-based network of scientists will enhance communications within and outside the animal nutrition research discipline. Finally, the newly developed Strategic Plan focuses our efforts toward the future goals of the committees.

OVERVIEW

Below are specific details on the work of the NRSP-9. Included are committee membership rosters of the Coordinating Committee, Feed Composition Committee, and Modeling Committee, and minutes of meetings of the Coordinating Committee. In addition, other important documents are given at the end of this report.

NRSP-9 Committee Rosters

Coordinating Committee

Gary Cromwell, Chair, University of Kentucky – swine nutrition
Jack Odle, North Carolina State University – swine nutrition
Phil Miller, University of Nebraska – swine nutrition
Michael Galylean, Texas Tech University – beef cattle nutrition
Mark Hanigan, Virginia Tech and State University – dairy cattle nutrition
William Weiss, The Ohio State University – dairy cattle nutrition
Mary Beth Hall, ARS and the University of Wisconsin – dairy cattle nutrition
Todd Applegate, Purdue University – poultry nutrition
Don Beitz, Iowa State University – nutritional biochemistry
Kasey Klein – administrative assistant

Feed Composition Committee

Phil Miller, Chair, University of Nebraska – swine nutrition
Ryan Dilger, University of Illinois – swine nutrition
Mark Nelson, Washington State University – beef cattle nutrition
Alexander Hristov, Pennsylvania State University – beef and dairy cattle nutrition
Vinicius Moreira, Louisiana State University – dairy cattle nutrition
Normand St-Pierre, Ohio State University – statistics
Bill Dozier, Auburn University – poultry nutrition
Bill Weiss, Ohio State University – dairy cattle nutrition
Mary Beth Hall, USDA/ARS and University of Wisconsin – dairy cattle nutrition
Huyen Tran, University of Nebraska – feed database coordinator

Modeling Committee

Mark Hanigan, Chair, Virginia Tech University – dairy cattle nutrition
Mike VandeHaar, Michigan State University – dairy cattle nutrition
Luis Tedeschi, Texas A&M University – beef cattle nutrition
John McNamara, Washington State University – ruminant nutrition
Kees de Lange, University of Guelph – swine nutrition (later resigned)
Brian Kerr – USDA/ARS and Iowa State University – swine nutrition
Nathalie Trottier, Michigan State University – swine nutrition
Bill Roush, Pennsylvania State University – poultry nutrition (later resigned)
Roselina Angel – University of Maryland – poultry nutrition
Ermias Kebreab – University of California-Davis – nutrition modeling
Robin White, Virginia Tech University – modeling curator

Administrative Advisors

Nancy Cox, Lead, University of Kentucky – Southern Region
Bret Hess, University of Wyoming – Western Region
David Benfield, The Ohio State University – North Central Region
Cameron Faustman, University of Connecticut – Northeast Region

U.S. Department of Agriculture Representatives

National Institute of Food and Agriculture

Charlotte Kirk Baer – National Program Leader, Animal Nutrition
Steve Smith – National Program Leader, Animal Production

Liaisons

National Academies/National Research Council

Austin Lewis – Consultant, Board on Agriculture and Natural Resources
Robin Schoen – Director, Board on Agriculture and Natural Resources

MINUTES OF THE COORDINATING COMMITTEE

Minutes of the Coordinating Committee meetings during Fiscal Year 2014, beginning with a virtual meeting in November, 2013 are provided below. Minutes of previous meetings were given in last year's report on the NIMSS Site. The minutes give additional details on NRSP-9 activities.

Minutes of the Coordinating Committee National Animal Nutrition Program – NRSP-9 Virtual Meeting – November 6, 2013

The November 6 virtual meeting of the Coordinating Animal Nutrition (CAN) Committee of the National Animal Nutrition Program (NANP) was called to order at 9:00 am EST by Chairman Gary Cromwell. Those in attendance were Mike Galyean, Mary Beth Hall, Don Beitz, Bill Weiss, Todd Applegate, Jack Odle, Mark Hanigan and Gary Cromwell (Committee Members), Phil Miller (Feed Composition Committee Chair), Austin Lewis (NRC) and Charlotte Kirk Baer (USDA).

Minutes – The minutes of the September 12, 2013 conference call meeting were approved.

Administrative Advisors – no report (none in attendance).

USDA/NIFA Update – Kirk Baer described the impacts of the recent federal-wide furlough and the current budget scenario for NIFA. She spoke about the agency's severely constrained and declining operating budget, which has negatively impacted the staff's ability to carry out responsibilities. In addition, constrained budgets have impacted the grants processes, including reduced ability to bring grant reviewers in for on-site panel meetings. The agency is currently implementing plans to improve efficiencies, be strategic about investments that provide high rates of return, and eliminate redundancies and activities that don't demonstrate impact. The government is operating on a continuing resolution until January 15, 2014.

NRC Update – Lewis reported that the NRC Beef Committee had their second meeting on September 17-18. He said that it was a great meeting and the committee is making excellent progress.

Lewis was pleased to report that the ASAS Foundation is going to contribute \$10K to the Beef report. The NRC would like for the NANP to suggest reviewers for the Beef report and they especially would like suggestions for a person to oversee the review process.

Lewis also wants suggestions for the members and chair of the upcoming NRC Dairy Committee. Kirk Baer suggested that the names be submitted to NRC on behalf of the full Coordinating Committee. Names should be sent to Gary and the NRSP committee will discuss them at the next conference call before submitting an official communication with the Committee's consensus recommendations to the NRC.

A discussion of interaction between NRSP and NRC committee members took place and Lewis encouraged one-on-one interactions, as NRSP is providing support to NRC. The issue of continuity between revisions of the NRC reports also was discussed. Hanigan reminded the group that the NRSP website has developed a listserv for feedback and comments related to

nutrient requirements (especially modeling) which can serve as a forum for discussion and a historical accounting of issues that can be shared with new committees to bridge the gap.

Update from Feed Composition Committee – Phil Miller reported that ChalkLabs has done a good job reading in the data for the feed composition portion of the web site using a format similar to the Feedipedia site, which is user friendly. They've handled glitches with how Excel spreadsheets were read in and there didn't appear to be any data format that ChalkLabs can't handle. One of the major items that will need to be addressed is unification of ingredients and composition (e.g., making yellow dent corn the same across all species). Miller has talked with Galen Erickson, from the NRC beef committee, and beef data will likely be provided in Excel format. The NRC committee will share with NRSP the headings that the beef committee has chosen. Help from a soon-to-be hired post-doctorate position will be needed with data acquisition.

A job announcement for the post-doctorate position will be sent out by Cromwell this week; this position is anticipated to greatly facilitate work in the feed composition area and completion of the feed information system. Applicants will be sent to Cromwell and he will forward the applications to Hanigan and Miller. Their recommendation(s) will be presented to the Coordinating Committee for approval.

In addition to the NRC data, Weiss has another large resource developed at Ohio State, which includes an enormous amount of feed composition information (2 million records). Once he has permission from the contributors, he will share the data for use with the feed composition committee. Here again, the post doc can help to identify ~15% of the information that might need to be removed from the compilation.

Another activity underway is a paper that Hall has initiated on feed analysis, which is being distributed among committee members. This serves as a good example of value added by the committee and is being recognized by the links to AAFCO's work.

Overall, the feed composition committee is making good progress. Miller suggested that a face-to-face meeting might be useful after the first of the year.

Update from Modeling Committee – Hanigan reported that progress has been slower than anticipated. He reiterated that individual assignments were agreed upon and members of the committee now need to follow through. While everyone is busy, he hopes that the time commitments made by accepting membership on the committee will be upheld. It was suggested that the committee might benefit from a face-to-face meeting to spur momentum.

As one of the committee's deliverables, Hanigan has developed a draft white paper, which will be sent to the committee soon to finalize. The paper describes a model interface that would work across species.

Hanigan has provided performance data to ChalkLabs, but has not made that a priority, since the feed composition piece was taking precedent. He has also developed a template for references and for updating activities on the site, which makes it straightforward to incorporate new materials.

Two additional items were noted: we need to get the word out about updated NRC models and it would be useful to track website usage (e.g., hits, downloads).

Committee Membership Policy – There was a short discussion on the need to develop a formal policy for committee membership. The policy should cover terms of service, membership rotation, and member responsibilities. Most of the committee members recommended 3-year staggered terms. Miller pointed out that the two working committees have just begun to gain momentum and there may be value in maintaining a good portion of the membership, but could also see the value of bringing new members on. Cromwell and Beitz will draft a proposal for committee member policy to present to the committee at the next meeting.

Status and Review of NANP Website – The group viewed the NANP website, noting several modifications to be conveyed to the feed composition committee:

- a. Allow selection of ingredients to display side by side, again perhaps using check boxes to select the ingredients to display from the larger list.
- b. Seems it would be better to show the nutrients vertically, particularly if you start looking at a common ingredient across species, i.e. a DE value for each species, ect. When you do that, there will likely be 200 nutrients or more which will display much better vertically.
- c. If the display stays horizontal, display the column headings vertically so the column width is less and more nutrients fit across the screen.
- d. Perhaps look at the DairyOne web site for some ideas on formatting.
- e. The dairy database has IFN numbers but the swine doesn't. IFN numbers are important for everything. When doing model evaluations, you need a unique identifier that is easy to merge on in SAS. Ingredient names don't really lend themselves to that function.

These suggestions were forwarded by Hanigan to Miller.

Plans for Spring Summit – Hall presented the working group's ideas. The goal of the meeting is to explore how to leverage our current knowledge in animal nutrition to improve public health by identifying research gaps and potential relevant but unexploited areas of research, and set a cohesive strategy for future work in animal nutrition to drive major advances in public health. A question was raised about the audience, which was identified after some discussion primarily as research funding entities (public and private) and administrators as well as the people working in animal nutrition and human health who could speak in lay terms about the benefits to each science area. In summary, the committee agreed that the meeting should (1) focus on broad issues (not technical), (2) bring together public policy and funding organizations, and (3) invite scientists good in their field but also good communicators. The Coordinating Committee agreed to send Hall ideas for speakers by November 22, 2013.

