

Farmers controlling feedlot runoff

BY JEAN CASPERS-SIMMET
simmet@agrinews.com

NEW VIENNA — Three farmers in the Headwaters North Fork Maquoketa River Watershed last week showed what they are doing to keep dairy and beef feedlot runoff out of waterways.

The manure tour was part of the Water Quality Initiatives for Small Beef and Dairy Feedlot Operations, which is spearheaded by Extension in cooperation with the DNR, EPA, Iowa State Dairy Association, Iowa Cattlemen's Association, Natural Resources Conservation Service and Iowa's ag department.

The tour included discussion of practices and management techniques to help small dairies and beef feedlots address potential water quality effects of runoff from outside open lot areas.

Paul Overman improved the manure storage on his farm, where he custom feeds cattle west of New Vienna. He bought the old dairy farm two years ago.

"As we made changes, we realized we had a problem with runoff running into the ditch," Overman said. "So we went over to the NRCS to see what we could do."

Overman installed a round concrete tank to contain manure.

"It works good," he said. "It was the way to go, and the cost-share helped out."

Overman said that the farm had a slurry store system built in the 1970s. It was worn out, and it didn't work for the feedlot manure that had to be pushed uphill to get it into the system.

Overman feeds 450 cattle in two pens and plans to add another yard to increase numbers to 600.

He moved a waterway farther out into the field when he built the manure tank.

The concrete tank is 14 feet deep, 120 feet across and holds a little more than one million gallons — a year's storage.

He'd like to put a roof over the entire feedlot to greatly reduce the water going into the pit.



Photos by Jean Caspers-Simmet / Agri News

Paul Overman, of New Vienna, showed his beef feedlot's new manure handling system, which includes a pit, as part of last week's Small Feedlot Field Day. The tour was hosted by Iowa State University Extension and Outreach, Delaware County Soil and Water Conservation District and the NRCS in Delaware County.

"But times have been a little tough, and since I've only been farming a few years, I'm saving my pennies to do that," Overman said.

He said, he'd like to put up a roofed facility with slatted floors and a pit underneath on his father's farm to eliminate all the open yards on that farm.

All Overman's yards run toward the pit. He cleans out the yards with a skid loader equipped with a tire scraper. He said it takes about three hours to clean the yards.

He decided against a stacking pad and settling basin because he didn't want to worry about rain.

"The tank will catch everything," Overman said. "All the nutrients are there and I can pump it back out on the field."

He will hire someone with a drag hose to apply the manure each fall.



Vernon, Wayne, Jen and Wade Brunsman also hosted the field day last week. They built the new hoop building on Wayne's farm near New Vienna to raise heifers that Wade uses in his nearby dairy operation.

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Angie Rieck-Hinz, of Iowa Manure Management Action Group, and Extension ag engineer Dan Huyser weigh manure as part of a manure calibration exercise at the Small Dairy and Beef Feedlot Field Day held last week at Wayne Brunsman's farm near New Vienna.

Tour focuses on improving manure management

simmet@agrinenews.com

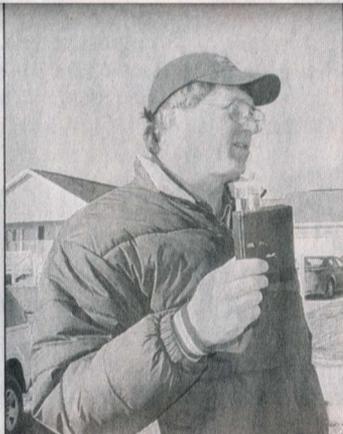
NEW VIENNA — To take full advantage of fertilizer in manure, correct application rates and uniform application are important, said Angie Rieck-Hinz, an agronomist who works with Extension's Water Quality Initiatives for Small Iowa Beef and Dairy Feedlot Operations.

Extension staff led participants through a manure spreader calibration exercise on Wayne Brunsman's farm to help fine-tune application rates of nutrients used for crop production.

Plastic sheets were placed at uniform intervals across the application swath. After manure was applied, collection sheets individually were weighed and weights recorded. Inspecting the range of individual weights collected showed the relative application amounts across the swath. The average application rate collected on all sheets was used to determine the average field application. The average application was used to approximate application across the entire field.

