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Murmec Farms, Bellefonte, PA

Sand separation lane,  
Meadow Vista Farms,  
Bainbridge, PA

## How planning is at the core of each project — large or small

This is the seventh in a series of articles about PDMP's Premier Partners.

By SHERRY BUNTING  
Special for Farmshine

LITITZ, Pa.—The dairy industry in Pennsylvania—and throughout the Northeast—is at an unprecedented time of planning and change as dairy farm owners are nearing age 50, and there is a drive to bring young people into the industry. According to the 2007 Ag Census, the average age of Pennsylvania dairy farm owners is 47. Many are operating facilities that are nearing the same age, and they are entering a stage where decisions are being made about the future of their dairies.

Herd health, cow comfort, cow management, cow flow, and labor are some of the key ingredients at the center of business planning for dairymen like PDMP member Ralph Moyer. In 1967 he moved with his family from Schuylkill County to Myerstown, Berks County, where his parents started Mor-Dale Farms.

“We’re milking 100 cows in 40-year-old facilities (freestall and parlor), and we are looking to expand to 250-275 cows without adding labor,” says Moyer about the groundbreaking underway on his farm this month for a new freestall robotic dairy facility by Lititz-based Triple H Construction. Eventually, the old freestall barn will be replaced by a new dry cow, maternity and heifer barn.

“My wife and I are both 48. We are not ready to retire, nor are we in a situation to retire,” he explains. “Our kids are all grown, but not yet married, and we want to do something to see this dairy farm continue.”

Alicia, 26, is a social worker and Jessica, 24, a teacher. Their son Kyle, 22, is very mechanically inclined and currently serves as a black hawk helicopter crew chief for the National Guard in Iraq.

This project gives the Moyers options not only for any of their children to perhaps join the business in the future, but it also helps them continue the dairy with the same loyal labor force they have had in the past, and to do so in a way that makes the business more manageable for them—even if the children are not involved—in the future.

The project has been in the planning stages with Triple H for at least three years. For the past year and a half, Moyer has worked even more closely with Jeff Ainslie, vice president of the company’s agricultural division, as the planning has evolved from concept, design and drafting, through permitting, tweaking and groundwork... on its way to becoming reality by the end of this year.

“What we are looking for in the new barn is better stalls, with larger stall sizing, and as we looked at robotic facilities, we liked the idea of not moving groups of cows and not having to put them into a holding pen. At the farms we visited, the cows were so relaxed,” says Moyer, adding that, “We chose Triple H for this project because of their reputation for quality and doing things right the first time.”

While the builder does a wide range of small and large dairy, agricultural and equine projects in a five-state area, they specialize in dairy. As interest in robotic facilities has increased, Triple H has sent their people across the country and to Canada and the Netherlands to learn more about these systems. Mor-Dale will be their fourth new robot barn, and they have also worked with projects requiring a retrofit for robots in existing facilities.

“Triple H has a lot of experience and has



Dean Weidman (left) and Barry Flora show a site plan for a dairy in western Pennsylvania. In the background, trusses are being set on an 80' x 180' hay storage barn at Star Rock Farms Dairy in southeastern Pennsylvania.

Photos by Sherry Bunting

done several robot barns. We also like the fact that they do all of the design work in-house,” Moyer relates. “With their contacts, the key is they can pull the subcontractors together easily because they are dealing with people I’ve never dealt with before. That makes my job easier because I have a dairy business to run. I can put my confidence in them. Since this is all new for me, I can rely on them to recommend who to use for different parts of the project.”

In addition to robotic dairy facilities, the company is seeing interest in everything from freestall additions and full complexes to heifer facilities, storage barns and manure management technology. For dairies where on-farm milk processing is part of the business plan, the company has completed a few commercial processing facilities.

All kinds of new technologies are making their way to dairy farms aimed at improving cow comfort and health, particularly in ventilation and cooling as well as manure management and barn hygiene.

“There has been a lot of progress in cooling systems, with the move from sprinklers at the bunk to misters,” says Triple H business development specialist and project manager Dean Weidman. “Insulated ceilings are another example.”

“For dairymen who are in a position to do something, there are great opportunities right now with the price of materials and interest rates being lower,” he reports.

Project planning can span two to three years, and in many cases, the planning goes back even further as the future takes shape in phases.

Whether or not expansion is on the horizon for a particular farm, a project can start with a dairyman wanting to do a better job with calves and heifers, or to improve the cow care and management in the special needs area. But when planning a piece of a dairy farm project, Weidman stresses the importance of doing a site plan for the whole farm, to see down the road in a way that keeps opportunities open. Site planning avoids ‘boxing’ the farm in with a layout that limits their future choices.