Networking – Animal Nutrition Expert Resource – Odle and Kirk Baer discussed two examples of expert locators (REACH NC and Biomed Experts). They have both reviewed several options for establishing a resource of animal nutrition experts, which will allow the public and researchers to identify specific networks of activity and expertise. They will do further checking on the cost and whether options include a yearly maintenance cost after the initial development of a network.

Sustainability of NANP – Kirk Baer indicated that this topic needs to be the first one discussed at the next meeting, as it has always fallen to the end of the meetings and has not received the attention it needs if the activity is to remain viable. In light of an uncertain Federal/State budget scenario, she suggested that the committee develop a plan for its future, including how it will interact with other groups beyond traditional stakeholders to establish linkages and support, how it will leverage resources to build its financial base, and what concrete activities will be undertaken to demonstrate impact. The group agreed that a strategic plan might be useful and Weiss volunteered to compile a draft to share with the group for discussion during its next meeting.

Next meeting – Cromwell will send out a Doodle poll to determine the best date and time of our next conference call in December. It was generally agreed that the virtual meeting approach was better than a conference call (although most of the participants seemed a bit weary after 4 straight hours). Kirk Baer also noted that the virtual meeting requires resources from the agency (e.g., band width and staff time to organize and monitor), so these should be used with discretion.

There being no other business, the meeting was adjourned at 1:10 pm EST.

ACTION ITEMS:

- Cromwell will post announcement for post-doctoral position by November 15, 2013.
- Coordinating Committee members will provide suggestions for summit speakers to Hall by November 22, 2013.
- Coordinating Committee members will provide suggestions for reviewers of the NRC beef report to Cromwell before next conference call so a formal committee recommendation can be made to the NRC.
- Coordinating Committee members will provide suggestions for members of the new NRC dairy committee to Cromwell before next conference call so a formal committee recommendation can be made to the NRC.
- Coordinating Committee members will provide suggestions for chair of the new NRC dairy committee to Cromwell before next conference call so a formal committee recommendation can be made to the NRC.
- Cromwell and Beitz will develop a draft membership policy for consideration by the Coordinating Committee during its next conference call.
- Weiss will develop a draft strategic plan for the Coordinating Committee to discuss and flesh out during its next conference call.

**Minutes of the Coordinating Committee
National Animal Nutrition Program – NRSP-9
Conference call - December 17, 2013**

Call to order: Chair Gary Cromwell called the December 17, 2013 conference call meeting of the Coordinating Committee of the National Animal Nutrition Program to order at 3:00 pm with

Mike Galyean, Mary Beth Hall, Don Beitz, Bill Weiss, Todd Applegate, Jack Odle, Mark Hanigan, Austin Lewis (NRC), and Charlotte Kirk Baer (USDA) present.

Minutes of previous meeting: Minutes of the November 6, 2013 virtual meeting of the Committee had been distributed earlier and were approved by voice vote.

Administrative Advisors: No Advisors were present, and thus no report was available.

USDA/NIFA Update: Charlotte Kirk Baer reported that the Federal government is negotiating action to raise the debt ceiling to avoid a national financial crisis. Negotiations on the new farm bill are ongoing.

NRC Update: Austin Lewis reported that NANP Committee members have recommended Reviewers for the Beef Report, Members of NRC Dairy Committee, and Chair of NRC Dairy Committee. Members were encouraged to consider additional nominees. Names of all nominees except Robin White and two nominees who are members of the Beef Committee will be submitted to the NRC for consideration.

Feed Composition Committee: Chair Phil Miller was unable to attend but filed a report that is summarized as follows: The Committee will hold a conference call in January. A list of job responsibilities of the future post-doctorate is being established. Goals for 2014 include a literature review of feed composition, assist with development of feed composition tables for new NRC Beef publication, develop industry cooperation for feed composition data, and develop description of chemical analyses and nutrients in feeds. Collaboration with AAFCO to link information of monographs with NRC feed composition tables is being pursued.

Modeling Committee: Chair Mark Hanigan stated that the website for the Modeling Committee is still being developed. Of the eight tasks identified by Mark Hanigan, good progress has been made on three and less on the other five. Gavin at Chalk Labs will work with Mike VandeHaar on data. References to models will be added to website. John McNamara is working on a manuscript to standardize guidelines for diet information for refereed publications. Usefulness of animal models is that they assist with identification of gaps in our knowledge of biological phenomena. Austin Lewis emphasized that NRC publications are to be written such that reader can identify 'rock solid' information and information that is tenuous.

Employment of post doctorate: Gary Cromwell, Phil Miller, and Mark Hanigan reviewed seven applications. Three candidates emerged from the first screening. Robin White was removed from list of viable candidates because of not being available yet (still working on Ph.D. degree program) and not having grant writing experience. On the basis of modeling and statistics expertise and availability, Huyen Tran at the University of Nebraska-Lincoln and Sebastian I. Arriola Apelo were selected at the top two candidates. On the basis of the major need of the Committee being 'feed composition' and experience with feed composition, Huyen Tran was recommended to our Committee as the top candidate. Mike Galyean moved and Bill Weiss seconded that Huyen Tran be hired to work primarily with the Feed Composition Committee. Motion passed unanimously. The Committee left open the possibility to considering in the next six months Sebastian Apelo as a candidate for a second post-doctorate

position with a focus on Animal Models. No action was taking at this time to write a job description for a second post-doctorate to focus on the animal modeling. Because of site of the account for the Committee being at the University of Kentucky, the post-doctorate(s) will be employees of the University of Kentucky. Gary Cromwell will offer a base salary of \$40,000 to Huyen Tran.

Special Assistant: The Committee discussed the hiring of a special assistant on a part-time basis to assist with Committee activities. Currently, the Committee needs help with development of the Spring Summit. Molly Kelly who works part-time for ADSA is unavailable for consideration. Between \$20,000 to \$40,000 is available for a special assistant. Mary Beth Hall moved and Mark Hanigan seconded that the Committee proceed with making arrangements for hiring a special assistant. Motion passed unanimously. Committee was encouraged to recommend names of potential part-time special assistants to Gary Cromwell for future consideration.

Budget information: According to Gary Cromwell, the Committee is working on a five-year NANP project with \$175,000 being available each year. About \$30K was spent in year one, about \$35K in year 2, and \$68K in year 3. About \$100K will be needed for the Spring Summit, about \$40K for a Network project, and about \$20K for each face-to-face meeting in Washington D.C. Thus, funds seem available to accelerate activities of the Committee with hiring of one and possibly two post-doctorates and a part time special assistant.

Policy for NANP Committee Membership: Gary Cromwell and Don Beitz had prepared a document on Membership Policy that was distributed before the meeting. Highlights of the document indicate that terms officially started on October 1, 2012 and that a rotation of membership will occur such that 2 or 3 members will rotate off by October 1, 2014 (2-year term), three on October 1, 2015 (3-year term), and three on October 1, 2016 (4-year term). Thereafter, members will serve 3-year terms. Members may be reappointed to a second 3-year term. Vacancies will be filled following a national search. Mike Galyean moved and Bill Weiss seconded to approve the policy statements as proposed. Motion passed unanimously. After follow-up discussion, Bill Weiss moved and Mike Galyean seconded that we recommend to the Administrative Advisers that the chairs of the Feed Composition and the Animal Models Committees be named as members of the NANP Coordinating Committee. Motion passed unanimously.

Spring 2014 Summit: Mary Beth Hall reported that initial arrangements are to hold the Summit in April 2014 in Washington D.C. She strongly encouraged responses to the “One Nutrition” Summit Series report that was sent to each member. Session 1 is Physiologic Models, Session 2 is Mathematical Models of Nutrition and Metabolism, Session 3 is Reducing Incidence of Chronic Diseases: Nutritional Links, and Session 4 is Tackling Obesity: Relevance of Fattening and Weight Loss in Livestock. Austin Lewis will inquire about use of Academy Buildings (old and new) for consideration along with the National Press Club as potential sites for holding the Summit. Suggestions of names of speakers are needed. Round tables for seating are recommended. Give suggestions of invitees to Mary Beth Hall.

National Animal Nutrition Network: Jack Odle raised two questions for consideration. 1. Should the Network be international or national? 2. How do we populate the Network? Using membership of professional societies seems problematic. Perhaps the Network can be set up and then invite scientists to supply information. In conversation with the CEO of ASAS, there is a possibility of developments of similar project within ASAS that would be duplicative with our Committee project. Jack Odle will continue dialog with CEO of ASAS.

Next Meeting: January 23 at 2:30 Eastern Standard Time was the suggested time for next conference call. Meeting date for February will be determined during the January meeting. Principal agenda items for January meeting: 1. Strategic Plan, 2. One Nutrition Summit, and 3. Network.

Action Items

- Send additional nominations for Reviewers of Beef Report, Members of NRC Dairy Committee, and Chair of NRC Dairy Committee to Gary Cromwell.
- Send suggestions of names of potential Special Assistant to the NANP Committee to Gary Cromwell.
- Send suggestions for speakers and invitees for the One Nutrition Summit to Mary Beth Hall.

Meeting was adjourned about 4:45 EST.

Minutes of the Coordinating Committee National Animal Nutrition Program – NRSP-9 Conference call –January 23, 2014

Call to order: Chair Gary Cromwell called the January 23, 2014 conference call meeting of the Coordinating Committee of the National Animal Nutrition Program to order with Mike Galyean, Mary Beth Hall, Don Beitz, Bill Weiss, Jack Odle, Phil Miller, Mark Hanigan (in New Zealand), Mike VandeHaar (guest), Austin Lewis (NRC), and Charlotte Kirk Baer (USDA) in attendance.

Minutes of previous meeting: Minutes of the December 17, 2013 meeting of the Committee had been distributed earlier and were approved by voice vote.

Administrative Advisors: No Advisors were present, and thus no report was available.

