

NRSP-9: The National Animal Nutritional Program

The National Animal Nutrition Program (NANP) serves as a resource for the agriculture animal research community through the sharing, collecting, assembling, synthesizing, and disseminating of science-based information, educational tools, and enabling technologies related to nutrition. Resources include feed composition and animal performance databases, as well as tools for finding relevant publications and expertise related to animal nutrition. Current species supported include dairy, beef, swine and poultry, though the program plans to expand to other animals in the coming years. NANP works closely with the NRC's Board on Agriculture and Natural Resources to update their nutrient requirement reports for agricultural animals. NRSP-9 is in its second 5-year project period and its next midterm review will be in 2018.

Updates for 2016 through Spring 2017:

- The NRC Nutrient Requirements of Beef Cattle report and accompanying model were released in 2016. NANP provided critical assistance in updating feed ingredient composition data and nominating committee members who worked on the report, which was the first update since 2000.
- NANP advising on NRC's ongoing dairy nutrient requirement study (last updated in 2001) which is expected to be released in 2018.
- A multistate research impact statement was developed to cover NANP's first five years and released in July of 2016 (<https://www.multistateresearchimpacts.org/single-post/2016/06/10/National-Animal-Nutrition-Program>). Following a press release and promotion through Ag is America, the NANP website (<https://nanp-nrsp-9.org/>) saw a spike in traffic.
- The NANP website's underlying architecture is in the process of being updated to a new content management system that will enable faster updates.
- Currently working with Elsevier to improve the searchable publication database available through the Global Animal Nutrition Expert Network (<https://gann-nanp.org/>). The database is populated from Scopus, PubAg and other relevant publication databases.
- Google analytics for the last quarter of 2016 showed an average of 100 visits per week and users from 55 countries.
- Published invited review: J. P. McNamara, M. D. Hanigan, and R. R. White. 2016. Experimental design, data reporting, and sharing in support of animal systems modeling research. *J. Dairy Sci.* 99 :9355–9371
- Two manuscripts accepted for publication (available online):
 - o R. R. White, Y. Roman-Garcia, J. L. Firkins, M. J. VandeHaar, L. E. Armentano, W. P. Weiss, T. McGill, R. Garnett, and M. D. Hanigan. 2017. Evaluation of the National Research Council (2001) dairy model and derivation of new prediction equations. 1. Digestibility of fiber, fat, protein, and nonfiber carbohydrate. *J. Dairy Sci.* doi: 10.3168/jds.2015-10800.
 - o R. R. White, Y. Roman-Garcia, J. L. Firkins, P. Kononoff, M. J. VandeHaar, H. Tran, T. McGill, R. Garnett, and M. D. Hanigan. 2017. Evaluation of the National Research Council

(2001) dairy model and derivation of new prediction equations. 2. Rumen degradable and undegradable protein. J. Dairy Sci. doi: 10.3168/jds.2015-10801.

Plans for the coming year:

- A Nutritional modeling workshop will be held on June 25th, 2017 in Pittsburgh at the 2017 American Dairy Science Association annual meeting. Targeting graduate students and non-modelers, the workshop will illustrate how mathematical models are constructed, evaluated, and applied toward problems in animal nutrition.
- A workshop is being planned on nutritional methods and procedures; plans include developing a video library of surgical research techniques.
- Finalize a new agreement to be used with community data contributors to outline terms of use, attribution, metadata requirements, etc.
- Apply to NIFA for a conference grant that would center around big data issues in animal nutrition.