

# National Research Support Project-9 National Animal Nutrition Program

March 31, 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 two years were outlined in a previous report. This summary outlines the activities, accomplishments, and impacts during Federal Fiscal Year 3 and the first half of Federal Fiscal Year 4. Specific details are provided in the sections that follow this Executive Summary.

### Year 3 10/01/2012 to 09/30/2013

**Activities:** One face-to-face meeting in Washington DC and monthly conference calls took place among members of the Coordinating Committee, the Administrative Advisors, personnel of the NRC, and the Program Leader of USDA/NIFA during Year 3 (minutes shown below). Conference meetings also were held within members of the Feed Composition Committee and Modeling Committee. Work was progressing at an excellent rate.

**Accomplishments:** We entered into an agreement with ChalkLabs to develop a permanent website for NANP (see <http://nanp-nrsp-9.org>). This firm will provide a site for the database on feed composition and modeling along with programming for easy access to the animal nutrition community. The Feed Composition Committee is continuing to work on the feed composition database. Work is progressing with the Modeling Committee. Three scientific abstracts on the activities of the NANP were published in the proceedings of the Joint Annual Meeting (JAM) of the American Society of Animal Science and American Dairy Science Association in July, 2013 and three posters on the NANP were displayed. An exhibition booth was also displayed at this meeting. Numerous oral presentations were given to acquaint scientists with the NANP. A symposium was developed by NANP members and held at the Poultry Science annual meeting to garner enthusiasm for updating the NRC Nutrient Requirements of Poultry publication. High priority issues in animal nutrition were identified and initial plans for a summit to discuss these issues were developed. Initial investigations were made on developing a networking plan for researchers involved in animal nutrition.

**Impacts:** A user friendly database on composition of feed ingredients should soon be available for use by future NRC committees and the general public. The feed composition committee is working with the current beef NRC on development of the feed composition tables that will be used in that publication. Researchers who work in the nutrient modeling area are beginning to be able to share modeling information to a greater extent than in the past.

**First Half of Year 4**  
**10/01/2013 to 03/31/2014**

**Activities:** The Coordinating Committee held monthly conference calls during first half of Year 4 and a virtual half-day meeting was held (minutes 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:** 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. A Post-Doctoral Associate was hired to assist in populating the Feed Composition database under the advisement of the Feed Composition Committee chair. A second Post-Doctoral Associate is being sought to work with the Modeling Committee. A database for storing animal performance data has been established and a portion of the 2001 Dairy NRC animal performance data has been uploaded to the web site. A NRC user feedback forum has been developed and work is progressing to set rules for use and to activate 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 for further development of the NRC nutrient requirement models. A plan was developed to determine length of terms on committees and rotation of members. Also, a Strategic Plan for the NANP was developed by the Coordinating Committee (see at end of this report). Plans are materializing for a National Summit with the title of “One Nutrition” to be held in Washington DC in the Fall of 2014.

**Impacts:** Work is continuing to progress on the feed composition database. This information will be of tremendous benefit to NRC committees who prepare the NRC nutrient requirement reports, to the feed industry, and to other interested parties. The 2001 Dairy NRC performance data should soon be available on the web site for use by the research community. The new Strategic Plan gives information on future plans 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; activities of the committees; and minutes of meetings of the Coordinating Committee. In addition, other important documents (Terms of Membership, Strategic Plan, etc.) 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 Galyean, 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

#### **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

#### **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

## **NRSP-9 ACTIVITIES**

### **Year 3**

**10/01/2012 to 09/30/2013**

The Coordinating Committee of the National Animal Nutrition Program (NANP) had ten conference calls (minutes of October, November, and December, 2012 meetings were previously reported; minutes of January through September, 2013 are shown below), and the Feed Composition and Modeling Committees had several conference calls during the year. Both subcommittees are actively pursuing their charges given to them by the Coordinating Committee. The Coordinating Committee entered into an agreement with ChalkLabs to develop a permanent web site for NANP (see <http://nanp-nrsp-9.org>). In addition, this firm will provide a site for the database on feed composition and modeling along with programming for easy access to the animal nutrition community. Three abstracts were submitted and poster presentations were made

at the annual Joint Annual Meeting JAM of Animal Science (ASAS) and Dairy Science (ADSA) in July, 2013 to introduce and familiarize ASAS and ADSA members with the objectives and accomplishments of NANP. Also, NANP had an exhibition booth at the JAM. Several oral presentations were also made at this meeting. A symposium was developed by NANP members and held at the Poultry Science annual meeting to garner enthusiasm for updating the NRC Nutrient Requirements of Poultry publication. High priority issues in animal nutrition were identified and initial plans for a summit to discuss these issues were developed. Also, initial investigations were made on developing a networking plan for researchers involved in animal nutrition.