USDA/NIFA Update: Charlotte Kirk Baer reported that ‘we have a budget’. Priority programs of the USDA received a \$107 million increase, with AFRI receiving a \$40 million increase. USDA budget now is near the 2012 level of funding.

NRC Update: Austin Lewis reported that Todd Applegate and he are beginning to seek public support and funds for the next Poultry Requirements publication. Todd will promote the future

publication at the Mid-Atlantic Poultry Conference in March. Gary Cromwell will provide him with NANP visuals. Todd plans to conduct a survey relative to the poultry publication. Charlotte Kirk Baer suggested that our website could use a forum (much like what is being discussed for dairy) to solicit feedback on survey questions for poultry, rather than send out a survey. She volunteered to talk with Todd about this. The Beef NRC Committee will hold its third and last face-to-face meeting on February 18 and 19, 2014 in Washington D.C. Robin Schoen of the NRC and Austin Lewis now have recommendations of the Coordinating Committee for reviewers for the new Beef NRC publication, chair of the Dairy NRC Committee, and Committee members for the Dairy NRC. Mary Beth Hall raised the question of members of the NANP Committee being aware of discussions of animal nutrition issues by the Board on Agriculture and Natural Resources (BANR). To alleviate that concern and possibly increase animal nutrition 'output' because of greater communication, Gary Hartnell of BANR will be invited by Charlotte Kirk Baer to the next meeting of our NANP Committee.

Feed Composition Committee: Chair Phil Miller, now an official member of the NANP Coordinating Committee, reported that the Feed Composition Subcommittee will hold a conference call on January 31. The Beef NRC Committee will be sending his Committee the template for feed composition tables of the new Beef NRC publication for assistance with incorporation of feed names and composition data.

Modeling Committee: Chair Mark Hanigan stated that flow data through the digestive tract of animals are now on the Committee's website. John McNamara is still working on a 'modeling of nutrition' paper. Mark is developing a white paper on animal model development. Mark then introduced Mike VandeHaar who has been working with Gavin LaRowe of ChalkLabs on development of an NRSP-9 User Forum that was described in a memo mailed to the Committee before today's meeting. Members generally agreed with the need and organization of the Forum for facilitation of inputs to current and future Nutrient Requirements NRC Committees. Most discussion regarded the limiting of registrants to members of ADSA, ASAS, and PSA for control of 'unproductive' feedback and ideas for NRC Committees. These societies in general do not give out email addresses for use by other groups. Gavin will develop a prototype of the Forum for future meetings prior to contact of professional societies for accessibility to 'lists'.

Employment of post doctorates and administrative assistant: Gary Cromwell informed the Committee that Huyen Tran will be officially appointed as a post-doctorate at the University of Kentucky on February 1, 2014 to assist primarily the Feed Composition Subcommittee. Unsuccessful candidates for this position will be informed of this decision by Gary Cromwell. Gary will advertise soon for a second post-doctorate position to assist primarily the Modelling Subcommittee via department head/chair lists and via posting on websites of our Committee and of ASAS, ADSA, and PSA. Proposed start date for this second post-doctorate position is June 1, 2014. Kasey Klein of Champaign, IL (kaklein83@gmail.com) was the only candidate who applied for our newly established part-time administrative assistant. She is very interested in the position and is highly recommended by Molly Kelley of ADSA. She will be paid \$30/hour and can start her work any time. It is anticipated that over a one-year period she will work about 500 hours. Regarding her potential hire, Don Beitz moved and Jack Odle seconded that we hire Kasey Klein on a part-time basis at a beginning pay rate of \$30/hour. Motion passed unanimously. Her main focus initially will be to assist with development of the SRSP-9 'One

Nutrition' Summit Series in addition to her assistance to Cromwell in taking minutes and following up with assignments for the Coordinating Committee.

Strategic plan: Before today's meeting, Bill Weiss distributed a proposed Strategic Plan for NRSP-9 project. In it, he proposed a list of seven 'activities' of the project. The Committee members agreed to assist in the Plan's development by ranking the proposed activities according to either 'short-term' or 'long-term' by February 4, 2014 and to send their ranking to Bill Weiss at weiss.6@osu.edu. Bill will compile a composite ranking for discussion at our next Committee meeting.

'One Nutrition' Summit Series: Mary Beth Hall, with help from Jack Odle and Todd Applegate, distributed a document that summarized plans to date for the Summit. The Fall 2014 Summit will consist of four different topic sessions organized around a formal presentation, followed by a panel discussion followed by a roundtable discussion. Site and date remain to be determined. National Academies facilities do not seem appropriate for the Summit. Mary Beth will send to the committee a spread sheet of proposed speakers, panel members, and invitees to stimulate additional suggestions. Kasey Klein and a person in the D.C. area as recommended by Charlotte will assist with the continued development of the Summit. White papers are a proposed outcome of the Summit.

National Animal Nutrition Network: Because of time constraints, this agenda item was tabled until our next conference call.

Next meeting: Because of some conflicts with proposed meeting dates of February 20 and 27, Gary Cromwell agreed to use a Doodle Poll to determine the next meeting date.

Adjournment: The meeting was adjourned about 4:00 EST.

Action Items

- a. Charlotte Kirk Baer will invite Gary Hartnell of BANR to join our next conference call to inform our Committee of animal nutrition issues being discussed by BANR.
- b. Charlotte Kirk Baer will discuss development of a survey with Todd Applegate to garner support for new NRC Poultry publication.
- c. Each member of NANP Committee is asked to prioritize activities in Strategic Plan under either Short-term or Long-term categories and then send the ranking to Bill Weiss at weiss.9@osu.edu on or before February 4, 2014.
- d. Everyone should review the 'One Nutrition' Summit and make additional suggestions on people to invite and possible speakers before the next meeting.

**Minutes of the Coordinating Committee
National Animal Nutrition Program – NRSP-9
Conference Call: March 6, 2014**

Call to Order: Chair Gary Cromwell called the March 6, 2014 meeting of the Coordinating Committee of the National Animal Nutrition Program to order at 2:00 pm with Mike Galyean, Don Beitz, Bill Weiss, Mark Hanigan, Todd Applegate, Austin Lewis (NRC), Robin Schoen (NRC), Charlotte Kirk Baer (USDA), Gary Hartnell (BANR), and Kasey Klein in attendance.

Minutes of the Previous Meeting: Minutes of the January 23, 2014 meeting of the Committee were viewed and accepted as written by a voice vote.

Brief Comments and Updates:

- *Administrative Advisors:* No Advisors were present, and thus no report was available.
- *USDA* – Charlotte Kirk Baer reported no update from USDA.
- *NRC* – Austin Lewis reported that the Beef NRC Committee held its third and final meeting in Washington DC. Lewis relayed that it was a good meeting, and the committee spent a large amount of time on the model, as well as discussed feed composition. An agreement has been reached with two companies that perform thousands of assays, and will allow NRC to use their database. Due to the size of the databases, the main obstacle will be sorting through the massive amount of data.
- Robin Schoen reported no update on the Dairy NRC Committee.
- *Feed Composition subcommittee* – Phil Miller was not in attendance, but it was reported that he has drafted a letter requesting information on feed composition from feed companies. Miller is finalizing subcommittee comments, and will circulate it to the Coordinating Committee soon for review. The letter should be completed within the next few weeks. It was also noted that Miller is working with Huyen Tran, newly hired post doctoral associate. Tran is communicating directly with ChalkLabs, and making good progress.
- *Modeling subcommittee* – Mark Hanigan commented on the previous meetings' minutes, clarifying that the intent of the NRSP-9 User Forum for user input to NRC committees is for all animal species, not just dairy.
- *Personnel update* – Gary Cromwell reported that Kasey Klein, administrative assistant, has started her position, and will now be taking minutes during the meetings.
- Cromwell also reported that Huyen Tran has started her post doctoral associate position with the Feed Composition subcommittee. Tran currently has a F1OPT annual visa, but has requested the Committee consider paying for application for the H1B permanent visa. The permanent visa will cost \$2,000, must be completed through the University of Kentucky, and will take several months to complete. The Committee agreed to follow through with this, and Cromwell will begin the process.

- Lastly, Cromwell reported that the post doctoral associate position with the Modeling subcommittee was still available. A few applications have been received, with a deadline to apply of March 15, 2014.
- *Upcoming Events:* Todd Applegate will present the need for a new Poultry NRC at the Mid-Atlantic Nutrition Conference the last week of March. Cromwell will be in Las Vegas next week speaking at AFIA about the Coordinating Committee: our background, current projects, accomplishments, and future goals. Also, the Committee plans to have a booth at the Joint Annual Meeting in Kansas City in July; we will be looking for volunteers to man the booth.

Policy for Access and Moderation of NANP Communication Tools: It was reported that Mike VandeHaar is moving forward to get the Forum on our website. There is concern that access should be limited to scientific societies to reduce random feedback. Kirk Baer mentioned that to follow USDA's policy with the use of public funds, public access must be granted. Hanigan stated that we need a registration process on the site. Once the registrant has provided their name and email address, the site would respond with an email. Once the email has been received, the registrant could continue on to the Forum. This method of registration should prevent scammers. Kirk Baer agreed with the idea, and Gavin LaRowe of ChalkLabs can help set this up. Kirk Baer also mentioned the need to be impartial. We don't want to exclude input based on personal preference, but need to determine a way to archive the comments received. The discussion turned to visibility of comments, how to categorize them, and if they will remain raw comments. Hanigan stated should categorize by species, followed by nutrients within species, and comments will remain raw. VandeHaar's opinion is that public access to previous comments would be beneficial, and discussion is needed on how to advertise the Forum once it is live. Hanigan will draft a policy related to the Forum.

