

# Integrated Cropping Systems and Nutrient Management on Dairy Farms

## Our goal

To develop integrated cropping, harvest, feeding, and manure management systems for small and large dairy farms that are profitable, sustainable, and environmentally sound. Our work is in three major areas...

- Cropping systems
- Pasture systems
- Integrated nutrient management

## Cropping systems

Objective: Improve crop production and utilization on dairy farms

### Projects

- Breeding of improved forage legumes
- Crop management
- N fixation and use of fertilizer and manure N by crops
- Sequestering of carbon in cropping systems



## Pasture systems

Objective: Improve pasture production and utilization by dairy farms

### Projects

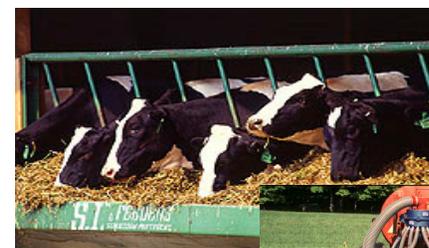
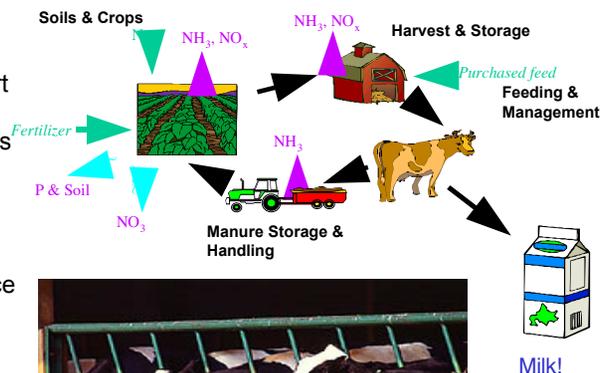
- Pasture renovation and management
- Protein and energy supplementation of grazing cattle
- Spring versus fall calving for seasonal milk production
- Nutrient loss from pasture systems

## Integrated nutrient management

Objective: Improve nutrient use, farm profitability, and environmental impact of dairy farming

### Projects

- Develop dairy diets that support high levels of milk production and produce manure P & N less susceptible to environmental loss
- Identify herd management and manure handling, storage, and application practices that reduce P & N losses
- Evaluate the effectiveness of conventional and alternative cropping systems for providing quality feed and for recycling manure nutrients
- Provide outreach and education that enhance integrated nutrient management at farm, regional and national scales



Michael Russelle, John Grabber, Mark Powell, and Larry Satter. A Plant Geneticist and Agroecologist will join the team in 2002.

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For further information, contact the Dairy Forage Center at 608-264-5240 or visit our website at [www.dfrc.ars.usda.gov](http://www.dfrc.ars.usda.gov)