

Maine dairy and crop farmers make working together profitable

Dairies expand land base for manure, get more and better forages. Potato and crop farmers beef up soils with manure and crop rotations, get dependable markets growing forages for dairies. Other winners: Maine's environmental quality and ag economy.

by Lorraine Stuart Merrill

FIVE years ago Ronnie and Beth Simpson of Simpson Farm in Corinna, Maine, were growing most of the forages for their 180 milking cows, plus young stock. Knowing they needed to expand and modernize the dairy, they leased an additional farm for their heifers. But they were still short on land — and time to put up feed for a 450-cow herd.



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Roger Whitney, 39, was born and brought up in a potato-farming family in the same community. "The old-school train of thought doesn't work," says Whitney. Tiring of the potato business, his ears pricked up when he heard about Ronnie Simpson's plan to expand. Whitney approached him about growing feed. "I saw a market there."

An ongoing process . . .

Scientists from the University of Maine and USDA Agricultural Research Service in Orono had been working with dairy and potato farmers in central and northern Maine to test potential synergies between the two types of agriculture that have long, but separate, traditions farming cheek-by-jowl in the state. Expanding dairies were burdened with excess manure and stretching to produce quality forages. Potato farms suffered from depleted, continuously cropped soils and declining



MAINE FARMERS Roger Whitney (left) and Ronnie Simpson have found that an agreement to share land and nutrient resources has benefitted both businesses.

ing yields. The research showed that, contrary to potato industry legend, manure was beneficial for potato crops, boosting fertility and organic matter, and did not cause or increase scab disease.

Farmers participating in Maine's dairy/potato integration project have found their own best ways to collaborate, depending on the individuals involved and their resources. Some have completely integrated their cropping systems. At least one pair of dairy and potato/crop farms has jointly purchased new land. Farmers have found working together boosts everybody's profits.

The Simpsons have built new facilities at what was a 39-cow farm when Ronnie, now 46, took it over at age 23 from his father. Their 450 Holstein cows now average around 22,000 pounds on 3x milking.

The author is a partner in a 250-cow farm in New Hampshire.

The arrangement the Simpsons and Whitneys worked out has resolved the challenge of using the manure from the expanded herd in a productive and environmentally sound manner.

"I can concentrate on the herd," Simpson says, knowing Whitney is producing the feed. He especially enjoys the freedom from machinery headaches. "Roger and his employees are wicked good mechanically," he says enthusiastically in New England slang.

"I don't know many dairy farmers who can go to Fryeburg Fair all week and have their corn chopped," Simpson adds. He's grateful for family time away at Maine's biggest fair, during peak corn-chopping season. The only crop work Simpson does now is put up some small square bales of hay.

Roger Whitney was looking to diversify his crop base and get out of potatoes. Producing dairy forages has worked so well for him that he has added custom cropping for two other dairies. Potatoes are still in his crop rotation but are now grown by another local potato grower. Whitney owns 275 acres and farms a total 1,500 acres.

"Corn was easier," Whitney says of the learning curve in his transition to dairy forages. He had grown small grains and shell corn. "Haylage was the harder step for me," he recalls with a chuckle. "I had to figure out what 'dry matter' meant."

Trust is the key . . .

Whitney works with Simpson and his feed consultants as a team to meet the needs of the dairy. They also work closely with crop consultant Lauchlin Titus, a certified professional agronomist.

"He follows his nutrient management plan well and uses appropriate amounts of manure," Titus says of Whitney's management. "He does have to supplement some of his grass fertility with commercial fertilizer."

Titus had just sampled soils in some of Whitney's fields in early fall. "I have sampled these fields over the past 10 years and have noticed a drastic improvement as he moved from a potato/grain operation with limited manure inputs to a dairy crop producer with access to plenty of manure," he said of soil quality in Whitney's fields. "The soil is more friable, less 'lumpy.' Good microbial activity is apparent."

Titus works as crop consultant directly with Whitney as the crop producer but has written both Simpson's and Whitney's nutrient management plans collaboratively.

"The key to success is trust," Titus observes. "I think agreements range from contractual to verbal. But once the agreement is made, everybody has to trust the other entity to do their part." A pitfall to avoid is worrying whether the other guy is getting more out of the arrangement. Just one pair of Titus's many collaborating dairy and potato/crop clients got into that difficult situation.

Ronnie Simpson and Roger Whitney agree their success depends on mutual trust, good communication, and a foundational understanding that they must both make money. "He knows I've got to make a dollar, and I know he's got to make a dollar," Simpson says. "If I sink, he sinks."

The two farmers do their planning together over the winter. "We communicate all the time during chopping, and so forth," Simpson adds. They started gradually, with Whitney taking on

Thinking about a move to Maine?

The Northeast Risk Management Education Center is looking for dairy farmers interested in expanding their farms by moving or starting satellite operations in Aroostook County. A two-day tour planned for August 14-15, 2007, will include visiting dairy and potato farms that are integrated or are interested in integration. Dinner, lodging, and transportation to and from central Maine to Aroostook will be covered by the project. Dairy farmers are encouraged to bring their families to see what Aroostook County can offer both agriculturally and socially. If you are interested in learning more, please contact Aaron Hoshide at aaron.hoshide@umit.maine.edu or at (207) 659-4808.

part of the crop work before and during Simpson's construction phase.

Understanding helps, too . . .

Whitney says it's important that Simpson realizes weather is a major factor. "I can't produce a perfect crop every time," he cautions.

The two men joke that, if neighbors complain about the smell of manure on the fields, they can blame each other. Whitney uses a chisel injector to minimize odor.

Whitney says heavy rains in the fall of 2005 meant he spread a lot of "light N" manure on the 2006 crop. "It showed up in the PST (presidedress nitrogen test) this spring on fall-spread ground." But he felt that, "when a guy gets \$10 to \$12 a hundredweight for his milk," he had to cut Simpson some slack.

Benefits for all parties are numerous, Titus says. The potato farmer can focus on more acres of potatoes, without worrying a lot about planning and marketing the rotation crop. The potato farmer gains residual manure nutrients and enhanced soil quality and microbial activity from manure. In Aroostook County, combined net income gains for integrated potato and dairy farms start at \$42 per acre (\$245 per cow) in the short term and can be as high as \$130 an acre (\$755 per cow) in the long term.

"The dairy farmer gets access to more land to grow forage crops, more land to spread manure on, and the benefit of some residual K from the potato rotation," Titus adds.

Dairy farmers and collaborating crop growers benefit from better overall weed control. "Potato growers generally use different herbicide chemistry than corn growers, and potato growers don't tolerate much weed pressure in fields," Titus notes. But each party has to pay close attention to plant-back restrictions for their herbicide choices.

"I think it helps that more than one entity has a stake in soil quality on the fields," Titus asserts. "Rocks get picked, cover crops get planted, washouts get taken care of."

The Maine dairy/potato project is part of a long-term effort to reintegrate crop and animal agriculture systems. The sidebar includes more information on a tour that is planned for interested dairy producers. Wherever dairy and crop farmers exist in proximity, opportunities may be found for collaborative relationships. 🐄

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