BANR and NANP: Gary Hartnell reported the meeting between animal nutritionists of BANR and FDA was successful. He thanked FDA for continued support of NRC, provided species updates, and progress on revisions of NRC Nutrient Requirement series. Also, he listened to the basic needs of FDA to determine how BANR (and ultimately our Committee) can assist with issues. In no order of priority, their interests are:

- Encouraged safety implications on tissue residues be studied as the NRCs are updated, especially if nutrient requirements are increased-- i.e.: ramifications on human health if selenium was increased
- NRC access on the web versus paper copy
- Models-- want to see data behind the validation of models
- Bio-availability-- want help with organic, inorganic, and bioavailability of minerals
- Role of dietary antioxidants related to oxidative stress in animals—i.e.: natural vs artificial antioxidants

- Safety implications of fortification—i.e.: omega 3 fatty acids
- Nutrient requirements of exotic birds
- Nanotechnology applications in feeds
- State of science of changing microbiome in response to several dietary factors

Hartnell reported no action had been taken on these issues; the meeting was only informative. Kirk Baer questioned how to proceed with future of symposium in a way that's useful to NRC as well. Schoen will continue communication with all groups to ensure useful feedback.

Strategic Plan: – Bill Weiss reported that he received no additional comments on the posted strategic plan; so the Committee accepted the final version. Current progress on strategic plan includes: the first two short-term goals are in progress, but no action has been taken on the last three short-term goals or any of the long-term goals. Kirk Baer will help develop a pre-amble to include a mission and vision statement. Weiss commented the need to demonstrate our achievements relative to the strategic plan. Suggestions included: posting on website, writing a review for FDA's bio-availability interest will increase public awareness, and begin inviting "customers" to interact with the Committee and view strategic plan. A Doodle Poll will be sent out to determine dates for a May meeting in Washington DC.

"One Nutrition" Summit: Mary Beth Hall was not in attendance but reported the need to assign a Committee member to run the summit. She suggested to remove one item from the agenda, leaving 3 sessions, with one committee member to run each session. Applegate noted that broader input was needed to assist with areas of expertise and logistics for conference. Committee decided that Summit will be main item of discussion at next conference call, with establishing a chair a top priority.

Sustainability of NANP: Cromwell and Kirk Baer reported that NRSP-9 grant will expire September 2015, and will require a re-write of the project for renewal. The Committee will need to discuss Committee and leadership changes at a later date due to term lengths.

National Animal Nutrition Network: Jack Odle was not present, and thus no report was available.

Next Meeting: The Committee will hold a **Conference Call April 3rd at 2:00 pm EST.**

Adjournment: The meeting was adjourned at 3:15 pm EST.

Action Items:

- Hanigan to draft policy concerning public access relating to the User Forum.
- Kirk Baer will develop a preamble to include mission and vision statement for Strategic Plan.

- Entire Committee should establish a “One Nutrition” Summit chair.

**Minutes of the Coordinating Committee
National Animal Nutrition Program – NRSP-9
Conference Call – April 3, 2014
2:00pm Eastern Time**

Call to Order: Chair Gary Cromwell called the April 3, 2014 meeting of the Coordinating Committee of the National Animal Nutrition Program to order with Don Beitz, Bill Weiss, Todd Applegate, Mary Beth Hall, Mark Hanigan, Jack Odle, Austin Lewis (NRC), Charlotte Kirk Baer (USDA), and Kasey Klein in attendance.

Minutes of the Previous Meeting: Minutes of the March 6, 2014 meeting of the Committee were viewed. Don Beitz moved to approve the minutes as written, Bill Weiss seconded, and the minutes were approved by a voice vote.

Brief Comments and Updates:

- *Administrative Advisors:* No Advisors were present, and thus no report was available.
- *USDA:* Charlotte Kirk Baer made the Committee aware of the new “Exploratory Research Program” she is co-leading. This program funds small, high risk, high return grants that look at agricultural problems from a new perspective. USDA has received a few animal science proposals, but would like more from animal nutrition specifically. Additional information about this program can be found [HERE](#), or by visiting the USDA website under the AFRI Competitive Grants Program, listed under the Foundational Program. Kirk Baer mentioned the proposal is only five pages, and encouraged the Committee members to check it out.
- *NRC:* Austin Lewis reported that most of the Beef NRC committee members will be at an upcoming meeting in San Antonio, Texas. He also reported that the Dairy NRC is moving forward, and should start inviting people to become committee members this month.
- *Feed Composition subcommittee:* Phil Miller was not in attendance, but Cromwell reported that the Feed Composition subcommittee is progressing well. A letter requesting information on feed composition will be sent out soon, and will also be posted on the NRSP-9 website. The Committee received a copy of the letter, and had a chance to review and comment. The Committee was in general consensus that the final draft of the letter is complete, and will be used to ask industry professionals, labs, etc. to contribute to the feed composition database.

- *Modeling subcommittee*: Mark Hanigan was not present at this time of the meeting, and thus no report was available.
- *Annual Report for the NIMSS website*: Cromwell reported that the NRSP-9 report has been submitted to the National Information Management and Support System, and should be posted on their website. This report included Committee meeting minutes from the previous fiscal year, as well as accomplishments and the impact of the Committee to date. The Committee had previously received a copy of the report, and was provided the chance to comment. Cromwell also noted the report has received positive feedback from the Administrative Advisors.

Post-Doctorate Associate to Assist the NANP Modeling subcommittee: On behalf of the selection committee consisting of Cromwell, Hanigan, and Miller; Cromwell reported there were ten applications received for the post-doctoral associate position with the Modeling subcommittee. After reviewing all applications, the selection committee recommended Dr. Robin White, PhD. Beitz agreed with the selection, as White's dissertation focused on working with modeling. Kirk Baer asked the Committee to review the commitments of the post-doctoral associates concerning their salary and length of employment. Cromwell commented that upon completion of their degree; the length of employment is one year, with the option of continuation of up to five years, pending available funding and performance. Cromwell also reported on their salary.

It was moved by Mary Beth Hall to hire Dr. Robin White as the post-doctoral associate for the Modeling subcommittee. The motion was seconded by Beitz. The motion was approved by the Committee, and Cromwell will contact White immediately. It was also noted that the NRSP-9 website will need to be updated (i.e., position announcements removed) now that both post-doctoral associate positions are filled.

Policy for Access and Moderation of NANP Communication Tools: Following up from previous action items, Hanigan created a Forum Policy document. The Committee received the document, and was allowed time to comment. Beitz moved to approve the Forum Policy, Todd Applegate seconded, and the motion passed. Cromwell and Kirk Baer reported that the final draft of the Forum Policy will be posted on the NRSP-9 website to inform users of the Policy, and allow appropriate use of the Forum. Hanigan reported that Mike VandeHaar and he will contact Gavin LaRowe of ChalkLabs to post the policy on the website, and Hanigan and VandeHaar will monitor the Forum. The Committee was in general consensus that this will be acceptable.

Face-to-Face Meeting in Washington DC: After reviewing the results of a Committee poll, June 19 (8:00 am to 5:00 pm) and June 20 (8:00 am to noon), 2014 appeared to be the best dates for a face-to-face meeting in Washington DC. Beitz moved to schedule the meeting as posted above, and Jack Odle seconded. The motion passed. The Committee will work on developing an agenda, and will consider bringing in guests onsite or virtually.

Fall Summit: Hall began the discussion on an upcoming Summit by commenting that she believes the entire Committee needs to be involved in the planning process of the conference. Hall noted planning such an event will take a substantial amount of time, and Committee members need to decide what resources each one can provide.

Beitz questioned if there was a way to integrate the Summit with the 2012 FAIR project, as a way to develop an attractive conference to increase attendance. Beitz noted that the four aspects of FAIR can all be applied to nutrition. These aspects included Food Security (feed and energy efficiency), One Health (health and nutrition impacts on metabolic and infectious diseases), Stewardship (nutrition management), and Cross Cutting Issues. Beitz proposed using the FAIR concept as a promotion to get more attention from the Animal Science and Dairy Science commodity groups.

Odle stressed that the Committee needs to determine specific action items and anticipated results of the Summit. This will assist in organizing the event, or deciding to abandon the Summit entirely. Odle continued that, while all Committee members should assist with the conference, a leader is needed to get the planning process moving. Odle also mentioned adjusting the Summit agenda to include only three sessions as a way to increase time management by allowing adequate time for questions.

Applegate agreed that the Summit could take a number of different shapes, and approved of the idea that the agenda needs to be discussed as a collective Committee.

Kirk Baer noted that the University of Minnesota is conducting a [One Health, One Medicine Conference](#) focusing on infectious diseases. USDA is extremely interested in the concept of the intersection of animal, humans, and the environment. Kirk Baer mentioned the Committee might be able to incorporate the idea of this intersection into the Summit.

Cromwell closed the Summit dialogue stating that the conference will be a major topic of discussion at the upcoming Committee meeting in Washington DC.

Other: Cromwell reported on his recent presentation to AFIA that included an update on the National Animal Nutrition Program. Lewis requested that Cromwell send a copy of his presentation to the Committee.

Next Meeting: Per the results of a Committee poll, the next meeting will be a **Conference Call on Thursday, May 15, 2014 at 2:00 pm Eastern Time.**

Adjournment: The meeting was adjourned at 3:10 pm EDT.

Action Items:

- Gary Cromwell will contact Dr. Robin White concerning her post-doctoral assistant position with the Modeling subcommittee.

- Don Beitz will follow up on the current progress of 2012 FAIR, in the interest of integrating it in the Summit.
- Coordinating Committee will continue to develop thoughts concerning the Summit agenda.

**Minutes of the Coordinating Committee
National Animal Nutrition Program – NRSP-9
Conference Call – May 15, 2014
2:00pm EDT**

Call to Order: Chair Gary Cromwell called the May 15, 2014 meeting of the Coordinating Committee of the National Animal Nutrition Program to order with Don Beitz, Bill Weiss, Todd Applegate, Mike Galyean, Jack Odle, Austin Lewis (NRC), Charlotte Kirk Baer (USDA), and Kasey Klein in attendance.

Minutes of the Previous Meeting: Minutes of the April 3, 2014 meeting of the Committee were viewed. Don Beitz moved to approve the minutes as written, Bill Weiss seconded, and the minutes were approved by a voice vote.