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

**Overview of First Half of Year 4**

The Coordinating Committee had three conference calls during the first half of Year 4 (minutes shown below). Members of the Coordinating Committee, Feed Composition Committee and Modeling Committee continued to be actively involved. Plans are underway for a National Summit with the title of “One Nutrition” to be held in Washington DC in the fall of 2014. A plan was developed to determine length of terms on committees and rotation of committee members. A Post-doctoral Associate was hired to assist in populating the Feed Composition database under the advisement of the Feed Composition Committee chair. The feed composition committee is working with the current beef NRC on development of the feed composition tables that will be used in that publication. Researchers who work in the nutrient modeling area are beginning to be able to share modeling information to a greater extent than in the past. A database for storing animal performance data has been established and a portion of the 2001 Dairy NRC animal performance data has been uploaded to the web site. A NRC user feedback forum has been developed and work is progressing to set rules for use and to activate 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 for further development of the NRC nutrient requirement models. A second Post-doctoral Associate is being sought to work with the Modeling Committee. A system for terms and appointments of committee membership was developed (see end of this report). A Strategic Plan for the NANP was developed by the Coordinating Committee (see end of report).

**MINUTES OF THE COORDINATING COMMITTEE**

Minutes of the Coordinating Committee meetings from January, 2013 to March, 2014 are provided below. Minutes of previous meetings are 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  
Conference Call – January 10, 2013**

The January conference call meeting of the Coordinating Animal Nutrition (CAN) Committee of the National Animal Nutrition Program (NANP) was called to order at 2:30 pm EDT by Chairman Gary Cromwell. Those in attendance were Mike Galyean, Mark Hanigan, Jack Odle, Don Beitz, Todd Applegate, Bill Weiss, Mary Beth Hall, and Gary Cromwell (Committee Members), David Benfield (Administrative Advisor), Austin Lewis (NRC), and Phil Miller (Chair of Feed Composition Committee).

The minutes of the November 29, 2012 conference call meeting were approved.

Cromwell reported that the materials for the Midterm review of NRSP-9 have been posted on the NIMSS site. Benfield indicated that the review committee would be reporting on their review in the spring.

Cromwell reminded the group that the NANP/NRSP-9 web site is up and running. The address of the site is: <http://www.ca.uky.edu/nrsp-9>.

Hanigan, chair of the Modeling Committee, reported that his group has been active. The main accomplishment has been changes that now allow the Beef and Dairy models to be accessed by users.

Phil Miller, chair of the Feed Composition Committee, gave an update on the work that his committee is undertaking.

Austin Lewis reported that the Beef Committee has been appointed and that names of members will soon be available to the general public.

Cromwell reported that Rosalina Angel, University of Maryland, will replace Bill Roush on the Modeling committee. He also reported that plans are being made to have short presentations at JAM this summer to increase awareness of NANP. Slides were sent to Hanigan and Miller for updating, and Galyean will include information on NANP in his paper during the ARPAS symposium.

The Coordinating Committee will assemble in Washington DC on February 7, 2013, for an on-site, 1-day meeting. Lodging will be at the Capital Holiday Inn.

Suggestions were made for agenda items at the upcoming on-site meeting.

The meeting was adjourned at approximately 3:20 pm EST.

**National Animal Nutrition Program – NRSP-9**  
**Coordinating Animal Nutrition Committee Meeting Minutes**  
**February 7, 2013**  
**Room 3310 - Waterfront Centre**  
**800 Ninth St., SW, Washington, DC 20024**

The meeting was called to order at 8:00 am by Chairman Gary Cromwell. Those in attendance were Todd Applegate, Don Beitz, Gary Cromwell, Mike Galyean, Mary Beth Hall, Mark Hanigan, Jack Odle, Bill Weiss (Committee Members), David Benfield (Administrative Advisor), Charlotte Kirk Baer (USDA/NIFA), and Austin Lewis (NRC).

**Introductory Remarks**

Gary provided initial opening remarks and distributed copies of the NRSP-9 midterm review documents. He noted that the material was submitted to NIMSS for use by the NRSP Review Committee. He reviewed the meeting agenda with the group.

Dave Benfield provided perspectives from the Administrative Advisors. He explained that every NRSP project has four Administrative Advisors that oversee these national projects and represent the four regions of the United States. He noted that the midterm review of the NRSP-9 will take place at the end of February 2013 where they will be looking for contributions and accomplishments. He spoke about the importance of demonstrating impact in an era of financial constraints. He reminded the committee that if sequestration occurs, it will most definitely impact “off-the-top” funding and have a trickle-down effect to NRSPs. He explained that it is critical for the Coordinating Committee to refine its goals and provide tangible deliverables. He also stressed the need for the committee to focus on ensuring its future sustainability by leveraging support from other organizations to supplement the financial support provided by NRSP. He suggested that the committee devote discussion during its meeting to that issue.

Charlotte Kirk Baer provided the USDA’s perspective on the activities of the NRSP. She spoke about the Federal budget situation, including the Continuing Resolution, the reauthorization of the Farm Bill with no appropriations for mandatory funding, which resulted in a 10% reduction in USDA/NIFA’s budget as well as the potential sequestration, which could result in a further 8% reduction. In light of the budget scenario, the agency is paying close attention to returns on investments made. She talked about the recently released reports by the President’s Committee of Advisors on Science and Technology, which call for expanding competition in allocation of funds and rebalancing intra/extramural and public/private research efforts. She complemented the committee for initiating the work of the feed composition and modeling committees. She noted the tangible accomplishments of both the feed composition and modeling committees and their strong, focused leadership that was cognizant of the need to set goals and define deliverables. Charlotte encouraged the Coordinating Committee to have a discussion of its goals and to define deliverables and suggested that time be devoted in the agenda to plan the next meeting.

