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Ruminant husbandry is a major source of anthropogenic greenhouse gases (GHG). There is a large body of existing nutrition-related GHG and ammonia (NH_3) mitigation data that are not well organized. The main objective of the GLOBAL NETWORK consortium, a 4-yr project funded through The Joint Programming Initiative on Agriculture, Food Security and Climate Change (FACCE-JPI), is to accumulate and analyze ruminant GHG mitigation data. The specific goals of this collaborative project are to: (1) Create, update, and expand animal and feed databases for the mitigation of enteric methane (CH_4); (2) Gain understanding of the contribution of genetic and microbial factors to the variation in enteric CH_4 production, digestion, and nutrient utilization; (3) Validate markers of enteric methanogenesis for the development and monitoring of CH_4 mitigation strategies in ruminants; (4) Create, update, and expand a database of mitigation strategies aimed at improving dietary N utilization and lowering N excretion and decreasing NH_3 and nitrous oxide (N_2O) emissions from manure; (5) Develop Standard Operating Procedures (SOP) and guidelines for conducting and assessing data from in vitro and in vivo studies designed to evaluate nutritional strategies for mitigation of CH_4, NH_3, and N_2O emissions; (6) Develop new and evaluate existing models for predicting CH_4 emission and N excretions under various nutritional, animal, and farm management scenarios; and (7) Identify and recommend CH_4, NH_3, and N_2O mitigation technologies that are both practical and feasible for implementation in various ruminant livestock production systems. These activities will be integrated with those of the "Network and Database on Feed and Nutrition in Relation to Greenhouse Gas Emissions" (FNN; http://animalscience.psu.edu/fnn), which is an activity of the Livestock Research Group (LRG) of the Global Research Alliance (GRA) on Agricultural Greenhouse Gases. The newly created GLOBAL NETWORK consortium intends to fill important knowledge gaps and provide the much needed expert recommendations for future research priorities, methodologies, and science-based GHG mitigation solutions to governments and non-governmental organizations, advisory/extension networks, and the ruminant livestock

sector. Animal scientists with an interest in GHG mitigation research are encouraged to contact members of the consortium to identify areas and opportunities for future collaboration and contribution of data.

Key words: livestock, methane, nitrous oxide, mitigation, database.