Manure has a value, Rieck-Hinz said. She estimated that the nutrients in the manure Brunsman was applying were worth \$23 per ton. That doesn't include the value of micronutrients or organic matter.

Extension has partnered with the Iowa DNR to place water quality testing kits for ammonia in 20 county Extension offices, said Rieck-Hinz. The kits are available for livestock producers to



Extension ag engineer Dan Huyser demonstrates a water quality testing kit for ammonia at last week's field day at the Wade and Wayne Brunsman and Paul Overman farms near New Vienna. Iowa State University Extension and Outreach is partnering with the Iowa Department of Natural Resources to place water quality testing kits for ammonia in 20 county Extension offices.

use to check water quality in streams below their feedlots and cow yards. The test kits come with an instructional video and a fact sheet on water quality testing and effects.

The results are confidential and livestock producers aren't required to share the information. This testing can help identify if runoff is reaching a stream and the potential impact on aquatic life. Extension ag engineer Dan Huyser demonstrated how to use the test kit.

Mills Manufacturing from Earlville demonstrated its vertical spreader. A representative from Digistar demonstrated its Nutrient

combines GPS and weight information for verification of manure applications.

The primary objectives of the Water Quality Initiatives for Small Iowa Beef and Dairy Feedlot operations are to educate producers to better understand the pollution potential of open feedlots; train them to accurately assess the water pollution potential of their feedlots; help them identify and evaluate appropriate runoff control alternatives; and provide technical assistance to implement solutions that improve the environmental performance of their feedlots, Rieck-Hinz said.

Brunsmann, who works for the Delaware County Soil and Water Conservation District in addition to farming, said cost-share funds are available through the Environmental Quality Incentives Program to correct feedlot runoff problems and protect water quality.

Watersheds in the Mississippi River Basin Healthy Watersheds Initiative offer increased financial assistance rates for key conservation and nutrient management practices.

Low-interest loans available through the State Revolving Loan Fund. Information on all these programs are available at county Soil and Water Conservation District Offices.

Farmers should check out Extension's Small Feedlots and Dairy Operations website for additional resources and information at agronext.iastate.edu/immag/smallfeedlotsdairy.html.

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The project required that he develop and follow a nutrient management plan. He will do nutrient sampling on the pit manure before applying it next fall.

The second stop was at Wade Bruneian's dairy farm. His father, Wayne, milked at the farm where his parents, Vernon and Norma lived, until 2005. Wayne and his wife, Denise, live on a farm just north of Wade's place. The elder Brunsmans recently sold the farms to Wade and Wayne.

Wade and his wife, Jennifer, milk 60 registered Ayrshires in a tie-stall barn.

They built broad-based terraces to divert clean runoff water from the open lots on Wade's farm. Grass is used to settle the remaining solids, but Wayne said they'd like to make more improvements to reduce the risk of feedlot runoff.

Wade and Wayne both use cover crops. They've drilled oats after harvest for several years. This year they planted rye into the corn stubble because it was too late for the oats to get established. They also aerial seeded some oats into standing crops.

"Cover crops are another way to control nutrients," said Wayne, who is a watershed coordinator for the Delaware Soil and Water Conservation soil health and control surface erosion."

The Brunsmans no-till plant. Wayne surface applies liquid manure late in the fall.

At the third stop, Wayne showed the hoop building he built to house heifers for Wade's dairy operation.

He had an old dairy barn, hog house and cattle shed that he used for heifers, dry cows and springing heifers, but the buildings were labor intensive, drafty and cold, and there were feedlot runoff issues.

With Mississippi River Basin Initiative offering cost share on buildings, he decided to knock down the dairy barn and hog house and put up a hoop building. The cattle shed is used for manure storage.

"It was quite a project, but it was fun, too," Wayne said.

Wade starts calves in calf huts. When they get big enough, they move to Wayne's hoop building.

Manure is scraped out of the hoop building onto a cement pad boxed in with cement blocks. From there it either goes into the spreader or to the cattle shed for storage.

The 65- by 140-foot hoop building has reduced labor, Wayne said. Cornstalks are used for bedding. Two lengths of curtains on both sides can be raised or lowered. The ends of the building were custom built in New Vienna and there are automatic overhead doors.

In addition to MRBI funding available in some watersheds, producers can look at the Environmental Quality Incentives Program or the State Revolving Loan Fund for assistance when making water quality improvements.