Brief Comments and Updates:

- *Administrative Advisors:* No Advisors were present, and thus no report was available.
- *USDA:* Charlotte Kirk Baer reported no updates from USDA.
- *NRC:* Austin Lewis provided updates on the three NRC projects currently underway or being planned. The Beef NRC committee had a productive spring meeting in April. The committee is working on a few remaining issues and is very close to being ready for review. Mike Galyean is working hard to encourage the committee to finalize their projects, and he agreed that progress is being made. The Beef NRC committee is on track for its projected August time frame. Lewis reported that progress is being made in the formation of a Dairy committee. The current goal is to have a proposed committee to present to the National Academies' President by early June and to be able to announce a slate at the time of the NRSP-9 meeting in Washington D.C. Todd Applegate, Robin Schoen, and Lewis participated in a conference call about the Poultry NRC funding. Schoen has produced a statement of task for the committee. Applegate noted that the Poultry NRC should begin with the solicitation of funds this summer.
- *Feed Composition committee:* Phil Miller was not in attendance, but Cromwell reported that the Feed Composition committee is doing well. Miller indicated that Huyen Tran,

post-doctoral associate, is doing a great job. Tran has a majority of the database completed for swine. The swine database was chosen first since the Swine NRC was recently completed. Upon the completion of the swine database, the committee will work with the data from the Beef and Dairy NRCs. The Feed Composition committee is planning a conference call within the next few weeks.

- *Modeling committee:* Mark Hanigan was not in attendance, but Cromwell reported that the action item from the April meeting was completed. Robin White was offered and accepted the post-doctoral associate position. White is preparing to move to Virginia Tech, and will start her position in June. Cromwell also noted that Tran, White, and Kasey Klein will be in attendance at the upcoming meeting in Washington D.C.

Communication Tool at ChalkLab's NANP website: Hanigan was not in attendance, and thus no report was available.

Exhibition Booth at the Joint Annual Meeting: Cromwell reported that the NANP will have a booth in the Exhibition Hall at the upcoming Joint Annual Meeting in Kansas City. Beitz and Klein will create a schedule for the booth, and Beitz requests that all available members volunteer a few hours of their time to be present at the booth. The display will include a computer and large monitor to showcase the nanp-nrsp-9.org website. Committee members will be present to hand out informational material and answer questions. A sign-up sheet will be distributed in late June.

Agenda for the On-Site Meeting in Washington D.C.: Cromwell reminded the Committee of the face-to-face meeting in Washington D.C. on June 19 (8:00 am to 5:00 pm EDT) and June 20 (8:00 am to 12:00 pm EDT), 2014. Cromwell presented a draft agenda, with the following topics in no particular order:

- I. Website – update of feed composition database, modeling data, forum, etc.
- II. Fall Summit – same general topic as FAIR 2012?, leadership, subject, speakers, venue, etc.
- III. Networking system.
- IV. Invite FDA, AFIA's iFEEDER Foundation, ASAS Foundation, ADSA Foundation, PSA Foundation, other foundations to meet with us?
- V. Sustainability of NANP – strategy for writing a new/revised NRSP-9 proposal.
- VI. Communications – discuss short-term item in the Strategic Plan.
- VII. Changes in makeup of the 3 NANP committees – initiate system of term limits.
- VIII. Finalize plans for exhibit booth at JAM.
- IX. Other items.

The Committee discussed several items on the draft agenda, including the need to identify invited guests as soon as possible. Beitz mentioned Richard Sellers as a possible guest to the

meeting. Sellers could discuss the feed industry and background of legal issues in the industry, as a form of education for the Committee.

Weiss noted that the Committee needs to start providing something of tangible value to outside groups. He suggested inviting AFIA and FDA. Beitz included that the Committee might consider creating special publications with nutrition topics, similar to the former CAN committee. Beitz and Weiss noted that to follow up on the idea, brainstorming time at the on-site meeting may be needed.

Beitz followed up with the idea to invite Lowell Randel, a Public Relations specialist from FASS. The Committee can utilize him to brainstorm about sustainability of the Committee from a public relations point of view, about relationships with federal agencies, and potential future projects.

Kirk Baer agreed with Weiss' previous comments that the Committee needs to identify their objectives, and connect with the communities that will help accomplish those objectives. She stressed that public education is still needed about the research support provided by the Committee. The need is strong to invite numerous communities to the on-site meeting, discuss their needs, and identify how the Committee can support them. Kirk Baer mentioned inviting members of BANR and FDA.

Beitz also commented that Eric Hentges with International Life Sciences Institute (ILSI) is a potential guest. Hentges currently works with human nutrition, but has a background in ruminant nutrition, and could potentially collaborate on future projects.

Jack Odle and Beitz concluded the discussion by mentioning the importance of the National Association for the Advancement of Animal Science (NAAAS). This group strives to seek more funding for animal agriculture research. Odle commented this was a worthy group to be associated with. Beitz will give a presentation about the organization at the on-site meeting in Washington D.C.

Other Items: Odle was interested in an update on the Basic Science Funding in Agriculture report. Kirk Baer will try to contact a staff member willing to speak on the topic.

Next Meeting: The next Committee meeting will be held in Washington D.C. on June 19 (8:00 am to 5:00 pm EDT) and June 20 (8:00 am to 12:00 pm EDT), 2014.

Adjournment: The meeting was adjourned at 2:55 pm EDT.

ACTION ITEMS

- Gary Cromwell, Bill Weiss, Don Beitz, and Charlotte Kirk Baer will create a final invite list for the on-site meeting in Washington D.C.
- Gary Cromwell, Charlotte Kirk Baer, and Kasey Klein will create an email invitation to send to the invited guests.
- Don Beitz will prepare a presentation about NAAAS for the Committee.

- NANP Committee members need to finalize their travel plans for the on-site meeting in Washington D.C.

**Minutes of the Coordinating Committee
National Animal Nutrition Program - NRSP-9
On-Site Meeting - June 19, 2014
USDA Waterfront Centre, Room 1341, Washington, D.C.**

Call to Order: Chair Gary Cromwell called the June 19, 2014 meeting of the Coordinating Committee of the National Animal Nutrition Program to order at 8:00 am EDT with Don Beitz, Todd Applegate, Jack Odle, Phil Miller, Mark Hanigan, Mary Beth Hall (via telephone), Bret Hess (Administrative Advisor), Austin Lewis (NRC), Charlotte Kirk Baer (USDA), Gavin LaRowe (guest, ChalkLabs), Robin White, Huyen Tran, and Kasey Klein in attendance. Gary Cromwell began the meeting with introductions and reviewed the expense report with all Committee members.

Minutes of the Previous Meeting: Minutes of the May 15, 2014 meeting of the Committee were viewed. Don Beitz moved to approve the minutes as written, Todd Applegate seconded, and the minutes were approved by a voice vote.

Brief Comments and Updates:

- a. *NANP Website Overview:* Gavin LaRowe began with an overview and history of his business, ChalkLabs, and continued with how the NANP website was developed and programmed. LaRowe reported that the searchable database was created to allow the syncing of each individual species database, resulting in a better way to cross domain analysis. LaRowe went in depth explaining the search function, with the idea to eventually include auto-fill options in the search query. All data presently found on the website were uploaded from current databases, but will be updated as the NANP committees correct and revise them. LaRowe commented that the eventual plan will be for all researchers to enter their findings in an Excel spreadsheet, and the information will automatically upload to the database. This will replace the current method of manually uploading all data. Mark Hanigan expressed interest in being able to do meta-analysis with studies concerning a specific topic. LaRowe stated this will be possible once all databases are complete. International collaboration is also a potential, as the website can be viewed in 15 languages.
- b. *Feed Composition committee:* Phil Miller began his report with the history of the feed ingredient database. Miller explained how he used ingredient databases from previous NRCs and had LaRowe upload the information to the website. With Huyen Tran incorporating updated information, the committee now has a complete database. It was noted that Tran has been working on the beef database with Galen Erickson of the Beef NRC, and progress is moving forward. Bill Weiss has developed a statistical approach to

identify and cluster outliers, and Tran will work with Weiss to implement this new approach.

Tran and Miller also noted their plan to solicit data from outside sources once they are assured the first data set is completed and correct. The Committee also spoke on the need to create a standardization of feed names and compositions. For example, hominy from the Dairy NRC and Swine NRC are not the same. Miller explained one way to differentiate would be to create a common ingredient name, but maintain the identity of each species to verify components such as energy. The database will also need to distinguish if the feed was used as dry matter or on an “as fed” basis. Jack Odle also pointed out that the committee should utilize the Description field on the website as a way to make notes about certain ingredients. Miller and Tran completed their report with a handout summarizing the Feed Composition committee accomplishments to date.

- c. *Modeling committee:* Hanigan reported that Robin White started her position June 1, and has already completed several projects. White and Mike VandeHaar are currently focusing on the Feedback Forum, and working with LaRowe to upload projects to the NANP website.

White gave a brief presentation on the Modeling committee accomplishments. The first update concerned the NANP website. Four areas recently impacted included the Resources, NRC Models, Feedback Forum, and Animal Performance Information pages. The Resources page is being reformatted to be more user friendly. The committee has drafted and is circulating a white paper titled “Developing a Flexible Software Framework for NRC Models from Multiple Species”, and is also preparing a second white paper titled “Inclusion of Diet Content in Manuscripts.”

The Dairy and Beef NRCs are currently available for download, and the Swine NRC will be uploaded shortly. A dataset looking at environmental stresses in swine will also be available soon. White reported the Feedback Forum is progressing and will be used to get feedback from users about model performance issues. Charlotte Kirk Baer questioned if the Forum will be more of a help function for users, or a place for user input? Hanigan noted the Forum could evolve to include all of these facets.

White and Hanigan closed their report with an example of how model testing will be an advantage as the committee moves forward and incorporates more data from outside sources, such as the Beltsville Chamber data, Swine NRC/Heat Stress data, and Poultry NRC data.