Austin Lewis provided a perspective from the National Research Council. He circulated information on the membership of the committee that will revise the Nutrient Requirements of Beef Cattle report. The committee will be chaired by Mike Gaylean. Their first meeting is February 25-26, 2013 in Washington DC. Charlotte and Gary have been invited to give a short report on the NANP. Austin also reported sponsors for the Beef report include the Illinois Corn

Marketing Board, Minnesota Corn Growers/Minnesota Corn Research and Promotion Council, Nebraska Corn Board, IFEEDER, and FDA Center for Veterinary Medicine. Approximately half of the funding will come from sales of previous publications. Sales from the recent Swine report have been very good. Austin also mentioned that the NRC is currently investigating ways that the Beef Cattle committee may be able to work with the two NANP subcommittees and still maintain the confidentiality required for all NRC committees.

### **Committee Reports**

The Modeling Committee report was provided by Mark Hanigan, chair of the committee. He talked about the accomplishments of the committee, which included making the NRC dairy and beef models compatible with contemporary operating systems and software so they can be used by researchers, educators, and industry personnel. Corrections were made to substantive errors in the original software and modifications were made to the original software to ensure its functionality. Mark conveyed that the Modeling Committee will be relying on the NRC committees to review and curate data. Discussion ensued around other potential leveraging and partnerships efforts, including talking with the staff of the USDA National Nutrient Database for Standard Reference about its data base and housing options. In addition, the committee would like to acquire the unique and important metabolism data generated in the animal calorimeters at Beltsville.

The Feed Composition Committee report was provided by Phil Miller, chair of the committee. He talked about the accomplishments of the committee, which included agreement on developing a transparent approach that will allow multiple users to enter information and a centralized location to check/verify entered data. At this point in time, it appears that the database(s) will be developed and managed at the University of Illinois. He described several potential leveraging and partnering efforts, including discussions and review of Feedipedia and ILSI's crop composition data base.

Both committees expressed their plans to be visible (i.e., through short presentations and posters) at the annual national meeting of the American Society of Animal Science by presenting posters and providing information through associated workshops and related sessions.

### **Poultry Science Association Symposium and Request for Funding**

A symposium entitled *Nutrient Requirement Evaluation and Publication for Poultry: US and Global Perspectives* will be hosted by NRSP-9 and held during the Poultry Science Association meeting on July 25, 2013 in San Diego, California. The symposium will create a forum for discussing how the science has changed over time and to explore different approaches used by various countries and species-specific development of nutrient requirements and publications. A request was made and approved to provide travel funds to one of the symposium speakers, Lee Southern.

### **State of Animal Nutrition and Research Focus Areas**

To help set the stage for the committee's discussion about its goals, priorities and future activities, Charlotte Kirk Baer provided an overview of the current state of animal nutrition and how research focus areas have changed over time. She also shared information on how previous work was not tightly networked among researchers, but strong networks have formed in recent

years. She discussed differences in the geographic distribution, disciplinary focus, level of collaboration and funding of the four major animal programs funded by NIFA. She left the committee with the following questions:

- o How has animal nutrition evolved and how should it look in the future?
- o Where are strengths and where are weaknesses in our knowledge?
- o Where are gaps in research focus areas?
- o Where could collaborations be essential?
- o What areas could have greatest potential impact?
- o Where are our greatest opportunities?
- o Where do we need to concentrate future generations of research?

A discussion followed on the issue of networking and locating expertise. Jack brought REACHNC to the attention of the group. It is an expert profiler developed for the NC system by Elsevier. It is compatible with several other open-source expert profilers. The idea of having an animal nutrition expert resource evolved and a subcommittee was appointed to look into options. Members of the subcommittee are: Jack Odle, Don Beitz, and Charlotte Kirk Baer.

### **High Priority Animal Nutrition Issues**

Don Beitz led a discussion of animal nutrition research priorities. He provided examples of the animal agriculture research priorities defined by FAIR 95, FAIR 2002 and FAIR 2012. A discussion centered around themes that have transcended time and some that appear to have changed over time. Ideas were shared about how to address national challenges that cut across various scientific, programmatic, and funding boundaries. Two topics of interest were “Energy in Balance” and Feed Efficiency: Role in Environment, Economics, and Safety.” A subcommittee was appointed to flesh out ideas on a topic of national concern that could be addressed by a forum hosted by NRSP-9 to include representatives from relevant disciplines and funding organizations, to occur in conjunction with the next meeting of the NRSP-9. Members of the subcommittee are: Mary Beth Hall (chair), Don Beitz, Jack Odle, Todd Applegate, and Charlotte Kirk Baer.

### **Miscellaneous Items**

Gary showed the website to the group. Future conference calls were scheduled to take place at 2:30 EST on March 7, April 11, May 23 and June 27, 2013. Reminders were provided about submitting travel expenses.

The meeting was adjourned at 3:45 pm.



**Minutes of the Coordinating Committee  
National Animal Nutrition Program – NRSP-9  
Conference Call – March 7, 2013**

The February conference call meeting of the Coordinating Animal Nutrition (CAN) Committee of the National Animal Nutrition Program (NANP) was called to order at 2:30 pm EST by Chairman Gary Cromwell. Those in attendance were Mike Galyean, Mark Hanigan, Jack Odle, Don Beitz, Bill Weiss, Mary Beth Hall, and Gary Cromwell (Committee Members), Austin Lewis (NRC), and Charlotte Kirk Baer (National Program Leader, U.S. Department of Agriculture).

