

**MINUTES OF THE FEED AND NUTRITION NETWORK AND GLOBAL NETWORK PROJECT
MEETINGS**

JULY 20, 2014

KANSAS CITY CONVENTION CENTER

KANSAS CITY, MO

1. Linkages/contacts with other Networks (reported by Hristov, Penn State University, USA):
 - a. Initial contact with METHAGENE/ASGGN (Yvette de Haas) was established. Discussed common or overlapping needs of the databases being developed by the two networks.
 - b. Initial contact with the Grassland Research Network (Virginia Pravia) was established. No further developments at this point. Will connect again in the future.
 - c. Hristov has been in contact with David Pacheco (Ag Research, NZ).
2. GLOBAL NETWORK project update: Hristov presented the ADSA poster/abstract and updated the group on recent activities.
 - a. There was a suggestion to prepare a proposal to USDA/private sponsors to reanalyze some of the old data/samples to populate the GN database. It was commented that this might be very challenging.
 - b. Mark Hanigan (Virginia Tech, USA) shared experience with data collection in relation to The National Animal Nutrition Program project (NRSP-9). It was decided to investigate the potential for sharing data with NRSP-9.
3. On-going research activities by network members. Current research activities were presented by the following members:
 - a. Kevin Shingfield and Alireza Bayat, MTT, Finland
 - b. Maguy Eugene, INRA, France.
 - c. Karl-Heinz Südekum, Universität Bonn, Germany
 - d. Juzu Ku-Vera, University of Yucatan, Mexico
 - e. Chris Reynolds, University of Reading, UK
 - f. Angela Schwarm, ETHZ, Switzerland
 - g. Alex Hristov, Penn State, USA.
 - h. Hristov presented slides provided by Garry Waghorn (DairyNZ, NZ) and ZT Yu (Ohio State University, USA).
 - i. Hristov briefed the group on relevant research by Pekka Huhtanen (SLU, Sweden) who could not attend the meeting.
4. The question if FNN should be involved in adaptation to climate change research was discussed. The decision was that this is funded by JPI through another recent project and FNN should not be involved.
5. Update on in vivo and in vitro experimental SOP:
 - a. In vitro SOP – Chris Reynolds presented on behalf of David Yañez-Ruiz (CSIC, Spain).

- i. It was decided that the group will pursue a peer-reviewed publication in the format of a review paper.
 - ii. Some members have already provided comments on David's draft.
 - iii. At the end of each section of the review, there should be a summary of recommended procedure(s) and a more detailed SOP/recommended protocol will be published separately (perhaps on FNN's website).
 - b. In vivo SOP - Reynolds presented.
 - i. The idea of writing recommendations for chamber operation was rejected.
 - ii. The in vivo paper will review techniques and protocols for measuring enteric CH₄ production
 - iii. A depository for publications will be created on FNN's website.
 - iv. The publication should include a review of experimental design (i.e., crossover vs. continuous, etc.).
 - c. In addition to the review papers, both in vitro and in vivo documents will be published on FNN's website.
 - d. Yañez-Ruiz (in vitro) and Reynolds (in vivo) will lead these publications.
- 6. Enteric methane measurement techniques. The SF6 and GreenFeed techniques were discussed.
 - a. The newly-released SF6 manual was presented.
 - i. Hristov presented related slides provided by Garry Waghorn.
 - b. A video detailing the SF6 technique was shown by Hristov.
 - c. Advantages and shortcomings of the 2 techniques were shared and discussed by network members.
- 7. Discussion on industry participation in FNN (extent, privileges, support).
 - a. Nicola Walker (AB Vista, representing AFIA, American Feed Industry Association) and Tomo Takagi (Ajinomoto, Inc., Japan) shared their thoughts with the group.
 - b. The general consensus was that industry would like to be involved in FNN and there shouldn't be problems with sharing information, especially for control animals (i.e., animals for which treatment information is not needed).
 - c. It was suggested (Walker) that FNN should approach industry for funding to, for example, sponsor speakers or FNN members from developing countries. Industry would likely be interested in funding FNN activities based on value proposition and recognition.
- 8. Access to databases created by FNN. An extensive discussion on this subject took place during the FNN meeting and the following GLOBAL NETWORK meeting. The following text summarizes the outcome of both discussions:
 - a. The consensus was that two SEPARATE DATABASES will be created – one for FNN and one for GN. Alternatives are:
 - i. There will be only one database that will belong to the GN project. Equations and recommendations developed from that database will be used for FNN.
 - ii. The FNN database could be a subset of the GN database – investigators will check a box, if they want their data to be included in both databases.
 - b. The predominant opinion was that researchers would be willing to share published data for the purpose of creating the FNN/GN databases.

- i. Data generated prior to the FNN/GN projects should belong to their owners.
 - ii. New data generated during the FNN/GN projects should also belong to the investigator(s) who created them.
 - c. Data will only be used for the purposes of the FNN/GN projects. This will be clearly stated in a letter to the contributors.
 - d. The question is how should unpublished data be handled?
 - i. It was decided that it will be up to the owner of the data to decide if they want to share them with FNN/GN.
 - e. The prediction models created from the FNN/GN databases will be in the public domain.
 - f. Need to decide what happens with the database after the (GN) project expires. It was proposed to have a meeting after the expiration of the project and then decide on the fate of the database.
 - g. Eugene (INRA, France) updated the group on the Consortium Agreement. Hristov will follow up with Penn State and get back to the group.
 - h. Collaborators – will likely need to sign a shortened version of the consortium agreement.
 - i. This agreement will have assurance that data will only be used for the project and will guarantee confidentiality.
 - i. Authorship will be offered to all contributors – max of 2 authors from an institution contributing data, UNLESS there is a significant contribution.
 - j. It was discussed if there should be a threshold for contribution/authorship, i.e. 5 animals vs. 50 animals, etc.
 - i. It was decided to include text in the proposal letter to contributors that authorship will be offered to those who have a REASONABLE CONTRIBUTION to the dataset.
 - k. The content and conditions of the microbial database was discussed. Hristov will clarify this item with ZT Yu and report to the group.
 - l. Kebreab (UC Davis, USA) presented his vision on the list of variables that need to be collected for the GN database:
 - i. Kebreab will propose a format to the GN group for discussion.
 - ii. Milk fatty acid profiles will be included in the database.
 - 1. Shingfield agreed to review the milk fatty acid data (when generated).
 - m. The database will include as much data as possible, which will give the opportunity to create subsets of data.
 - n. It was discussed how to handle manure NH_3 and N_2O emissions in relation to the N database.
 - i. Reynolds will contact Tom Misselbrook (Rothamsted Research, UK) regarding sharing their $\text{NH}_3/\text{N}_2\text{O}$ emission data with the GN project.
 - ii. Hristov will contact Mark Powell (USDFRC, USA) regarding sharing their $\text{NH}_3/\text{N}_2\text{O}$ emission data with the GN project.
9. It was discussed if and how to approach government and industry for funding to hire a research assistant or a post-doc who will process and input data into the FNN/GN database(s).

- a. How to procure funding for members from developing countries to come to FNN meetings.
 - b. Approach other networks for their experience with funding.
10. Hristov will contact FAO for their potential involvement in FNN/GN.
11. Next FNN meeting, activities, and other issues to discuss.
- a. Several options for the 2015 meeting venue were discussed, but no decision was made.
 - b. The issue will be discussed by e-mail with all FNN members.
 - i. One suggestion was that the meeting could be coordinated with the METHAGENE group.

Meeting was adjourned.