

Changes to manure practices focus on environment and animal health

The way producers handle their animals' manure has changed over the past 16 years to keep up with environmental changes, what has been learned about nutrient use and continuous efficiency improvements.

"We're all working together. All stakeholders need science-based information to guide our producers in using manure's nutrients within the unique challenges and climate that we have in Manitoba," says John Carney, executive director of the Manitoba Livestock Manure Management Initiative (MLMMI).

Since its inception in 1998, MLMMI has been looking at management issues surrounding manure, such as nutrient availability and use, storage and odour management. Through research, now funded by *Growing Forward 2's* Growing Innovation program and the Manitoba Pork Council, MLMMI has been investigating solutions that are scientifically sound, environmentally sustainable and economically feasible.

Over the past 16 years, MLMMI has completed 77 research projects that range from evaluating the agronomic value of various forms of manure, precision farming techniques for manure application, and mineral use in animal and crop production systems. They currently have

six ongoing projects that surround Porcine Epidemic Diarrhea (PED) virus, manure transportation, and the agronomic value of nutrients in separated solid manure.

MLMMI aims to be the go-to source for all matters related to manure management, and to continue to find practical solutions for producers in Manitoba's changing economy and environment.

All stakeholders need science-based information to guide our producers in using manure's nutrients within the unique challenges and climate that we have in Manitoba.

Pathogens are naturally present in manure, so there is the possibility of transferring pathogens that adversely affect herd health. Where PED is present in manure, it has been shown that the path of transmission is primarily through consuming contaminated manure.

"Producers, veterinarians and manure applicators are keenly interested in the results of our PED research, since PED can

be devastating to a farm," says Carney. "Through research we are looking to learn more about the virus so we can prevent its spread if it is found."

Across the different livestock sectors, MLMMI's research addresses varying concerns relating to each livestock species.

Dairy farmers move from solid to liquid manure system

"With dairy cows the biggest changes we've seen as a result of research is moving from a straw-based manure system, where solid manure is collected in straw and spread over the farm, to a liquid-based system. We've also been monitoring what's happening in the soil and what's in the manure," says Henry Holtmann vice-chairman of the Dairy Farmers of Manitoba.

Research and practice have shown that using an injection of liquid manure to fertilize the land is more efficient than solid manure, because it can be injected into the soil to reduce odours and minimize nitrogen volatilization. This leaves nutrients in the soil for plant uptake. It also has a more consistent level of nutrients because they are condensed into a liquid.

Beef producers reduce manure storage over winter

For Manitoba Beef Producers (MBP) the biggest change has been in the area of manure storage. Cattle now graze

longer on pasture, which means there is less manure created in pens during the winter months.

"The longer grazing period keeps the land fertilized into the winter months, and having a small stockpile is obviously good for cleanliness. Many producers have also moved to a May and June pasture calving so there is less chance for contamination and disease when new calves are born," says Heinz Reimer, president of MBP.

According to Carney, the interest from producers who ask questions and take suggestions from MLMMI are what makes the research important.

"We are working hard to provide producers with information on various aspects of manure management and best management practices for the environment. Continued producer interest and investment in MLMMI research demonstrates the on-farm value of this information and is a vote of confidence in MLMMI. The support from government funding helps to carry that investment from producers even further as we look at new research and continue working on our current projects," Carney says.

For more information on current research projects visit manure.mb.ca. ■

Machinery used in preparation of spreading manure on crops



Photo by PAMI.

Manure gets new life as cow bedding

One Manitoba dairy farmer is giving up on straw and turning manure into bedding for his cows instead.

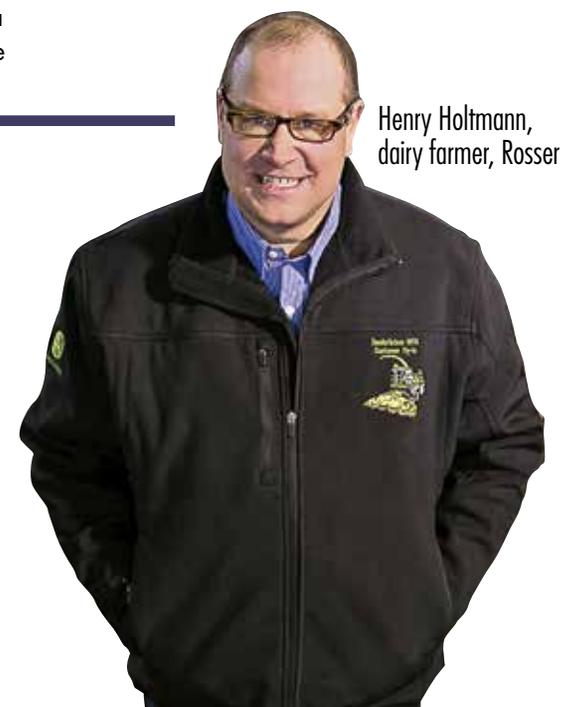
Rosser, Manitoba's Henry Holtmann is testing a new system that composts manure solids so they can be reused as bedding for his dairy cows.

To be converted into bedding, the solids must be removed from the liquid manure and allowed to heat in a Bedding Recovery Unit drum for 30 hours to neutralize the bacteria and weed seeds. The result is an odour-free, compost-like bedding that is relatively dry and easy to work with.

"We toured many farms in the northeastern United States and saw a number of them using this system," says Holtmann. "We were very interested in it as the straw that we previously used for bedding can be difficult to find in the quantities we need."

As an increasing number of farmers switch their crops to soybeans, dairy and beef farmers in Manitoba may need to search harder to find straw for bedding if they don't grow enough themselves. Holtmann plans to continue researching to ensure this system is safe and viable for his business.

Holtmann received funding from *Growing Forward 2's* Growing Innovation-On-Farm program to cover part of the cost of his research. ■



Henry Holtmann, dairy farmer, Rosser