Fall Summit: Beitz began the discussion on the upcoming Fall Summit by reviewing suggested topics, speakers, target audience, and format of the event. Beitz reminded the committee of the suggestion to follow up on FAIR 2012. He asked what other organizations should be involved with the Summit, such as FASS, One-Health, and/or BANR?

Cromwell then opened the discussion up to the Committee. All Committee members participated in the dialogue, discussing items such as choosing an appropriate title for the target audience,

proper length of the event to attract the audience, and the best way to get a national response from the Summit. Mary Beth Hall noted that the Committee needs to focus on the anticipated accomplishments of the Summit, and mold the decision-making process to fit the expected outcome. Bret Hess agreed with Hall, and reminded the Committee that the anticipated results should relate back to the purpose of the NANP. Cromwell then postponed the dialogue, with plans to return to the discussion the following morning.

Sustainability of NANP: Cromwell questioned the Committee about the steps needed to renew the NRSP-9 project for another 5 years. Kirk Baer noted to begin with the strategic plan, select important needs, and articulate these on the renewal application. Hess provided the timeline for the renewal process, which will begin in the fall of 2014 with the selection of peer reviewers. The proposal for renewal should be submitted no later than December 2014, and a vote on renewal will be taken in September 2015. If approved, the NRSP-9 project will continue beginning October 1, 2015.

Cromwell asked for volunteers for a committee to begin preparing the grant renewal application. Hanigan suggested the post-doctoral associates assist with the renewal process, subject to final Committee approval before submitting the application. The Committee concurred, and Cromwell and Kirk Baer will send the original NRSP-9 application, with suggestions, to a committee of Hanigan, Miller, White, and Tran for further revisions.

The Committee then broke for lunch, and Cromwell called the meeting back to order at 1:00 pm EDT. All previous Committee members were present, and Cromwell began with introductions of additional invited guests: Robin Schoen (BANR), Lowell Randel (FASS), Susan Harris (ILSI), and Sharon Benz (FDA).

Guest Presentations

- a. *BANR:* Robin Schoen reported on the National Research Council's Board on Agriculture and Natural Resources current projects of interest to the NANP, including:
 - Sustainability Considerations for the Future of Animal Agriculture Science Research. Schoen reviewed the statement of task and committee members chosen for the study. Schoen noted the study will identify critical areas of research and development, technologies, and resource needs for research in the field of animal agriculture. The Coordinating Committee was requested to provide potential reviewers and suggestions for venues of dissemination of study results in early 2015.
 - Genetically Engineered Crops: Past Experience and Future Prospects. Schoen reported this study will conduct a broad review of available information on GE crops in the context of the contemporary global food and agricultural system. The objective will be to examine the scientific foundation of current environmental and food safety assessments for GE crops and foods, and indicate where there are uncertainties and information gaps about the economic, agronomic, health, and safety impacts of GE crops.
 - A Review of the USDA Agriculture and Food Research Initiative. Schoen noted the AFRI report went into review in January of 2014. An NRC committee has performed an independent assessment of the AFRI program, including the quality and value of research funded by the program and the prospects for its success in meeting established goals and outcomes.

- Nutrient Requirements of Beef and Dairy Cattle. Schoen provided an update on the Beef NRC committee. The upcoming Dairy NRC committee was also discussed, and it was noted that the names of the committee members have not yet been released.
- b. *Professional Societies (FASS, ASAS, ADSA, PSA)*: Lowell Randel provided the Committee with a presentation showcasing current trends in agriculture funding. Randel reported that US investment in public agriculture research and development spending has been stagnant, while Brazil has shown a minor increase, and China and India have shown substantial increases.

Randel also commented on the PCAST Report on Agriculture Preparedness, the first White House report on agriculture. This report identified seven challenges facing agriculture in the 21st century. It contained six major recommendations, including a \$700 million increase in federal investment. The administration's budget provided funds to support three of the six recommendations at \$25 million apiece. Unfortunately, according to appropriations, \$75 million of new money was not feasible. Randel noted that while the innovation proposal was not funded, AFRI did receive their designated increase, showing that the administration took the report seriously.

Randel closed his presentation by discussing two potential opportunities within the Farm Bill. The first opportunity is found in Section 1433. It is an expanded section to include a competitive grants program that focuses on food security, one health, and stewardship. The language directs USDA to use FAIR 2012 priorities as funds become available. This garnered support of over 90 national and state animal organizations. The second opportunity is the formation of the Foundation for Food and Ag Research (FFAR) as a non-profit foundation. The Farm Bill provides \$200 million in seed money to start this important new tool. Randel and Schoen noted it will be critical to have animal scientists on the Board, as well as awareness and support from the animal industry.

- c. *ILSI*: Susan Harris opened by showcasing the important operating principles of ILSI including identifying emerging scientific challenges, fostering a culture of open access data, translating science to improve health and safety, providing science to help harmonize policies and procedures, and encouraging scientific dialogue. Harris reported that ILSI has 4 thematic areas: food and water safety, toxicology and risk science, nutrition, health, and wellness, and sustainable agriculture and nutrition security. Harris noted ILSI is a global network, resulting in a greater reach of science. ILSI North America is one of 16 branches that work independently. ILSI NA has 45 member companies that pay a membership fee, and work on technical and project committees. Each committee operates on a scope of work and funds new research, and all projects are published. The Committee was encouraged to visit the ILSI website at www.ilsina.org.
- d. *FDA*: Sharon Benz began her presentation discussing FDA's involvement in bioengineered plants. Benz explained that before any food product is released, it has to have FDA approval. Labeling of food products concerning genetically modified plants is also currently an important topic. Benz then discussed the implementation of the Food Safety Modernization Act. The four items from this act include: preventive control

regulations for animals, sanitary transport, farm supplier verification program, and verification of third party auditors. All final regulations must be completed by August 2015, and FDA is working hard to make the regulations relevant to animal feed production.

Benz also highlighted a few documents found on the FDA website, including Guidance 209, the Judicious Use of Anti-Microbials in Food Animals. The FDA is moving forward and working with drug companies to remove production uses of medically necessary drugs in animal diets. The FDA believes anti-microbials should be used only to combat disease and with veterinarian involvement. Guidance 152 provides an appendix that lists all medically necessary anti-microbial drugs.

Benz completed her report by discussing the Nutrition and Labeling Requirements for Pet Foods. The FDA has drafted regulations with plans to be published by 2015. Benz mentioned the potential to work with the NANP Feed Composition committee to define ingredients used to make feed. Benz also encouraged the Committee to view the FDA website at www.fda.gov.

Update on NAAAS: Beitz continued the meeting with a presentation about the National Association for the Advancement of Animal Science, formed in 2012. Beitz explained that their principal function is to be an effective advocate for increasing support for animal science research, extension, and teaching. Beitz presented a short PowerPoint presentation showcasing the current agriculture research funding situation, and addressed changes that NAAAS feels are needed in the sector.

Beitz addressed some disturbing trends that included significant decline in MS and PhD degrees in Animal Science. He also stressed the important of NAAAS as an advocate for an increase in federal funding of animal agriculture. Beitz summarized his presentation by encouraging everyone to ensure their academic departments are members, as well as encouraging industry, commodity, scientific, and other organizations to join as associate members.

Adjournment: The meeting of the NANP Coordinating Committee was adjourned at 5:00 pm EDT, with plans to resume the meeting on Friday, June 20, 2014.

Day 2 of On-Site Meeting - June 20, 2014

The NANP Coordinating Committee began the meeting in Executive Session. At the close of Executive Session, the Committee reconvened with Don Beitz, Todd Applegate, Jack Odle, Phil Miller, Mark Hanigan, Mary Beth Hall (via telephone), Bill Weiss, Bret Hess (Administrative Advisor), Austin Lewis (NRC), Charlotte Kirk Baer (USDA), Robin White, Huyen Tran, and Kasey Klein in attendance.

Fall Summit: Hanigan and Beitz reopened the discussion on the upcoming Fall Summit. After much discussion from the Committee, the following outline was approved.

Summit Title: The Role of Food Animals in Sustainable Food Security

Objective: Identify strengths and gaps in animal nutrition knowledge for optimal human, animal and environmental health.

Date: November 20, 2014 from 8:30 am – 4:00 pm EDT, with November 18 or 19 as potential secondary dates

Location: National Academy Building, National Press Club, USDA Jefferson Auditorium, or a Hotel Convention Center

Format:

Keynote Speaker (8:30 am – 9:30 am)

Efficiency of Ruminant Production Systems (9:30 am – 10:00 am)

Efficiency of Poultry Production Systems (10:00 am – 10:30 am)

Efficiency of Pork Production Systems (10:30 am – 11:00 am)

Efficiency of Aquaculture Production Systems (11:00 am – 11:30 am)

Lunch and Open Discussion (11:30 am – 1:00 pm)

Water Footprint of Animal Agricultural Systems (1:00 pm – 1:30 pm)

Carbon Footprint of Animal Agricultural Systems (1:30 pm – 2:00 pm)

Defining the Human Diet of the Next 25 Years (2:00 pm – 2:30 pm)

Economics of Land Use for Animal Production (2:30 pm – 3:00 pm)

Wrap Up: Defining Animal Nutrition Research Priorities (3:00 pm – 4:00 pm)

Discussion on the Summit wrapped up with Committee members selecting potential speakers for each topic. Hanigan and White agreed to lead the Summit project, Beitz and Hanigan will begin contacting the selected speakers for the event, and White and Kasey Klein will assist in the Summit preparation process. Odle and Applegate also suggested recording Summit presentations to post on the NANP website. Applegate will contact Scott Radcliffe about this option.

