A cash cow for dairy farmers and the environment

By JoAnne Castagna, Ed.D.

Caramel vanilla swirl, mint chocolate chip and vanilla fudge ripple are popular ice cream flavors that are savored by countless people any given day — including New Yorkers, who while enjoying these delectable delights are also being stewards to the environment.

New Yorkers who buy these creamy treats are supporting milk suppliers that are participating in an innovative program in New York that's protecting the State's watersheds from pollution. The watersheds in upstate New York provide fresh water to millions of New York residents and businesses.

The Precision Feed Management Program, funded by the U.S. Army Corps of Engineers, New York District, is working with New York dairy farms to implement cow feeding methods that are keeping the state's watersheds free of pollution. The program is also improving the quality of the farm's milk and increasing their profits.

In Delaware County, N.Y., the program is led by the Cornell Cooperative Extension of Delaware County along with a multi-agency team that includes the Corps' New York District, Delaware County, the New York City Watershed Agricultural Council and the Delaware County Soil and Water Conservation District.

The program is showing dairy farmers ways they can reduce the amount of phosphorous and nitrogen in their cow's feed. Phosphorous and nitrogen can runoff into the water sources from cow excrement in the farm's soil. So far the program has reduced phosphorous and nitrogen levels in the watersheds on participating farms by more than 50 percent.

On all dairy farms, about two thirds to three quarters of the nutrients from animal feed end up in the farm soil, where over time they can be lost to the environment if not managed properly. For watershed supplying drinking water, increased phosphorous and nitrogen in the water supply increases the growth of algae in the water, requiring more chlorination. Chlorination can create substances that can cause cancer in humans. To reduce phosphorous and nitrogen in the cow feed, the program is encouraging dairy farms to create better feed mixes for their dairy cows.

The Precision Feed Management Program encourages farmers to grow more of their own feed.

A better feed mix can reduce the amount of phosphorous and nitrogen that makes its way into water supply.

Dairy farms usually create feed by mixing commercially purchased feed with their own home grown crop. Commercial feed is supplemented with high levels of vitamins and minerals, including phosphorous. The program is showing dairy farmers how to create more balanced blends that contain less phosphorous.

One way they are doing this is by encouraging the farmers to purchase less commercial feed, which can be expensive, and grow more of their own home grown crop to feed their cows. To grow their own feed, the program works with farms to adopt crop production methods that are beneficial to the farms in many ways, including no-till crop planting. This method eliminates the need to use gas guzzling machinery that requires expensive fuel. Doing less soil tillage also reduces soil erosion from the watershed. This is soil that may contain phosphorous and nitrogen.

This method also increases harvest production because it eliminates the need for several time consuming tilling operations that are usually performed. Increased production yields more nutrient dense crops for the cows, improving the quality of their milk. Improved milk quality is something Hager Farms is experiencing with the program. Hager Farms is a 1,200-acre dairy farm in Delaware County that's been on the program since 2004 and produces milk that's sold throughout the state.

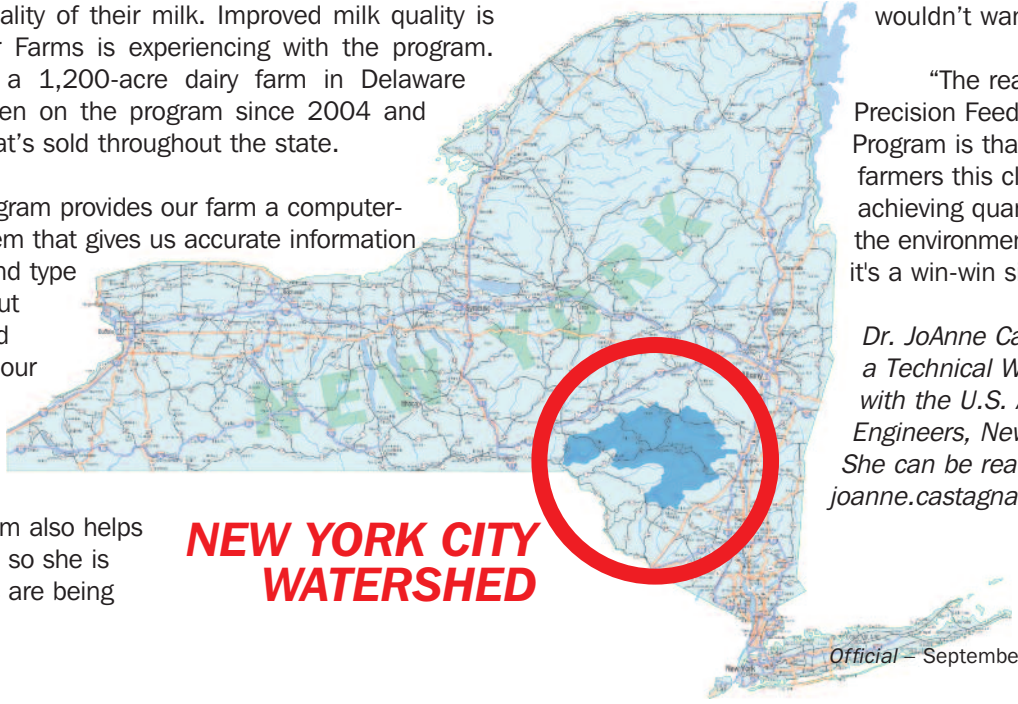
"The program provides our farm a computerized feeding system that gives us accurate information on the amount and type of feed that we put into our mixer and helps us monitor our feed inventories," said Ellen Hager, owner of Hager Farms. The feeding system also helps her adjust rations so she is assured her cows are being well nourished. "Cows are a biological event, so any change in any feed will affect them, positively or negatively," Hager said.

"We can also monitor a cow's health through monthly milk testing that the program has shown us how to perform. This also shows us how our cows are using our feed," said Hager.

Paul Cerosaletti, team leader, Delaware County, PFM Management Team, Cornell Cooperative Extension is pleased that dairy farms, like Hager Farms, are benefiting from the program.

"When we started the program in 2000 we knew it would be a major challenge. We were asking dairy farmers to change the way they feed their cows, which can directly affect their farm's profit engine, milk production" said Cerosaletti. "Feeding cows is a complex process because what they are fed determines the health of the cow and the quality of the milk they produce — it's a delicate area to be trying to change. We knew that if the farms experience one year of crop failure, while on our program that they wouldn't want to adopt it.

"The real strength of the Precision Feed Management Program is that by working with farmers this closely we're achieving quantified benefits for the environment and the farms — it's a win-win situation."



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