“In a lot of cases, farms are identifying their weakest link in herd management and addressing that need with a new facility, addition, renovation, or improvement,” Weidman notes. “We’re also working with people looking at different types of manure management, includ-

ing methane digesters and manure separation technologies as a lot of farmers are fighting the battle to buy shavings for bedding. Dry composted manure solids are an economical alternative, and these systems can benefit the farm’s nutrient management plan.”

When it comes to manure management, Triple H has made it a priority to be on the cusp of new trends and improved technologies. Gravity-flow sand separation lanes, for example, have progressed over the past eight to 10 years.

The technologies in dairy facilities and management are not the only things that have progressed over time. How Triple H bids their projects has also evolved. Today, Guaranteed Maximum Price (GMP) is increasingly seen as the way to go on larger projects.

“Lenders like this approach,” observes Barry Flora, a project manager with the company for 19 years. He’s involved from the very beginning in estimating the project, and then as project manager, he sees it through by purchasing materials, coordinating subcontractors, setting timelines and schedules, and working with the farm owner to bring the project to fruition.

“Ten years ago, lenders’ constraints were not the same as they are now,” Weidman and Flora relate. “We are in a very different time now. We are doing more of the all-inclusive turnkey projects, where customers know the total cost of a project, and we assume the risk. The end result is a project that goes a lot smoother and faster and keeps its timelines. Coordination and management are critical.”

Whether a project is a new dairy complex with everything happening at once, or a phased expansion and modernization over a period of years, the plans are customized to the needs of the dairy. Weidman experienced this before coming to Triple H four years ago, as he was formerly the facilities and project manager for a large dairy farm, where the phased growth and project planning spanned 10 years.

“For some dairies, the emphasis might be on the milking center because they are maxed out. They may want to start there, and then bring the housing along. For others, the situation can be the reverse,” Weidman observes. “We design and lay out a lot of phased projects, but the details of the site plan are unique to each farm’s situation.”

Here’s where it pays to be a good listener

and to spend time with the farm family visiting other facilities. The goal of long-range site planning is, that when it comes time for the farm to do the next piece, they already know where it’s going to go.

“That process starts early with site design, and from there, we look at what is driving the thinking about a project: Does the farm have an immediate need they are trying to fulfill? What are their goals looking forward? Are there other family members that may be coming into the business?” Weidman explains.

For example, he’s working with a family in western Pennsylvania, where they have a lot of heifers coming on, but they are not yet over-capacity in their parlor.

“In that case, we’re looking to work on the freestall barn this summer, but we have already done all of the site planning for the farm,” Weidman explains. “It’s a picture of planned growth with different steps along the way, so the family knows where the lagoon will go, where the next barn and parlor would go, what the cow flow will look like. With this plan, they can solve their immediate need and at the same time see visually the cow flow in the future.”

Cow flow is two-fold—from the flow of animals through different stages of growth and lactation to the actual flow of animals within a facility. In the barn, cow-flow is essential because the easier it is for the cows to move around, the less likely they are to get injured. And the easier it is to sort and handle the cattle, the more likely it is that herd health will be well managed.

“From cow flow and handling to stall size, flooring and footing, these are just some of the facility planning details that contribute to cow comfort and herd health,” Weidman points out. But the overall planning involves much more—from ideas and feasibility studies to business planning, site planning, and project planning and estimation.

Ten to 15 years ago, full-scale site plans were primarily done by a few companies specializing in engineering consulting on a national and international basis. Fast forward to the present, and Triple H has added this resource in-house. With architects on-staff, they are also able to incorporate new technologies into existing facilities.

An example occurred at Murmac Farms, Bellefonte, where the Craig family added a second freestall barn, extended special needs area and new milking center in 2007 to expand their herd and consolidate their animals at one location. The flush system for the new barn was incorporated in a way that allowed the existing freestall barn to tie in for sand separation, even though the existing barn is still tractor-scraped instead of flushed. This enabled the farm to go to sand bedding throughout the entire complex.

“The elevations were a challenge, but we were able to bring the sand separation technology to both the new and existing facilities,” Weidman reports. JoBo Holsteins, Gettysburg, is another example. Their project required some creativity in devising a special channel to deliver the sand separation capabilities of the new barn to the existing tractor-scraped facilities on the farm.

For Weidman and Flora, along with the rest of the team at Triple H, the best part of all the planning that goes into a project is to see something start out as an idea and then see it working on the farm. Says Flora: “Having a satisfied customer is what makes the work so enjoyable.”