Global Animal Nutrition Network: Odle provided a short summary of the proposed Global Animal Nutrition Network for NRSP-9. Odle demonstrated the NRSP-8 website directory, which allows anyone to join and subscribe to the mailing list. He also noted how the directory broke down where subscribers are from and what species they are associated with. Odle questioned if NANP could develop a hybrid networking system that is populated by both website users and membership lists mined from animal society membership directories. He noted there would be advantages and disadvantages of populating the system with either method. Kirk Baer commented that including more members in the networking system would result in an incentive to network users. Odle made a motion to solicit an updated statement of work (SOW) and quote from ChalkLabs to add a hybrid directory/network tool to our existing NANP website, Miller seconded, and the motion was approved by a voice vote.

NANP Committee Appointments and Terms: Cromwell began the discussion of the NANP membership policy with concerns about committee member appointments and term limits. Appointments are made for three years with one-third of the committee rotating off each year. A member can be reappointed for a three year term. The current rotation schedule for a nine member committee is as follows:

Oct 1, 2014, rotate 3 members off, following their 2 year term

Oct 1, 2015: rotate 3 members off, following their 3 year term

Oct 1, 2016: rotate 3 members off, following their 4 year term.

Hess commented that it is not unusual for NRSPs to have term limits for the lifetime of the grant. He suggested retaining current committee membership at the leadership level for the continued success of projects currently underway.

Austin Lewis noted that the Committee could start by asking for volunteers to be rotated off. Cromwell asked the Coordinating Committee members in attendance, and all agreed to remain on the Committee. Beitz then suggested asking the Feed Composition and Modeling committee members about their rotation as well. Weiss moved to push the rotation schedule previously discussed back by one year, changing the schedule to 2015-2017, Applegate seconded, and the motion was approved by a voice vote.

Joint Annual Meeting Exhibit Booth: Beitz distributed a schedule for Committee members to volunteer their time at the NANP Booth at the upcoming JAM. Cromwell reviewed the booth location and handouts that will be available. The Committee reviewed the NRSP-9 Impact brochure to be used for a handout at the animal society meetings. Klein will print 500 brochures, and Cromwell will also have NANP pens made to hand out as well.

Next Meeting: The next meeting of the NANP Coordinating Committee will be a conference call on Thursday, August 7, 2014 at 2:00 pm EDT. The following meeting will be a conference call on September 25, 2014 at 2:00 pm EDT.

Adjournment: Beitz moved to adjourn the meeting, Hanigan seconded, and the Committee approved to adjourn the meeting at 11:30 am EDT.

Action Items

- All Committee members will submit names for potential Peer Reviewers to Gary Cromwell by June 27, 2014.
- Mark Hanigan and Phil Miller will compile information for a Statement of Work for ChalkLabs concerning the website.
- Jack Odle and Charlotte Kirk Baer will compile information for a Statement of Work for ChalkLabs concerning the networking system.
- Charlotte Kirk Baer will follow up on the leverage of funds matter.
- Gary Cromwell will follow through with the continuation of term limits by contacting Mike Galyean with the Coordinating Committee and Phil Miller with the Feed Composition committee. Cromwell, Miller, and Mark Hanigan will contact the Feed Composition and Modeling committees to inform them of the change in term limits and ask their permission to serve another year. Cromwell will also revise the Committee term limit document.
- Gary Cromwell and Charlotte Kirk Baer will make recommendations by July 3, 2014 on the first NRSP-9 application, and send to a committee of Mark Hanigan, Robin White, Phil Miller, and Huyen Tran to begin the application renewal process.

- Mark Hanigan and Don Beitz will start contacting potential speakers for *The Role of Food Animals in Sustainable Food Security* fall summit, tentatively set for November 20, with November 18 or 19 as backup dates.
- Todd Applegate will contact Scott Radcliffe about recording the Summit presentations to post on the NANP website.
- Charlotte Kirk Baer and Bret Hess will follow up with the Administrative Advisors to ensure acknowledgements are listed correctly on the website, stationary, and NRSP-9 Impact brochure.
- Committee members will develop a PowerPoint slide for use at the upcoming animal science society meetings to advertise the NANP.
- Charlotte Kirk Baer, Robin White, Huyen Tran, and Kasey Klein will finalize the NRSP-9 Impact brochure.
- Gary Cromwell and Kasey Klein will send correspondence thanking all invited guests.

**Minutes of the Coordinating Committee
National Animal Nutrition Program – NRSP-9
Conference Call – August 7, 2014
2:00 pm Eastern Time**

Call to Order: Chair Gary Cromwell called the August 7, 2014 meeting of the Coordinating Committee of the National Animal Nutrition Program to order at 2:00 pm EDT with Don Beitz, Todd Applegate, Jack Odle, Phil Miller, Mark Hanigan, Bill Weiss, Mary Beth Hall, Mike Galyean, Bret Hess (Administrative Advisor), Charlotte Kirk Baer (USDA), and Kasey Klein in attendance.

Minutes of the Previous Meeting: Minutes of the June 19-20, 2014 meeting of the Committee were reviewed. Beitz moved to approve the minutes as written, Hanigan seconded, and the minutes were approved by a voice vote.

Brief Comments and Updates:

- a. *Summit:* Beitz provided a brief summary on the upcoming Summit, including plans to host the event in the spring of 2015. Kirk Baer suggested modifying the set-up of feed efficiency discussions to include a panel discussion. Hanigan agreed with Kirk Baer's suggestion to have a moderator ask the Summit audience to determine research gaps and assist in setting a path for the future. The Summit sub-committee will hold a conference call August 8, 2014 to further discuss details of the event.

- b. NRC:* Hall noted the Dairy NRC committee members were recently announced, but are awaiting final approval before committee work can begin.
- c. Feed Composition committee:* Miller reported that the Feed Composition committee will hold a conference call August 22 at 2:00 pm EDT. Miller also noted Huyen Tran has been busy working on the NRSP-9 grant renewal proposal, but will resume working on the Beef NRC dataset soon, including fixing current nomenclature issues. Miller and Tran have also been discussing necessary updates to the NANP website.
- d. Modeling committee:* Hanigan reported that the Modeling committee held a meeting at the ADSA-ASAS Joint Annual Meeting (JAM) in Kansas City. The committee reviewed high priority projects, and assessed that a majority of them are moving along smoothly. Hanigan and Robin White have submitted several items to Gavin LaRowe at ChalkLabs for addition to the website. Hanigan mentioned the beef modeling information on the website is correct and ready to use. White recently corrected the dairy models, and will soon begin working on the swine models.
- e. ADSA-ASAS JAM:* Cromwell noted the NANP exhibit booth at the 2014 JAM was well received by attendees, and thanked all Committee members who volunteered their time. Hanigan reported that he contacted non-ruminant and ruminant nutrition session chairs for the 2015 ADSA-ASAS JAM. He communicated that the NANP has interest in increasing their presence at the JAM, possibly through hosting a hands-on modeling workshop. Hall commented that she is involved with the ruminant nutrition symposium, and recently passed NANP information along to her committee as well.

NRSP-9 Renewal Proposal: All Committee members received an emailed copy of the NRSP-9 Renewal Proposal rough draft for their review. Cromwell reminded Committee members that the deadline for the first draft of the NRSP-9 Renewal Proposal is August 21, 2014. Kirk Baer commended Tran and White for their hard work on the proposal, and invited Committee feedback. Kirk Baer noted previous discussion to expand the Committee's scope to include aquaculture, small ruminants, and horses. She noted expansion would require additional committee members, and as a result, a need to increase the requested budget. Beitz agreed that the increased request sounded logical. Kirk Baer then led discussion on the proper way to describe leveraged funds, and explained how the sub-committee calculated the Total Amount Leveraged reported in the proposal. Hall noted that while the Total Amount Leveraged is a large number, it is reasonable and can be supported.

Hanigan continued the discussion by questioning how to monetize observed data. The Committee discussed how to put a figure on obtained datasets, the cost associated with re-creating a dataset, and the value of not losing data. Beitz suggested to record items that support the project, but are unable to be monetized. Hall noted that the Committee should claim the hours used to create the data instead of the cost. Hess agreed that this action would sustain the fact that the NANP is a research support project. Kirk Baer will follow up on this idea, and encouraged Committee members to continue to review the draft proposal. Hess reminded the Committee that the review process will begin September 1, 2014, and praised the Committee for being on schedule. Hess also noted that the submitted list of suggested peer reviewers was exceptional.

Policy on Authorship of Peer-reviewed Journal Papers and Abstracts: Hanigan reported the immediate need to create a Committee policy on authorship of peer-reviewed journal papers and abstracts related to NANP work. Beitz agreed that a policy should be implemented before any publications relating to NANP work are submitted. Miller suggested that authorship should reflect the primary authors, but the NANP Committee could be included in the institution tagline. This would allow efforts of the Committee to be highlighted without taking away from the primary writers. Hanigan agreed, stating that while the primary writers should be listed as authors, publishable outcomes would not have been possible without Committee involvement. Cromwell created an Authorship Policy sub-committee consisting of Beitz, Miller, Odle, and Kirk Baer. The sub-committee will create a policy concerning authorship on journal papers and abstracts, and will identify the appropriate tagline to be included.

Page Charges for Peer-reviewed Journal Papers and Posters: Cromwell informed the Committee of a request to cover journal page charges and poster printing costs for any NANP related work. Beitz moved that any costs associated with scientific publications and abstract posters concerning NANP projects be paid for out of the NANP budget, Hall seconded, and the motion carried.

Initiation of Forum: Cromwell reported the need to appoint an administrator for the online Forum. Hanigan suggested appointing White, pending Committee approval. Hanigan noted that White would not handle all responses, but rather coordinate with various professionals to respond to questions within their field. The Committee agreed White will be the Forum administrator, and Cromwell will pass this information along to LaRowe at ChalkLabs. Kirk Baer and Hanigan also expressed interest in receiving input from the NRC committees regarding information received from the Forum.

NANP Website: Cromwell circulated a list of current website suggestions created by Tran and White, and the Committee was encouraged to review and comment. Hanigan mentioned the need to appoint a primary correspondent related to NANP website changes. Miller agreed that having a single correspondent would result in suggestions being submitted efficiently and correctly. Hanigan moved to appoint Tran as the primary correspondent related to NANP website changes, Miller seconded, and the motion carried.