The minutes of the January 10, 2013 conference call meeting and the amended minutes of the February 7, 2013 on-site meeting in Washington, DC were approved.

Lewis gave an update on National Research Council (NRC) activities. The first meeting of the NRC Beef Committee was held on February 25-26, 2013. Kirk Baer was in attendance both days and on the first day gave an overview of the NANP program. Cromwell joined the discussion by phone. The second day, Mark Hanigan and Phil Miller joined the Beef group by phone and described what the Modeling and Feed Composition Committees of the NANP are doing. There was good interaction and a general feeling that there were strong benefits to the relationship of these committees with the Beef group. The next two meetings of the NRC's Beef committee will be in approximately 6 and 12 months.

Hanigan gave an update on the Modeling Committee and indicated that they will have a conference call sometime soon.

Weiss indicated that the Feed Composition Committee is in the process of developing templates for their data base. They will be sending their template to the NRC's Beef group soon to see if the committee has overlooked any important nutrients. Kirk Baer indicated that she has been in contact with a company (Chalklabs) that has expertise in data management, and recommended that Phil Miller engage in conversation with that group. This may be important for long-term stability of this effort.

Cromwell indicated that three abstracts were submitted for poster presentations at the Joint Annual Meeting (JAM) of ASAS/ADSA in July. In addition, ASAS/ADSA has offered to give NANP a booth in the exhibition area. It will be important to have personnel at the booth during the meeting. Cromwell will work on an arrangement to make that happen. Cromwell and Kirk Baer will prepare a short feature story on the NANP that can be submitted for publication in the newsletters of ASAS (Taking Stock), ADSA (Dairy News), and PSA (Poultry Science Newsletter), similar to the story that Weiss prepared for **eXtension**.

Odle and Kirk Baer gave an update from the subcommittee that was appointed to address an Animal Nutrition Expert Resource. Members are Odle (chair), Beitz, and Kirk Baer. Charlotte has been in contact with Elsevier to discuss the potential for a pilot effort and NANP first needs to define goals of the proposed initiative. The group will work together to come up with some bullets to share with Elsevier that describe goals. Hall indicated that the subcommittee to

address national concerns and plan a conference in conjunction with an on-site meeting of NRSP-9 in November, 2013 has been in contact by phone. The committee consists of Hall (chair) Beitz, Odle, Applegate, and Kirk Baer. This group will have a conference call on April 30 to begin a discussion on the effects of choices on resource use relative to food security, environmental sustainability, and energy supply as they affect human society, agriculture, and the environment.

After some discussion, a tentative date of November 7, 2013 was set for the conference. The Coordinating Committee should plan on meeting the afternoon before the date of the conference and the morning after, so we should plan on blocking the dates of November 6, 7, and 8.

Kirk Baer indicated that she was approached by a National Program Leader from ARS to brainstorm about potential novel opportunities for supporting the NRC's beef study and other nutrient requirement efforts of the NRC and NANP.

Jack Odle reminded the group that serious consideration and action should be taken regarding a plan for the NANP's future sustainability (e.g., financial support to match NRSP and leveraging of other resources to sustain products developed by the NANP). Charlotte confirmed that this should be a priority of the group to ensure that the foundation being laid now results in long-term activity that supports the animal nutrition research community.

Upcoming phone conference calls are scheduled for 2:30 Eastern time on April 11, May 23, and June 27, 2013.

The meeting was adjourned at 3:34 pm EST.

**Minutes of the Coordinating Committee  
National Animal Nutrition Program – NRSP-9  
Conference Call – April 11, 2013**

The April conference call meeting of the Coordinating Animal Nutrition (CAN) Committee of the National Animal Nutrition Program (NANP) was called to order at 2:30 pm EST by Chairman Gary Cromwell. Those in attendance were Mike Galyean, Mark Hanigan, Todd Applegate, Mary Beth Hall, and Gary Cromwell (Committee Members), Dave Benfield (Administrative Advisor), Austin Lewis (NRC), and Charlotte Kirk Baer (National Program Leader, U.S. Department of Agriculture). Committee members Jack Odle, Bill Weiss, and Don Beitz were absent from the meeting.

The minutes of the February 7, 2013 conference call meeting were approved.

Benfield reported that the four administrative advisors gave their midterm reports to Nancy Cox who assembled them into a common report and sent to the Ag Experiment Station's review committee. The report was very positive. The review committee will make their decision regarding a continuation of funding of NRSP-9 in the next month or two. He reminded us that

sequestration may result in some reduction in funding of the project since NRSPs are financially supported with “off the top” funding.

Lewis reported that the NRC Beef group is making good progress and has had one conference call in addition to their initial meeting in Washington DC. Galyean mentioned that Galen Erickson has been communicating with Phil Miller, chair of the NANP Feed Composition Committee, regarding the feed composition data base. Applegate said the symposium at the PSA annual meeting on updating the Poultry NRC is taking shape. The date of the symposium is July 25.

