

Evergreen Farms Sees Cleaner Flush Water, Cleaner Barns With Use Of McLanahan Rotary Drums



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Abe Harpster
Evergreen Farms, Inc.

Evergreen Farms, Inc. is a family-owned dairy located in Spruce Creek, Pa. It was established in 1965 by Wayne Harpster, who started the farm with 18 cows. By 1991, Wayne had grown his herd to 1,600 cows and built a dairy to accommodate his expanding farm.

Today, Evergreen Farms is operated by Wayne’s three sons: Abe, Aaron and Andrew. They milk 3,200 cows, raise their own heifers and cultivate approximately 7,000 acres of land at their Central Pennsylvania farm to make feed for their cows. They also offer educational and employment opportunities for young people to develop their skills to become the next generation of dairy professionals.

Challenge

Evergreen Farms built their barns on a 2.5-3% slope to accommodate a flush system for cleaning manure from the alleys. They initially used mattresses covered in sawdust as bedding for their cows, but eventually decided to switch to composted solids.

“Over time, sawdust became very expensive and hard to find, and our mattresses were kind of wearing out, so we decided to try deep-bedded stalls,” said Abe Harpster.

In 2006, Evergreen Farms incorporated a screw press into their manure management routine to separate the fibrous solids from the dirty flush liquid to create bedding for their cows.

“We became successful at it and decided to convert all our barns over to composted solids,” Harpster said.

To help thicken the solids prior to the screw presses and increase the quality of the liquid portion for use as recycled flush water, Evergreen Farms began looking at Rotary Drums to help meet their manure management goals.



Solution

They considered two companies, but ultimately chose McLanahan based on their experience and the quality of their equipment.

“We decided on McLanahan for a couple reasons. They’re a company that’s well known in our region for the equipment that they make for the mining industry, and they’re involved in agriculture with some products,” explained Harpster. “They make a good product. It was a simple decision to go with McLanahan for the quality equipment that they produce.”

In 2014, McLanahan installed two 60” Rotary Drums to fit into Evergreen Farms’ manure management system. Water from their storage tanks is flushed through the barns to clean the manure from the alleys. Because of the slope of the barns, the flush water and manure gather into a reception pit at the end of the alleys. This liquid is then fed to the McLanahan Rotary Drums.

The Rotary Drums separate the liquid into two portions: a clean water portion that exits into Evergreen Farms’ lagoon system for reuse as flush water, and a thickened portion that is pumped to their screw presses to make bedding for the freestalls.

“The way the drums work is manure is pumped into one end, and there’s a rotating screen on the inside,” said Rob Plank, Global Product Manager - Agricultural Products at McLanahan. “Manure falls on the inside of that screen, and the liquid and fine particles come through the screen. The thickened fibers, the larger fibers, are captured on the inside. They tumble through and dewater somewhat, and then the thickened portion comes out the discharge end.”

Results

The Rotary Drums have proven to be an integral part of Evergreen Farms’ manure management system.

“The McLanahan Rotary Drums have been really good for us, for cleaning the solids out of the water,” said Harpster. “It improved upon our flush water quality that we recycle through the barns, so the barns stay nice and clean now.”

Besides separating the solids from the liquid to produce high-quality flush water, the McLanahan Rotary Drums also play a role in creating high-quality bedding for Evergreen Farms’ cows.

“They help us by dewatering the flush water and thickening up the product that we pump to our screw presses, making higher-quality composted solids,” Harpster explained.

Since installing the Rotary Drums, Evergreen Farms has been pleased

with their performance.

“We’ve had the McLanahan drums for five years now, and they’ve been working basically maintenance-free; we just do routine maintenance for them,” said he noted. “They’ve been a perfect piece of equipment for our operation.”

Throughout the years, Evergreen Farms has also benefited from a great working relationship with the McLanahan team.

“They have a great team of people. They stop in and check on me, make sure the equipment is still doing what it’s supposed to be doing,” said Harpster. “They’re really a good team to deal with in our industry.”

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