Review of Previous Action Items: Cromwell reviewed Action Items from the June NANP meeting, and reminded Committee members to continue working on their respective items.

Adjournment: The meeting was adjourned at 3:25 pm EDT.

ACTION ITEMS

- Mark Hanigan and Mary Beth Hall will follow up with NANP involvement at the 2015 ADSA-ASAS Joint Annual Meeting.

- Charlotte Kirk Baer will research how to include the value of observed data in the NRSP-9 Renewal Proposal.
- All Committee members will continue to review the draft NRSP-9 Renewal Proposal until the August 21, 2014 deadline.
- Authorship Policy sub-committee members Don Beitz, Phil Miller, Jack Odle, and Charlotte Kirk Baer will create a policy concerning authorship on journal papers and abstracts, and will identify the appropriate tagline to be included.
- Gary Cromwell will notify Gavin LaRowe of ChalkLabs that Robin White is the Forum administrator.
- All Committee members will continue to review the list of proposed NANP website changes, and notify Huyen Tran of any new changes deemed necessary. Charlotte Kirk Baer will work with Tran on the web requests to Gavin LaRowe to ensure that requests remain within the scope of work ChalkLabs was contracted to perform.
- All Committee members who have not completed their respective Action Items from the June meeting are encouraged to continue working on those items.

**Minutes of the Modeling Committee
National Animal Nutrition Program – NRSP-9
Kansas City, MO – July 21, 2014
7:00 am Central Time**

1. **Call to Order:** Chair Mark Hanigan called the August 21, 2014 meeting of the Modeling Committee of the National Animal Nutrition Program to order at 7:00 am CDT with Gary Cromwell, Mike VandeHaar, Luis Tedeschi, Ermias Kebreab, John McNamara, and Brian Kerr in attendance.
2. **Website Updates:**
 - a. *Database:* White provided a brief summary of the different datasets that have been added to the website (Dairy NRC, Lofgreen and Garrett) and datasets that have either been acquired (Swine NRC, Swine Climate Responses, Beef Digestibility) or are in the process of being acquired (Beltsville chamber data). Hanigan clarified that the Lofgreen and Garrett data did not include diet information, only nutrient content.
 - b. *Resources:* White provided a description of the resources tab on the website. Kebreab queried how copyright issues were handled and suggested removing pdf copies of the resources. Tedeschi suggested checking whether the titles could be

accessed from non-university networks to identify whether copyright issues were a concern.

3. NRC Support Projects and Planned White papers:

- a. *Swine climate stress*: White provided a summary of an evaluation of the swine NRC prediction of feed intake of heat stressed pigs indicating the original model demonstrated bias and new parameters were fit that eliminated this bias. White briefly added that an evaluation of maintenance energy responses to temperature stress were also being undertaken.
- b. *Data inclusions in publications*: McNamara provided a recap and summary of progress on the proposed review paper addressing the type of data that should be included in publications for later use in modeling efforts. McNamara noted that the editors of JDS and JAS will need to be contacted to solicit an invitation to review the topic.
- c. *Software framework for NRC model*: Mark noted that a white paper has been drafted addressing the idea of using a common software platform to run NRC models across species.
- d. *Model assessment methods*: Hanigan asked Tedeschi and Kebreab about a planned white paper on model assessment methods. Tedeschi and Kebreab noted that they had discussed the paper. Hanigan indicated White could help with the effort. Tedeschi, Kebreab and White agreed to correspond about the paper. Tedeschi asked about interest in publishing this paper collectively with the data inclusions review as a special issue. Hanigan indicated concern about whether sufficient information would be available to warrant a special issue.

4. Research Support:

- a. *JAM 2015 symposium*: Hanigan indicated interest in hosting a symposium at JAM 2015, noting that the deadline for submission was approaching. The symposium would focus on identifying gaps with in animal nutrition research. White commented that the feed committee had submitted a proposal that may be complementary. McNamara said he could contact Mary Beth Hall about a copy of the feed committee proposal. Tedeschi suggested that a hands-on workshop might be useful. The workshop could have three morning speakers and small group activities such as demonstrations or coding activities in the afternoon. The group agreed that Hangian and White would contact the appropriate parties about submitting a symposium proposal and a workshop idea.

Adjournment: The meeting was adjourned at 9:00 am CDT.

**Minutes of the Feed Composition Committee
National Animal Nutrition Program – NRSP-9
Conference Call – August 22, 2014
2:00 pm Eastern Time**

2. **Call to Order:** Chair Phillip Miller called the August 22, 2014 meeting of the Feed Composition Committee of the National Animal Nutrition Program to order at 2:00 pm EDT with Bill Weiss, Ryan Dilger, Mark Nelson, William Dozier, Huyen Tran, and Kasey Klein in attendance.
3. **Review of Feed Composition Databases:** Tran reported that she is currently processing feed databases with the assistance of Miller, Weiss, and Galen Erickson. Tran is working with data from three laboratories. After the mean is calculated for a specific feed, it is compared between the three labs. If similar, the end result will be one new mean for the feed. If different, Tran will find a solution to determine the differentiations. Miller noted that this process is very time consuming. Tran will document the range and standard deviation for the first 50 feeds of each lab and submit a report to Erickson. Once the process is reviewed and approved, other feeds should follow suit in a quick manner.

Weiss questioned the calculations for common nutrients, and asked if the Feed Composition Committee has developed a standard for calculating energy values. Miller agreed that a standardized equation was needed, and follow-up with the Beef and Dairy NRC Committees will be important. Miller and Tran will follow up with the specific NRC committees and work to establish transparent standard calculations.

Weiss also inquired about obtaining a basic list of feeds, including a short description of each, for use with the Dairy NRC Committee. Tran will work with Weiss to compile this list.

4. **NRSP-9 Renewal Proposal Submission:** Miller reported on the current state of the NRSP-9 renewal process, and noted that Tran has been assisting with the renewal proposal. The proposal will be reviewed this fall, and if renewed, the new five year project will begin October 2015.
5. **NRSP-9 Website Feedback:** Miller noted that the Committee is making improvements on the website design, including how databases are presented. Committee members are encouraged to review the website and notify Tran of items that need changed, omitted, etc. Tran will report these items to the NANP Coordinating Committee and/or work with Charlotte Kirk Baer to get the changes implemented.
6. **Dairy and Poultry NRC/ Feed Databases:** Weiss reported that the Dairy NRC Committee is scheduled to begin at the end of September.

Dozier reported on a few meetings being held concerning a Poultry NRC. He noted that there is interest from an academic standpoint, but industry representatives do not seem as receptive. Miller brought up the idea of funding a feed ingredient database only, and not linking it with an NRC study. Dozier thought this idea would also garner interest.

Dilger mentioned the need to increase awareness of the Feed Composition Committee as a way to boost support for a poultry feed ingredient database. The Committee discussed ways to accomplish this goal, and decided to be more active at the Poultry Animal Science annual meeting, as well as have a presence at the International Poultry Expo. Dozier will follow up on the possibility of obtaining booth space for a display at the Expo. Miller will work with Committee members to put together a schedule of upcoming poultry meetings.

7. **Lab Analysis Feedback:** Mary Beth Hall was not in attendance, but Miller reported that Hall is interested in receiving input from Committee members concerning lab analysis. Requested input includes critical papers or techniques that would be useful in the discussion of common lab analysis. Committee members are encouraged to forward any information concerning lab analysis to Hall and Tran.
8. **Adjournment:** The meeting was adjourned at 2:45 pm EDT.

ACTION ITEMS

- Phillip Miller and Huyen Tran will follow up with the Beef and Dairy NRC Committees to establish standardized equations for calculating energy values.
- Bill Weiss and Huyen Tran will compile a list of feeds, including a short description of each, prior to the Dairy NRC Committee meeting.
- All Committee members are encouraged to review the website and notify Huyen Tran of items that need changed, omitted, etc.
- William Dozier will follow up on the possibility of obtaining booth space for a Feed Composition Committee display at the International Poultry Expo.
- Phillip Miller will work with Committee members to put together a schedule of upcoming poultry meetings, as a way to increase awareness of the Feed Composition Committee.
- All Committee members are encouraged to forward critical papers and techniques concerning lab analysis to Mary Beth Hall and Huyen Tran.

**NATIONAL ANIMAL NUTRITION PROGRAM
NATIONAL RESEARCH SUPPORT PROJECT (NRSP-9)
STRATEGIC PLAN**

Mission Statement

Serve as a forum to identify high-priority animal nutrition issues and provide an integrated and systematic approach to sharing collecting, assembling, synthesizing, and disseminating science-based information, educational tools, and enabling technologies on animal nutrition that will facilitate high-priority research across agricultural species.

Short-term Goals (to be accomplished by 2016)

1. Assist the National Research Council (NRC) beef and upcoming NRC dairy committees develop their feed composition database.

Deliverable: A standard platform that will be useable for all NRC publications.

Deliverable: A publically available, continually updated feed information system (data base on feed composition) accessible from the NANP website.

2. Provide a forum for discussion and development of a research agenda that elucidates how animal nutrition can best be applied to improve to human health.

Deliverable: A series of targeted summit meetings to discuss critical issues in animal nutrition. The first summit will be held within 12 months and will be designed to foster communication between researchers in animal and human nutrition in the area of nutritional/physiological models and nutrition and health. Output from this meeting will be collated, distributed widely, and posted on the NANP website.

3. Provide advice on analytic methods of feed analysis.

Deliverable: A critical review (publication venue to be decided) on evolving (i.e., those that are not AOAC approved) analytical methods for feed analysis.

4. Provide advice to on modeling.

Deliverable: Rapid response and assistance (e.g., beta-testing software) for NRC committees as needed.

5. Develop and implement a communications plan.

Deliverable: Mechanisms in place to engage and inform our customers (nutrition scientists, feed industry, NRC, and government agencies) of what we are doing. Potential