Kirk Baer indicated that USDA is dealing with budget reduction. Their goal is to save jobs and not furlough. Cuts will be directed toward travel, meetings, etc. Hatch funds will be impacted to some degree.

Hanigan reported that the Modeling Committee have their tasks and are working on them. The committee has a conference call tomorrow, April 12.

Cromwell read a report prepared by Phil Miller, chair of the Feed Composition Committee. Miller has been in contact with Gavin LaRowe at ChalkLabs in Indiana regarding the development of the feed composition data base. He believes they will be a good group to work with. LaRowe has looked at the swine ingredient data base and will be visiting with him early next week. Miller has received some biological data from Hanigan and has passed that along to LaRowe also. Kirk Baer indicated that she has worked with ChalkLabs on some other projects and has been very impressed with their work. The Feed Composition Committee has scheduled a conference call for May 3, 2013.

There was no report from the subcommittee on Animal Nutrition Expert Resource or the subcommittee to address national concerns.

Cromwell indicated that a short feature story on the NANP for publication in ASAS, ADSA, and PSA newsletters will be prepared soon.

Regarding items 11 and 12 on the agenda, Kirk Baer indicated that the NANP is off to a strong start and has made good progress in its initial years of work. Now, in its third year of the original 5-year project, it is time to develop a formal plan for sustaining the work of the NANP into the future. We hope that with demonstrated impacts, we will continue to receive some level of support from Experiment Stations through NIFA beyond the initial 5 years; however, we need to think about growing the base of support to ensure that the foundation we build will continue to serve us in the future. Other organizations and agencies are recognizing the importance and the value of the work being conducted by the NANP, especially as it relates to support of the NRC and the broader research community. We need to meet with and engage those organizations in a discussion of support for national animal nutrition activities (NANP and NRC). A strategy needs to be developed: NANP needs to define its goals (what do we want to accomplish and what is the public value), targets for support (how much, from what sectors, through what mechanisms), and how to operationalize the strategy (who will make contacts with which organizations and how).

This topic should rise to the top of our priority list to engage organizations now, as they are also

planning for the future. Cromwell reminded the group to block November 6, 7, and 8 for our scheduled meeting in Washington DC.

The next conference calls will be on May 23, June 27, and August 1, 2013, at 2:30 pm EDT.

There being no other business, the meeting was adjourned at 3:00 pm EDT.

**Minutes of the Coordinating Committee  
National Animal Nutrition Program – NRSP-9  
Conference Call – May 23, 2013**

The May 23 conference call meeting of the Coordinating Animal Nutrition (CAN) Committee of the National Animal Nutrition Program (NANP) was called to order at 2:30 pm EST by Chairman Gary Cromwell. Those in attendance were Mark Hanigan, Todd Applegate, Mary Beth Hall, Jack Odle, Don Beitz, Bill Weiss, and Gary Cromwell (Committee Members), Austin Lewis (NRC), and Charlotte Kirk Baer (National Program Leader, U.S. Department of Agriculture). Committee member Mike Galyean was unable to attend the meeting.

The minutes of the April 11, 2013 conference call meeting were approved.

Cromwell reported that Nancy Cox told him that the four administrative advisors gave a “glowing” report of our committee’s work. Cox also reported that Hatch Funds had been reduced by 7.41%, meaning that our budget for Year 3 was reduced from \$175,000 to \$161,683. Cromwell also reported that we will continue to transfer \$25,000 to the NRC even though the yearly budget was reduced.

Lewis reported that the beef committee is working on various assignments and will have a conference call in early June. Plans are in place for the symposium on updating the NRC’s *Nutrient Requirements of Poultry* at the Poultry Science Meeting on July 25 in San Diego. He recently learned that the Beef Cattle Research Council of Canada will contribute financially to the revision of the *Nutrient Requirements of Beef Cattle*. He also was appreciative to hear that the NRSP plans to continue the full \$25,000 contribution to the NRC, despite the budget cuts.

Kirk Baer reported that the Senate Ag Committee passed legislation in the Agriculture Reform, Food, and Jobs Act of 2013 (Farm Bill) that includes a “Farm Animal Agriculture Integrated Research Initiative” at an authorized level of \$50 million per fiscal year from 2014 through 2018 to be administered competitively through federal agencies, including NIFA and ARS. The legislation will be considered by the full Senate.

Hanigan reported that the Modeling Committee have their tasks and are working on them. The committee had a conference call on April 12, but few were able to participate. He also said the Phil Miller had taken the lead on working with ChalkLabs and that he had been in communication with Phil.

Cromwell also indicated that he had been in touch with Phil and that his committee was making good progress. There are still some questions to be addressed with ChalkLabs, but he is confident that this can be worked out quickly. Kirk Baer suggested that she, Miller, and

Cromwell have a conference call with Gavin LaRowe of ChalkLabs in the next few days to get clarification on various issues regarding setting up and managing the data base. The committee was in favor of moving ahead with a contract with ChalkLabs.

Odle, chair of the subcommittee on Animal Nutrition Expert Resources, discussed the issue of confidentiality and whether data from the ASAS membership directory could be used to help populate the members of this expert database. Cromwell suggested that ASAS be contacted and indicated that the Society has a mechanism to query members as to whether their information could be used for such a purpose. Jack will seek this information. Charlotte had an initial discussion with Elsevier regarding the prospect of gaining their assistance (gratis) and also suggested “Vivo” as a possible alternate.

