

Iowa CONSERVATION Showcase

DeGroot Adds Settling Area to Keep Sand Out of Lagoon

Sand mixing into his waste storage lagoon prompted Sioux County dairy farmer Daryl DeGroot to look for a way to settle out the sand, which comes from bedding he uses for his dairy cows. Sand was causing problems for farmers using the manure slurry for liquid fertilizer.

DeGroot, and his wife, Marla, own Donjan Swiss Inc. in Hull, Iowa, a 180-cow dairy operation named for Daryl's parents, Don and Jan.

To find a way to settle out the sand, DeGroot sought assistance from the USDA-Natural Resources Conservation Service (NRCS). Gary Reinders, a soil conservation technician with NRCS in Orange City, recommended DeGroot install a concrete solid settling area to keep as much sand out of the lagoon as possible.



Daryl DeGroot

Before the new settling area was installed, DeGroot pushed all material straight into the lagoon. "It got to the point where liquid manure handlers didn't want to deal with the sand anymore," he said.

To help fund the installation of the con-



DeGroot installed this concrete settling area to keep as much sand out of the lagoon below as possible.

crete solid settling area, DeGroot received an **Environmental Quality Incentives Program (EQIP)** contract in 2004 that provides up to 50 percent cost-share. EQIP is a voluntary conservation program administered by the USDA-NRCS that promotes agricultural production and environmental quality as compatible national goals. This program offers financial and technical assistance to install or implement structural and management practices on eligible agricultural land.

The concrete settling area was completed in 2006, and DeGroot said he is happy with the results. DeGroot is a 30-year veteran of the dairy cow industry. He and his father used to dump manure out to get rid of it, but now it's more valuable, prompting him to take more care of the storage lagoon. "I can grow 200 bushel corn on beans with just cow manure, if I work it right," he said. "We haul manure two or three miles to some of our crops now."

Comprehensive Nutrient Management Plan Helps Protect Resources

Since DeGroot signed an EQIP contract for a waste storage facility, he was required to develop and implement a Comprehensive Nutrient Management Plan (CNMP) to address the management and treatment of nutrients on his property and protect soil and water resources.

The concrete settling area will settle out solids, including unwanted sand, from the lagoon below.



The nutrient management portion of the CNMP helps DeGroot manage the amount, form, placement and timing of plant nutrient applications. Soil tests must be completed every three to four years to determine P and K levels, and yield goals are used to determine N levels. The timing of manure and commercial fertilizer applications minimizes the loss of fertilizer through leaching and runoff.

"CNMPs serve as a guide for the producer to best utilize nutrients for crop production," says Steve Brinkman, a nutrient management specialist for NRCS in Iowa.

Oats Incentive Program

In addition to his EQIP contract for a waste storage facility, DeGroot took advantage of EQIP cost-share funds to install 3,250 feet of terraces during the summer of 2006. He received a \$50 per acre oats incentive for planting oats, instead of corn or beans, so terraces could be constructed during the summer.

"We've been short on contractors here, so having the summer oats incentive program helped," said Greg Marek, Sioux County District Conservationist. "It spread out the work for them and we were able to get more conservation on the ground in the county because of it."

DeGroot row crops about 700 acres of mostly corn and soybeans, and he typically raises 10 to 15 acres of oats. He seeded 30 acres of oats in 2006. "I chopped the oats. It makes good feed for the heifers," he said. "When the oats incentive came along this summer, I thought I would try a few more acres."

In addition to terraces, DeGroot practices conservation crop rotation, conservation tillage, contour farming, and he installed a grassed waterway in 1997—all to reduce soil erosion, prevent flooding and improve water quality.

*Jason Johnson, Iowa NRCS
November 2006*

Helping People Help the Land

USDA is an equal opportunity provider and employer.