



# The National Animal Nutrition Program

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## BACKGROUND and MISSION

- The National Animal Nutrition Program (NANP) was established in 2010 to provide an integrated and systemic 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.
- The NANP is funded as a National Research Support Project (NRSP) by the Association of Public Land Grant Universities with Hatch funds drawn from the total federal allocation prior to distribution of formula funds to state agricultural experiment stations.
- Funds are appropriated to and administered by the U.S. Department of Agriculture's National Institute of Food and Agriculture (NIFA).
- This particular NRSP, identified as NRSP-9, is one of seven NRSPs.

## FOCUS OF THE NATIONAL ANIMAL NUTRITION PROGRAM

- The National Animal Nutrition Program focuses on:
  - addressing challenges facing researchers in animal agriculture, and
  - filling voids in the research and academic communities.
- Emphasis is placed on beef cattle, dairy cattle, swine, and poultry.

## GOVERNANCE OF THE NATIONAL ANIMAL NUTRITION PROGRAM

- **Administrative Advisors from four regions:**
  - Nancy Cox (Lead) – University of Kentucky
  - Bret Hess – University of Wyoming
  - David Benfield – The Ohio State University
  - Cameron Faustman – University of Connecticut
- **National Program Leaders from USDA/NIFA**
  - Charlotte Kirk Baer (Lead) - NIFA
  - Steve Smith - NIFA

## SELECTION OF COMMITTEE MEMBERS

- The NANP consists of three committees: Coordinating, Feed Composition, and Modeling.
- Applicants were recruited through a national search utilizing various media and involving professional societies, government, academia, and industry.
- Files of applicants were reviewed, and appointments were made by the Administrative Advisors.
- Species expertise and geographic region were considered in making appointments.

## COMMITTEE STRUCTURE OF THE NATIONAL ANIMAL NUTRITION PROGRAM

### COORDINATING ANIMAL NUTRITION (CAN) COMMITTEE

Oversee and coordinate the selection process and the work of the feed composition and modeling committees, advise the National Academies on critical national priorities, and provide a forum to address research support needs.

#### *Committee Members*

Gary Cromwell (Chair) – University of Kentucky  
 Mike Galyean – Texas Tech University  
 Mark Hanigan – Virginia Tech University  
 Jack Odle – North Carolina State University  
 Don Beitz – Iowa State University  
 Todd Applegate – Purdue University  
 Bill Weiss – The Ohio State University  
 Mary Beth Hall – USDA/ARS  
 Phillip Miller – University of Nebraska

### FEED COMPOSITION COMMITTEE

Bring together data and research resources in the area of feed composition, foster communication among those collecting feed composition information, and facilitate efficiencies and consistencies in data collection and maintenance.

#### *Committee Members*

Phillip Miller (Chair) – University of Nebraska  
 Ryan Dilger – University of Illinois  
 Mark Nelson – Washington State University  
 Alexander Hristov – Pennsylvania State University  
 Vinicius Moreira – Louisiana State University  
 Normand St-Pierre – The Ohio State University  
 William Dozier – Auburn University  
 Mary Beth Hall – USDA/ARS  
 Bill Weiss – The Ohio State University

### MODELING COMMITTEE

Improve use of predictive technologies and tools to best utilize available platforms, and work with researchers to effectively share, combine, manage, manipulate, and analyze models and modeling information.

#### *Committee Members*

Mark Hanigan (Chair) – Virginia Tech University  
 Mike VandeHaar – Michigan State University  
 Luis Tedeschi – Texas A&M University  
 John McNamara – Washington State University  
 Kees de Lange – University of Guelph  
 Brian Kerr – USDA/ARS  
 Nathalie Trottier – Michigan State University  
 Roselina Angel – University of Maryland  
 Ermias Kebreab – University of California-Davis

## COLLABORATION WITH THE NATIONAL ACADEMIES – NATIONAL RESEARCH COUNCIL

- The National Animal Nutrition Program provides annual financial support to the NRC.
  - Scientific and technical support is provided to the NRC in two major areas:
    - Development of a system for management of feed and ingredient information, including a feed ingredient database.
    - Modeling support for establishment of nutrient requirements for beef cattle, dairy cattle, swine, and poultry.
- Collaborators*
- Robin Schoen – Director, Board on Agriculture and Natural Resources, NRC.
  - Austin Lewis – Consultant, NRC.

## ACCOMPLISHMENTS TO DATE OF THE COORDINATING COMMITTEE

- Advised the Administrative Advisors in appointing members to the Feed Composition and Modeling Committees.
- Developed charges for the two committees.
- Established a website that serves as a repository of animal nutrition research resources provided by NANP.
- Created a Participation Forum in the NANP website to promote dialogue about nutrient models and feed composition data.
- Prepared posters and exhibition booth at JAM.
- Planned symposium at PSA annual meeting on “Nutrient Requirement Evaluation and Publication for Poultry: U.S. and Global Perspectives.”
- Recommended individuals as members and co-chairs for the new NRC Committees on Dairy Cattle Nutrition and Beef Cattle Nutrition.
- Planning a networking system for scientists working in nutrition and related disciplines.
- Planning an inaugural national event focused on the role of animal nutrition in solving high-priority societal challenges.
- Hosting a summit focusing on the role of animal nutrition in sustainable global food production.
- Exploring new areas of collaboration.

## ACCOMPLISHMENTS TO DATE OF THE FEED COMPOSITION COMMITTEE

- Developed database structure for feed composition repositories with input templates for beef, dairy, poultry, and swine.
- Collected, screened, and sorted nearly 1.5 million records of feed composition data. Some of these data have been used in the upcoming NRC Nutrient Requirement of Beef Cattle report.
- Added links to references used in the feed composition tables of the NRC Nutrient Requirement of Swine.
- Working actively with the Modeling Committee to support needs regarding ingredient composition data as model inputs.
- Collecting feed composition information.
- Working to improve efficiency and consistency in data collection and maintenance.
- Organizing approaches to identify research needs and published research critical to the sustainability of feed ingredient database.

## ACCOMPLISHMENTS TO DATE OF THE MODELING COMMITTEE

- NRC models for *Nutrient Requirements of Dairy Cattle* (2001) and *Beef Cattle* (2000) were updated to run on modern computers and are now available for download.
- A repository of annotated code examples and over 40 references on modelling techniques was compiled and made available for download.
- The data used to validate the 2001 Dairy NRC and the Lofgreen and Garrett beef data are now searchable and available for download.
- Literature summary datasets on beef cow nutrient digestibility and swine, poultry, beef, and dairy feed intake responses to heat stress have been compiled, organized, and uploaded to the NANP website.
- A dataset containing information from over 60 experiments conducted at the USDA Beltsville experiment station has been recovered and is being transferred to modern technology for preservation.
- SAS and R code for importing data downloaded from the NANP website has been added to the data and software resources.

## WEBSITE AND CONTACT INFORMATION

Website: <http://nanp-nrsp-9.org>

For more information, contact:

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