Hall, chair of the subcommittee on planning a national conference related to animal nutrition, reported that, based on feedback that Kirk Baer received from a colleague, the discussion on energy has already been done at least to some extent, or the funding was being withdrawn from efforts it would address. To focus the conference on a topic of interest to the targeted audience and integrate it into but differentiate from other discussions, the subcommittee is proposing to plan for "One Nutrition", put in the context of how this could support human health (the “One Health” initiative). The committee is presently discussing the focus, but could address the role that livestock can play both as research models and food sources in supporting improved human nutrition and health.

For the proposed conference, Odle proposed the idea of using a “conversation forum” for the meeting, designed to catalyze exchange among participants. Basic outline is to first have a SPEAKER address a topic in traditional seminar/lecture style (powerpoint slides) followed by comments from a four-member PANEL (including individuals from different sectors: academic, industry, government & stakeholder perspectives). Finally, the panelists are followed by ROUNDTABLE discussion among conference participants seated at roundtables with questions that are seeded by the program committee. This format can be cycled through about four times in a day (two cycles in the am and two in the pm). The committee will give this suggestion consideration.

Cromwell indicated that a short feature story on the National Animal Nutrition Program for publication in ASAS, ADSA, and PSA newsletters has not yet been done.

Hall asked if it was possible to track the number of visitors that the websites received as an indicator of impact. It was agreed that this was a good idea and that it would be important for a counter to be in place by the time of the Animal and Dairy Science Joint Annual Meeting in July when the websites would be announced. Lewis and others indicated that inclusion of a website analysis tool should be a relatively simple task, and it was an option in some of the website programs. Hall asked that if the website that Hanigan discussed was not yet in place at that point, that the present NRSP-9 website have an analysis tool installed. Cromwell indicated that he would have his associate install an analysis tool (NOTE: that was done on the day following this meeting and it is working).

Cromwell indicated that we will need volunteers to be at the NANP exhibition booth at the ASAS/ADSA annual meeting this summer. Beitz volunteered to send out a form for committee members to volunteer for 2-hour time slots at the booth.

The next conference calls will be on June 20 (**note change of date**) and August 1, 2013, at 2:30 pm EDT.

There being no other business, the meeting was adjourned at 3:40 pm EDT.

**Minutes of the Coordinating Committee  
National Animal Nutrition Program – NRSP-9  
Conference Call – June 20, 2013**

The June 20 conference call meeting of the Coordinating Animal Nutrition (CAN) Committee of the National Animal Nutrition Program (NANP) was called to order at 2:30 pm EDT by Chairman Gary Cromwell. Those in attendance were Todd Applegate, Mike Galyean, Mary Beth Hall, Don Beitz, Bill Weiss, and Gary Cromwell (Committee Members), and Austin Lewis (NRC). Committee members Jack Odle and Mark Hanigan, and Charlotte Kirk Baer were unable to attend the meeting.

The minutes of the May 23, 2013 conference call meeting were approved following a correction to change “counter” to “web site analysis tool” in Hall’s report.

**Administrative Advisors Report** – Cromwell reported that based on the mid-year report and positive recommendation from the Administrative Advisors, NRSP-9 was approved for the remainder of the 5-year period.

**Update on NRC Activities** - Lewis reported that the Iowa Corn Producers have provided funding for the Beef Report. This group joins the Nebraska, Illinois, and Minnesota Corn Producers as supporters. He also reported that the ADSA Foundations is providing 51% of the cost of producing a new NRC Nutrient Requirements of Dairy and are encouraging feed industry groups to join in the funding process. Mention was made that most of the Coordinating Committee members and members of the Modeling and Feed Composition Committees were unaware of this activity.

**Update on NIFA/USDA Activities** – no report.

**Finalized Contract with ChalkLabs for Website and Data Management** – Cromwell reported that a contract for \$37,050 was approved and ChalkLabs will have a workable website available in time for demonstration at the summer JAM meeting. Cromwell, Miller, Hanigan and Kirk Baer are currently working with Gavin La Roche on the initial drafts of the website.

**Upcoming ASAS/ADSA Annual Meeting (JAM)** – Posters (n = 3) are being prepared by Cromwell, Miller, and Hanigan and will be on display at the JAM on Tuesday. Members of our committee are encouraged to join in on the poster presentations from 7:30 to 9:30 am on Tuesday. The NANP exhibition booth will be open from 8:00 to 5:00 pm on Tuesday and Wednesday, and until 2:00 pm on Thursday. Please go to the Doodle Poll that Beitz has prepared and sign up for some 1- or 2-hour blocks. We need at least 1 person at the booth during the conference. Labeled ball-point pens and small versions of the three posters (printed on legal size paper) will be available for distribution. Galyean will publicize NANP activities at the ARPAS symposium and Cromwell will do the same at the Dairy Forum on Monday and the Beef Species Symposium on Wednesday. Hanigan, McNamara, and Miller will also have short presentations at sessions during the JAM.

**Upcoming PSA meeting** – Applegate indicated that everything is in order for the special symposium at the Poultry Science.

