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Monoslope Building Eliminates Manure Runoff for Sonderman

Jason Johnson, Public Affairs Specialist, February 2011

Replacing an open feedlot with a more environmentally-friendly, deep-bedded total containment building is paying dividends for Shelby County cattleman Clint Sonderman. His new 20,000 square foot facility totally eliminates manure runoff, allows for better manure utilization, and is resulting in healthier, more productive cattle.

Three years ago Sonderman sought help from the USDA to reduce the amount of manure runoff from his 20-acre, 500-head cattle open feedlot during early spring snowmelt. “I was thinking (of installing) a settling basin,” he said, “something to keep the manure from running off the feedlot and into the ditch.”

But Soil Conservation Technician Luke Zaiger of USDA’s Natural Resources Conservation Service (NRCS) presented a few total containment options, such as a hoop or monoslope building. “Sediment basins don’t provide 100 percent trap efficiency (of liquid manure), like total containment facilities,” said Zaiger.

Sonderman, who farms near Earling, chose to install a monoslope building, which was finished in October 2008. He says he made the right decision. “It has completely eliminated my manure runoff issue,” said Sonderman. “Managed properly, nothing runs out of this building.”

The new building includes three pens, and allows about 40 square feet per animal. Sonderman uses cornstalk bales for bedding. He says he uses a little more than one round bale per head per year.

USDA-NRCS provided Sonderman financial assistance through the Environmental Quality Incentives Program (EQIP) to help pay for the building. EQIP is a voluntary conservation program that promotes agricultural production and environmental quality. This program offers financial and technical assistance to install or implement structural, vegetative and management practices to treat resource concerns on eligible agricultural land.

Just 35-years old, Clint Sonderman took over full operation of the family farm after his father passed away eight years ago.

Sonderman was also able to obtain financial assistance through the State Revolving Fund (SRF) Low-Interest Loan Program for the remaining cost of the monoslope building. The low-interest loan program makes loans available to Iowa farmers for a variety of conservation practices that help improve water quality.

Better Manure Utilization

Compared to his open feedlot, Sonderman says his new building is allowing him to better utilize manure on his 600 acres of cropland. “I know it’s all pure manure now,” he said. “Scraping feedlots you might get one-quarter dirt. I never really knew the manure con-

The old feedlot location was a sloped area prone to runoff. Now, Sonderman uses it for alfalfa hay.

tent." Clint and his brother, Corey, scrape the manure weekly into a holding facility.

His EQIP contract required a Comprehensive Nutrient Management Plan (CNMP) that provided helpful manure test results. Sonderman says these test results indicated he could cut back on commercial fertilizer. "I can tell the nutrient value of the manure better now," he said. "Where I spread manure I have cut my nitrogen application rates in half and yields are exceptional."

Sonderman recently purchased a side slinger manure spreader for more even manure distribution. As a proud no-tiller, he says, "I've been no-tilling right through that and it's been working well."

Healthier, Productive Livestock

The new deep-bedded facility is also helping Sonderman produce healthier, more productive cattle. He is thankful for the covered building following consecutive cold, snowy winters and rainy summers. "I've got less sick cattle just because they are out of the rough weather conditions," said Sonderman.

Although Iowa State University research indicates no significant improvement in feed efficiency or rate of gain in open feedlots versus a total containment facility, Sonderman says he has seen a rate of gain improvement in his cattle. "During the winter months we would hope livestock weight would remain steady," he said. "Now we are continuing to see steady rate of gain throughout the year."

More Local Interest

Zaiger says Sonderman's monoslope building is the first of its kind in Shelby County. Last July, Sonderman hosted a field day to show off the new building. "Since that day we have received a lot of interest from local producers," said Zaiger. "I know of several producers in Shelby County who would benefit from this type of structure."

For more information about better manure management on your farm, visit your local NRCS field office.

(top) Sonderman's new monoslope building includes three pens. He averages about 500-head of cattle in the building, similar to the number he had in his feedlot. (above) Sonderman's brother, Corey, takes manure from the holding facility to a side slinger manure spreader for fall application.