



Milking the Farm Business

Agricultural products continue to help precast manufacturers extend and diversify their offerings.

By Shari Held

Feed and water troughs are part of a wide variety of precast concrete agricultural product offerings.

The scope of agricultural projects available for precasters is larger than most may imagine. Today, the agricultural market encompasses everything from standalone feed bunks for family farm operations to highly complex environmental projects for regulatory agencies such as the Natural Resources Conservation Service.

No matter the niche, it's a growing market. Mike Deihl, owner of Deihl Vault & Precast in Orangeville, Pa., said the demand in the agriculture industry is being driven by the environmental aspect. "Everybody is more environmentally conscious right now," Deihl said. "We're in the Chesapeake Bay Watershed, and everyone is concerned about keeping the bay clean."

Greg Barrett, sales manager for SI Precast Concrete Products based in Overland Park, Kan., notes the uptick in demand for precast as the cost for steel and plastic rises.

"Precast is becoming more and more accepted as the value becomes better," he said. "We've doubled our sales in agricultural products in the last six or seven years since steel prices went up. It's a huge market, and we haven't even scratched the surface of it."

NOT YOUR TYPICAL CUSTOMER

Farmers tend to do business with people they know, so forging relationships is especially important. A good reputation is golden.

"You have to understand the industry, because it's way different," said Andy Wieser, president of Wieser Concrete Products based in Maiden Rock, Wis. "You have to be able to talk the talk to gain credibility."

Wieser Concrete has been selling to the agricultural industry for 48 years and it makes up a "big chunk" of the company's business, according to Wieser. He credits the

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company’s success to attending nearly 40 agricultural shows each year.

A good reputation isn’t the only key, though. According to Trenton Glace, operations manager for Maryland Concrete in Freeland, Md., agricultural customers want products in stock or with a quick turnaround as well.

“It’s not that they’re impatient, it’s just that they don’t go through the planning process that a contractor or an engineer would,” he said. “Their planning process is in their head. Everything we build for contractors is based off standard details or specifications. We never find that in the agricultural industry.”

Often, precasters can produce to their own designs. There’s more flexibility and give-and-take on projects – even when dealing with regulatory agencies. “It’s just a different type of professional atmosphere,” Deihl said. “Everybody is somewhat open-minded. It’s not like a DOT project where everything is black and white on paper and that’s the way it’s got to be done.”

Farmers’ livelihoods, and thus their level of spending on precast products, are also highly dependent on the whims of Mother Nature and commodity pricing. However, because this market doesn’t necessarily follow the national economy, agricultural products can potentially provide a nice buffer when the national economy slows down.

“This market is driven by how the farmers are doing, not by how the whole economy is doing,” Wieser said. “The price of milk and the price of grain has a big impact on how our agricultural sales go.”

The industry is more seasonal than most as well. “Fall through early spring is when we see a big demand for feed bunks and most of the agricultural products we sell,” Barrett said. “That’s typically when the ranchers sell cattle and have money in their pockets to spend on beefing up their infrastructure. It’s also when they’re not in the fields planting and harvesting.”

All of these variables make for a challenging industry to serve. “When I arrive at a job, there are always new variables” said Mark Pfenning, sales manager for Camp Precast Concrete Products in Milton, Vt. “It’s very hard to stay on budget with farm jobs. The biggest problem with the agricultural market is funding. If they have the money, projects will move forward. If funds aren’t available, it’s a dead market.”

THERE’S A PRECAST PRODUCT FOR THAT

The following examples showcase the variety of projects precasters work on in the industry.

Slatted-Floor Under-Barn Manure Storage System – Peine Farms, Cannon Falls, Minn. (Wieser Concrete Products)

Using a pre-engineered precast system for the walls meant no additional structural designing was necessary, allowing this 200-foot by 240-foot manure storage system to be built quickly and economically. Wieser installed its system in the fall, the farmer erected a barn over it during the winter, and the barn was ready to house 1,570 steers by the spring.

The project also had some unique aspects. The two drive-through feeding lanes had to withstand a



Photo courtesy of Wieser Concrete Products

70,000-pound load for feed trucks, and the feed bunk, which is included in the manure storage system, had to be able to hold the weight of the barn above it.

“We had to do a bit of extra engineering to withstand that extra weight,” Wieser said, noting that slatted-floor manure storage systems are beginning to incorporate dual drive-through feeding lanes as the norm.