**Subcommittee on Animal Nutrition Expert Resource** – no report.

**Subcommittee on National Concerns** – Hall gave a short report of a recent conference call that occurred between her and Odle. Due to a mix-up with time (central vs. eastern), the other members did not participate. They are continuing to work on an agenda for the Forum in November, 2013.

**Plans to Address NANP's Future Sustainability** – no report.

**Other Items** – Kees de Lange has resigned from the Modeling Committee due to health reasons. Cromwell suggested that we consider Brian Kerr as a replacement for de Lange. The committee was strongly in support of Brian as a new member of the Modeling Committee. Cromwell will contact Kerr and encourage him to consider serving in this role.

The next conference call will be on August 1 and 2:30 pm (eastern time).

There being no other business, the meeting was adjourned at 3:18 pm EDT.

**Minutes of the Coordinating Committee  
National Animal Nutrition Program – NRSP-9  
Conference Call – August 1, 2013**

The August 1 conference call meeting of the Coordinating Animal Nutrition (CAN) Committee of the National Animal Nutrition Program (NANP) was called to order at 2:30 pm EDT by Chairman Gary Cromwell. Those in attendance were Mike Galyean, Mary Beth Hall, Don Beitz, Bill Weiss, Jack Odle, and Gary Cromwell (Committee Members), Austin Lewis (NRC) and Charlotte Kirk Baer (USDA). Committee members Todd Applegate and Mark Hanigan were unable to attend.

The minutes of the June 20, 2013 conference call meeting were approved.

**Administrative Advisors** – no report.

**Update on NRC Activities** - Lewis reported Robin Schoen participated at the ADSA preconference session at JAM. He also reported that the symposium on an updated NRC Nutrient Requirements of Poultry at the PSA annual meeting went extremely well. The room was  $\frac{3}{4}$  full and he estimated 200 to 250 people attended. The reception was very positive and Applegate and his group are thanked for organizing the symposium.

**Update on NIFA/USDA Activities** – Kirk Baer mentioned that NANP needs to be recognized as a supporter of NRC activities whenever possible. Lewis suggested that Kirk Baer and Cromwell should pass that word directly to Schoen. She also reminded the group that appointment to committees should be on a competitive basis and implied that this was not followed in the last two appointments. Cromwell argued that the last two appointments were strongly recommended by the full committee and no one knew of a stronger candidate than the ones put forward. Kirk Baer indicated that we should be thinking about terms of service on the committees. At present, we do not have a policy on length of terms.

**Update from Modeling Committee** – Cromwell indicated that the Administrative Advisors appointed Brian Kerr to serve on the Modeling Committee. Kerr replaces Kees de Lange who resigned due to health reasons. A request from Kees de Lange to cover the cost (approximately \$1,200) of fixing the software so that the NRC (2012) swine model will work when the French language is selected in Excel was considered. Apparently some of the functions do not work when French is selected. The committee decided that this would not be an appropriate activity to fund with NRSP-9 funds.

**Update from Feed Composition Committee** – No report. Phil Miller was planning to join the conference call but had to decline due to his father's hospitalization. He indicated that the next step is to hire someone (post doc) to enter data. Miller will be asked to develop a proposal and submit it to the Coordinating Committee.

**Data submission to ChalkLabs** – Cromwell reported that Phil Miller, Hanigan, and Cromwell met with Gavin LaRoche at the JAM meeting. The website is running and was exhibited at the JAM meeting. There is a need to populate the website with data.

**ASAS/ADSA Annual Meeting (JAM)** – Posters were given by Cromwell, Miller, and Hanigan and the exhibition booth was well attended. Thanks go to those committee members who helped in the booth. Thanks also go to Beitz for organizing the participation of the booth. A number of people had presentations at this meeting to publicize NANP activities. Galyean, Miller, and McNamara gave presentations at the ARPAS symposium and Cromwell did the same at the Dairy Forum and the Beef Species Symposium. Hanigan and Hall also gave short presentations. We will post Power-Point slides of some of the presentations dealing with NANP-NRC on our website. Cromwell will contact the JAS Editor-in-Chief to see about posting papers that will eventually be submitted to the Journal on our website.

**PSA Symposium** – No report other than Lewis's comments about the success of this venture (see above).

**Subcommittee on Animal Nutrition Expert Resource** – Odle reported that he contacted Meghan Wulster-Radcliffe (CEO of ASAS) regarding using their membership list and the response was favorable. Also, Charlotte made the subcommittee aware of another example of an Elsevier-based expert-finder called "BiomedExperts". A link to the site is: <http://www.biomedexperts.com/Start/FirstTimeLogin.aspx>. To view this site you need to register for a free account. The display is very similar to ReachNC that was shared previously. There was discussion of whether to use the Elsevier-based program, which automatically harvests from Pub-Med (or Scopus) or whether to use Vivo. The Elsevier system will be more costly (\$30 to \$50K), but would not require direct user inputs and would therefore have low maintenance in the long run. If we decide to invest money in an Elsevier product, we would need to be sure that it adequately mines AGRICULTURAL publication databases. For example, Pub-Med misses many Ag journals.

**Subcommittee on National Concerns** – Hall reported that their committee is in the planning stages and will have a conference call soon.

