CALS Integrated Nutrient Management for Dairy and Livestock Farms
2002 Program Work Team Progress Report

The Integrated Nutrient Management Program Work Team (INM PWT) aims to improve profitability of New York State dairy farms while protecting the environment. In 2002, we focused on assessing current knowledge, identifying research and educational needs, supporting the submission of proposals that address our research, extension and teaching priorities, facilitating new research, technology and knowledge development and transfer and aiding in the on-farm implementation of strategies for managing nutrients.

Bi-weekly meetings: Since the last annual report, the INM PWT has formally met on 22 occasions. Meetings were generally attended by 10 to 20 work team members with 2 to 5 of these typically being external stakeholders. During five of the meetings we explored links to other related PWTs: Integrated Field Crop, Soil and Pest Management; Managing Wastes; Watershed-Based Management of Water Resources; and Small Farms. PWT members and stakeholders visited two innovative and progressive New York dairy farms and hosted two international visitors, Dr. Hong Di from Lincoln University in New Zealand and Jeremy Wilson, dairy farmer in the UK. Our meetings resulted in greatly enhanced communication that has lead to several members of the INM PWT now actively collaborating across department boundaries.

Workshop: On December 19-20, 2001, the PWT organized a workshop “Developing and Applying Next Generation Tools for Farm and Watershed Nutrient Management to Protect Water Quality” to communicate program efforts related to agricultural nutrient management and to develop a cohesive program strategy for future collaborative efforts and funding opportunities. Approximately 40 people attended this workshop including individuals from 5 different departments at Cornell, from the USDA-Pasture Systems and Watershed Management Research Unit at Pennsylvania State University, private industry, extension, and state and federal agencies. The two-day workshop consisted of 7 formal presentations followed by question and answer periods, a breakout session, and a final group discussion. The 83 page proceeding of the conference was widely distributed.

CuNMPS: A subgroup of our PWT continued to develop, distribute, support and evaluate the Cornell University Nutrient Management Planning System (cuNMPS) that is designed for use by CCE educators, NRCS and S&WCD planners, and private consultants in developing Comprehensive Nutrient Management Plans in New York. The cuNMPS contains the Cornell Net Carbohydrate and Protein System (570 users) for developing herd nutrient management plans and Cornell Cropware (237 users) for developing crop, soil, and manure nutrient management plans to meet federal and state guidelines and regulations. During 2002, four 1 and 2-day Cropware training sessions were attended by 46 people. Both nutrient management planning tools were presented at a 3-day training session for 70 agriservice professionals.

Development of risk indicators: PWT members’ were involved in the development, implementation and evaluation of the New York State Phosphorus Index (PI) and Nitrogen Leaching Index (NLI). Both risk indicators were developed with extensive input from our stakeholders. The PI and the NLI were integrated into Cropware for delivery to planners as an easy to use integrated planning tool.

Joint extension programming: Examples include: 1) a 70 min session entitled “Forages for Dummies” and a 5 hr “Integrated Dairy Management” session at the 2002 Ag Inservice; and 2) a 2-day workshop for producers on Integrated Forage and Feeding Systems Management in Delaware County, NYC Watershed.

Joint teaching activities: The course “Livestock and the Environment”, was expanded to give students a more complete background into agronomic components of nutrient management planning and is now cross-listed in the Department of Crop and Soil Sciences (CSS) and Animal Science (ANSI).

Funding: PWT participation has fostered multidisciplinary projects, which successfully obtained funding from many sources including Funds for Rural America, USDA-NRCS, and the National Center for Waste Management. The latter project is in collaboration with the University of Wisconsin.