Slatted-Floor Under-Barn Manure Storage System

Air Handler Tunnel – Ma & Pa Farms, Pylesville, Md. (Maryland Concrete)

Ma & Pa Farms, a grain broker, had a problem: The corrugated metal pipe used to channel air into its grain silos was degrading. When it came time to build a new silo, the owners came to Maryland Concrete to ask about a cast-in-



Photo courtesy of Maryland Concrete

Air Handler Tunnel



place solution. Glace recommended precast. “They were very excited, because precast wouldn’t rust, and it also gave them instant installation options,” Glace said.

Maryland Concrete manufactured 12 sections to create 40 feet of horizontal run with a 90 degree bend, followed by 20 feet of vertical stacked sections.

“We used standard molds,” Glace said. “It was very easy to do. And we kept the weight of each section under 5,000

pounds so the farmer could move them around easily.”

Glace hasn’t heard of similar projects, at least not in his area. “We’re pretty excited, hoping it catches on and we can do more projects like it,” he said.

Manure Transfer System – Gorrell Dairy, East Smithfield, Pa. (Deihl Vault & Precast)

Gorrell Dairy uses sand as a bedding material for its 700 head of cattle, but the sand was filling the manure storage facility, leaving no room for the manure. The solution was to create a sand separation area that would trap the sand while allowing the manure to be transported to a storage lagoon. “They can recoup the sand and reuse it, and that saves

the farmer overhead cost,” Deihl said.

The challenge was to not disrupt the dairy operation. Using precast meant minimal downtime as well as allowing workers to proceed at a steady pace.

Within two weeks, Deihl had produced eight precast “scrape-in” hoppers, each 24 inches wide and 12 feet or 13 feet in length with rubber gaskets for pipe connections on each end. The depth varied from 1 foot 10 inches to 3 feet 2

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inches to accommodate the slope needed to transfer the manure by gravity.

Deihl was pulled into this totally custom project – the kind he loves – by the NRCS technicians assigned to it. Getting in on the ground floor, he was able to suggest lining the precast hoppers with high-density polyethylene for easier manure transfer. Deihl's piece of the project also involved drop manhole structures, junction manholes and a pump station, and he's since received an order to build water troughs for the dairy.

Leachate Pump Station – Ballard Farm, Georgia, Vt. (Camp Precast Concrete Products)

Leachate, the liquid runoff from silage stacks, can be 200 times stronger than raw domestic sewage and has a pH of between 4 and 4.5. Nothing can live in it. In 2010, the NRCS ordered Ballard Farm to contain its leachate, so the owners contacted Camp Precast on a word-of-mouth recommendation from another customer. The goal was to collect leachate and, during peak storm events, dispose of the diluted leachate in a subsurface collection system.

Precast was perfect for the job, because it could be manufactured and installed faster and less expensively than other options.

Camp Precast designed a 6-foot by 12-foot, one-compartment leachate collection box with a metal screen that connects to a two-chamber, 7-foot by 16-foot, high-flow/low-flow utility structure via an 8-inch pipe. Both chambers had pumps. The low-flow chamber of highly concentrated leachate was pumped to the manure pit. The high-flow chamber that overshot the low-flow compartment was pumped to a subsurface drainage system.

The challenge with the project was that it was pumping slightly downhill. "We had to play with various force main sizes and end flow rates to put some restriction on the pumps so they wouldn't overload the pump motors," Pfenning said. It took Camp Precast four months to accomplish the task, and it was more involved than many of the company's other projects.

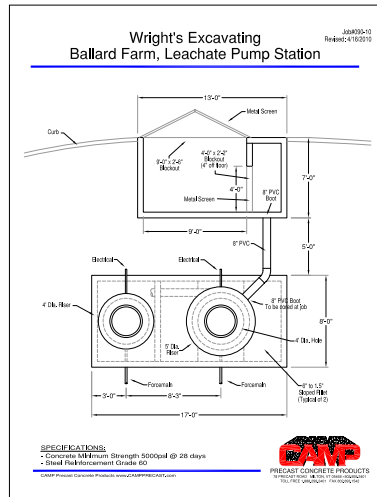
"The challenge for me is to make sure we meet or exceed everybody's requirements – the farmer, the site contractor and the regulatory agency."

– Mark Pfenning,
Camp Precast Concrete Products

with your existing skills and circumstances. Wieser suggests starting with feed bunks, because they're easy to make and relatively inexpensive.

For more sophisticated projects such as leachate pump stations, you may want to heed Pfenning's advice: "You need to be familiar with pumps, controls and electrical considerations, and have a very diversified product line," he said. "We use every tool in our toolbox to get these jobs done." ■

Shari Held is an Indianapolis-based freelance writer who has covered the construction industry for more than 10 years.



Camp Precast's Leachate Pump Station Building Specs

Graphic courtesy of Camp Precast Concrete Products

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