**Plans to Address NANP's Future Sustainability** – Did not address due to lack of time.

**Other Items** – The next conference call will be on September 12 and October 17 at 2:30 pm (Eastern Time).

There being no other business, the meeting was adjourned at 3:29 pm EDT.



**Minutes of the Coordinating Committee  
National Animal Nutrition Program – NRSP-9  
Conference Call – September 12, 2013**

The September 12 conference call meeting of the Coordinating Animal Nutrition (CAN) Committee of the National Animal Nutrition Program (NANP) was called to order at 2:30 pm EDT by Chairman Gary Cromwell. Those in attendance were Mike Galyean, Mary Beth Hall, Don Beitz, Bill Weiss, Todd Applegate, and Gary Cromwell (Committee Members), Austin Lewis (NRC) and Charlotte Kirk Baer (USDA). Committee members Jack Odle and Mark Hanigan were unable to attend.

**Minutes** – The minutes of the August 1, 2013 conference call meeting were approved.

**Administrative Advisors** – no report (none in attendance).

**Update on NRC Activities** - Lewis reported that the Beef Committee will have their second meeting next Tuesday and Wednesday. They have drafts of 50-60% of the document completed. He also reported that the Dairy NRC has been approved.

**Update on NIFA/USDA Activities** – Kirk Baer commented that she and Cromwell had a short conference call with Robin Schoen of the NRC regarding additional exposure of the NANP in NRC publications. Kirk Baer also asked Schoen if Camella (program officer) could participate in NANP conference calls. No decision was made.

**Update from Modeling Committee** – no report.

**Update from Feed Composition Committee** – Phil Miller reported that the committee has templates and the next step is to populate the system with data. He also indicated the need to get a resource person for this activity.

**Proposal from Feed Composition and Modeling Committees** - A proposal to hire a post doc to serve as a resource person for the Feed Composition and Modeling Committees previously circulated to the Coordinating Committee was unanimously approved by the Committee (see attachment).

**Website and activity at ChalkLabs** – Cromwell reported that PowerPoint slides from the beef session at the Joint Annual Meeting of ASAS and ADSA are posted. The presentations at the special session on updating the NRC poultry report at the Poultry Science meeting are posted (both slides and audio).

**Subcommittee on Animal Nutrition Expert Resource** – no report.

**Update on November Summit** – Hall circulated a document showing a plan for “One Nutrition” Summit Series. She asked for comments from the committee. It was generally agreed that this or a similar summit would need to be delayed until the spring of 2014.

**Policy for appointment of new members and establish terms of membership** – did not address because Kirk Baer had to leave earlier in the meeting.

**Plans to Address NANP’s Future Sustainability** – No report.

**Other Items** – The next conference call will be on October 17, 2013 at 2:30 EDT (Note: the conference call was later cancelled due to the Federal Government shutdown). The committee should hold the November 6-8 dates originally set for the summit in Washington DC for a face-to-face meeting in Washington DC. Details will come later.

There being no other business, the meeting was adjourned at 3:10 pm EDT.

**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**

1. **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.

2. **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.
3. **Administrative Advisors:** No Advisors were present, and thus no report was available.
4. **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.
5. **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.
6. **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.
7. **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.
8. **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.

9. **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.
10. **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.
11. **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.
12. **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.

13. **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.
14. **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.
15. 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](mailto: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](mailto: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](mailto: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**

2. **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.
3. **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.
4. **Brief Comments and Updates:**
  - a. *Administrative Advisors:* No Advisors were present, and thus no report was available.
  - b. *USDA* – Charlotte Kirk Baer reported no update from USDA.
  - c. *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.
  - d. *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.

- e. *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.
- f. *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.

- g. *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.

5. **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.
6. **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:

- a. 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
- b. NRC access on the web versus paper copy
- c. Models-- want to see data behind the validation of models
- d. Bio-availability-- want help with organic, inorganic, and bioavailability of minerals
- e. Role of dietary antioxidants related to oxidative stress in animals—i.e.: natural vs artificial antioxidants
- f. Safety implications of fortification—i.e.: omega 3 fatty acids
- g. Nutrient requirements of exotic birds
- h. Nanotechnology applications in feeds
- i. 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.

7. **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.
8. **"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.





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 mechanisms to be pursued include regular articles (every couple of months) in society newsletters, posters at national meetings, invitations to key stakeholders to NANP meetings, among others.

### **Longer-term Goals (to be accomplished by 2019)**

1. Determine limitations of currently available feed characterization assays.

Deliverable: Conduct a survey of nutrition scientists and convey results on limitations of currently available feed characterization assays.

2. Establish an interactive, low-maintenance, web-based collaborative expert network that serves as an “expert finder,” highlights trends in animal nutrition research publications, identifies relationships among topics, and maps expertise geographically.

Deliverable: Develop a network of nutrition experts for use by government agencies, public and private researchers, feed industry, livestock producers, and educators, and extension workers.

3. Facilitate model development.



Deliverable: Develop a uniform modeling platform for use by future NRC requirement committees.

4. Identify emerging or urgent topics

Deliverable: Write reviews on topics in scientific journals that have been identified by NANP, the research community, industry, or government.

5. Develop a mechanism to help maintain NRC requirement publications between editions.

Deliverable: Correcting errors in the model code, making limited changes based on compelling needs, and collecting information for future use via a web-based forum.