



Magic Valley dairy seeing good results with manure treatment

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JEROME, Idaho — Between tightening regulations and community acceptance, manure management on dairies is becoming increasingly more challenging.

That is a fact that inspires Bill Campion, who says his company — Pro-Act Biotech Systems — has the answers dairymen are looking for.

“Manure is slow to digest, smelly. We can change that by adding different microbes and growth factors,” he said.

Founder and president of the Warren, R.I.-based company, Campion was in the Magic Valley recently to demonstrate how his product — Pro-Act Microbial — is working on Bettencourt #3 dairy outside Jerome.

“A year ago, they were plagued with slippery floors and odor problems,” he said, adding that the dairy began using the Pro-Act product one year ago. “Now the odor is way down, the flush system works better, the feed lanes are no longer slick, and there are more solids being collected from the separators.”



Bill Campion, right, and Pro-Act area sales representative Rob Sterk of Ag Pro Idaho wind up a tour of Bettencourt #3 dairy where Pro-Act Microbial is being used to treat waste lagoons. Photo by CAROL RYAN DUMAS/Ag Weekly

Arcadio Avilia, herdsman for the dairy, lives with his family on site, and he agrees.

“There’s smell now but not like it was,” he said, adding that’s a big benefit considering the dairy’s neighbors.

In addition, it’s improved operations and milk production, he said. The feed lanes, which are cleaned with a flush system that recycles the lagoon water are no longer slick, which allows the cows safer access to feed and cuts way down on cow injury.

“The cows were afraid to walk inside to feed,” Avilia said. “And we had a lot of cows with broken legs.” A lost cow costs the dairy about \$2,800 in today’s market, not to mention the lost production, he added.

And because the alleys are cleaner, there’s less bacteria, which results in a better somatic cell count, he said. The microbe-rich flush water also keeps the system’s pipes cleaned out.

The manure water going to the separator is less slimy and sticky — which used to plug up the separator screens — and has resulted in almost twice as many dry solids pulled from the treated water.

The microbial mix comes in powdered form in water-soluble plastic packets, Campion said. Treatment needs to be at least once a month and sometimes every couple of weeks. The microbes, accompanied by growth accelerators, grow and "dine on" carbons in the solids and nitrogen in the urea.

"The solids are fecal material, excess feed, some bedding and hay, the sand settles out in the long pits beside the first lagoon," he said. "Urea is the primary nitrogen source, and it's the major contributor to odor."

The treatment takes into account the three "layers" of microbes in a manure pond — anaerobic microbes at the bottom, facultative microbes (which can be anaerobic and aerobic) in the middle and aerobic microbes at the top. The microbes at the bottom layer break down and liquefy the waste and send light solids and gasses upward — leaving behind phosphorous, which accumulates at the bottom.

At the next level, microbes convert nutrients and light solids into a desirable fertilizer.

"The microbes are digesting the waste and stabilizing nitrogen, turning nitrogen from organic to inorganic — plants like inorganic — making better fertilizer," Campion said.

The final component in Pro-Act's system is to add air to the top layer to supply oxygen to stimulate the growth of aerobic microbes to create an odor cap on the gasses that have gotten through the facultative layer. This also facilitates nutrients to be sent back down to microbes in the layers below to further digestion.

Campion said this product is the only one on the market that targets all three layers in a waste lagoon.

"We have this down scientifically," he said. "As the regulations start to tighten up, there are all sorts of people coming out of the woodwork with solutions to the problem."

"We think we've got as practical an answer to the problem as there can be," he added.

For a virtual tour explaining how Pro-Act's system works, go to www.ProActMicrobial.com (dairy section) or request a free DVD by calling (800) 772-3775. Or call local sales representative Rob Sterk at (208) 539-3242

What it does

- Liquefies solids
- Decreases odor
- Stratifies phosphorous for easy removal
- Improves flush water
- Facilitates methane collection



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