

Precision Feed Management for Improved Profitability and Environmental Stewardship in Yates County

Overview

Precision Feed Management (PFM) = better herd health, increased milk yield, reduced input costs and less nitrogen and phosphorus release through manure and urine.

Yates County has a rapidly expanding agricultural community (20% increase in farms, 10% increase in acreage; USDA 2007) and vast water resources (Canandaigua, Keuka, and Seneca Lake) supplying drinking water for 200,000 people.

The majority of farms in Yates County are under 200 cows and do not fall under federal and state Concentrated Animal Feeding Operation (CAFO) regulations that try to reduce and monitor environmental impact. Runoff of manure containing nitrogen and phosphorus into surface water and leaching into the groundwater are documented concerns in the watershed.

How will this work?

Cornell Cooperative Extension will work with nutritionists to carry out the study over two years. Initial contact of dairy producers will be made via informational flyers sent in the mail or delivered by feed company reps and veterinarians. Two workshop meetings will inform interested producers about PFM. Participating farms will be involved with forage management field days, pasture management tours, and nutrient management workshops. Throughout the project, individual farm visits by members of the PFM Work Group will help with PFM plan implementation and data collection.

Emphasis will be placed on tracking feed nitrogen and phosphorus inputs, feed costs, milk production, overall cow health, forage quality, forage intake, feed analysis and manure management. A spreadsheet using seven easily obtained benchmarks will be used to quantify pre-evaluation, interim progress and final assessments of each farm's income over feed costs, efficiencies of nitrogen and phosphorus utilization and herd productivity.

Benchmark	Goal	My Farm
Forage NDF as % body weight	0.90%	
Forage as % of diet	60%	
Home grown feeds as % of diet	60%	
Ration P as % of NRC requirements	95-105%	
Diet crude protein, % DM	<16.5%	
Milk Urea Nitrogen, MUN	8-12	
Cows dead or culled less than 60 DIM	<5%	

We are looking to have twenty dairy farmers in Yates County adopt PFM practices impacting feeding practices on up to 1,200 mature dairy cattle, increasing milk income over all grain cost up to \$7,600 per farm, while reducing total nitrogen released to the environment by over 400,000 pounds and phosphorus by over 40,000 pounds annually.

Cornell Cooperative Extension will provide guidance, help with data collection and support for extra expense required for laboratory testing.