

“Owner’s Report” On Best, Worst Odor Control Products

How do you take the smell out of manure?

That’s the question livestock producers all over the world are asking. And hundreds of companies are on the market with products that they say will control odor.

To find out which products work, we contacted a wide sampling of North American pork producers who’ve all tried one or more odor controllers. Farmers we polled included the board of directors of the National Pork Producers Council, plus a few producers whose names were supplied to us by manufacturers.

One conclusion: the majority seem to favor the convenience of feed additives to pit additives.

Here’s show the survey shaped up.

Garth Boyd, Rose Hill, N.C.: “We’ve tried just about everything in the last five years, with mostly disappointing results,” says Garth, a veterinarian for Murphy Family Farms, one of the “Big Four” in U.S. pork production. “However, we’re extremely encouraged with the preliminary results we’ve had with **Micropan Normal** (Eurovix USA, 1326 Jerusalem Ave., North Merrick, N.Y. 11566; ph 516 485-2848).

“It’s a dry, granular enzyme/bacteria product from Italy that’s been sold in Europe for several years. We’re the first operation in the U.S. to test it, which we began in June in three 1,224-head finishing houses. Micropan is scattered by hand in the pen with the animals. It then mixes with manure and migrates into lagoons or pits to control odor. It’s used once a week during a three-week impact phase, then every two weeks during an ongoing maintenance phase. It’s used at the rate of 1 kilogram (2.2 lbs.) per 10,000 lbs. live weight and comes in 5 and 10 kg plastic containers. It sells for \$35 per kg.

“We have no per head cost estimates or hard scientific data yet. But, in our opinion, it’s greatly reduced odor in both finishing houses and lagoons.”

Tom Cale, Hartford City, Ind.: Tom uses **Micro-Aid**, a yucca-based feed additive designed to accelerate the breakdown of solid waste and control odor by reducing volatile fatty acids, ammonia and hydrogen sulfide, in manure (Distributors Processing Inc., 17656 Ave. 168, Porterville, Calif. 93257; ph 209 781-0297). The product has been tested by over 133 universities worldwide and has been shown to be effective at controlling odors. Tom, who has a 165-sow farrow-to-finish operation gets it in premix from his veterinarian supplier. Using 1 lb. per ton in his grower-finishing ration costs about 50 cents per head through finishing.

“It’s somewhat effective in cutting down solids and odor in my three naturally ventilated grower-finishing houses with pits underneath,” he says. “There could probably be a more effective product but, until there is, I’ll continue to use it.”

Lynn Green, Morgan, Minn.: In the last 15 years, Lynn and her husband Richard have tried four or five different odor control products in their finishing operation.

This year, they’re trying **Shac** from Shac Environmental Products Inc. (Box 222, Dunmore, Alberta, Canada T0J 1A0; ph 403 528-4446; fax 529-9334). “It’s a coal derivative that’s supposed to reduce odor by 83 percent and increase nitrogen content in manure by 44 percent,” Lynn says. “Recommended rate is 20 liters per 100,000 gals. The company treated one of our two deep pits in March to break up a surface crusting problem. I didn’t notice a difference after a couple

months so they came back and retreated it in June. I still haven’t noticed a difference, even though it was supposed to have completely liquefied the crust by now.

“We haven’t paid anything for any of the products we’ve used. Whenever sales people call, I tell them to come out or send us whatever it is they’re offering. Then we’ll try it and be happy to pay if it works. So far, nothing has.”

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Clyde Shaffer, Jr., Fairview, Ind.: Clyde has been using the chemical additive **Pit Boss** for nine months in his main 550-sow farrow-to-finish operation. It contains chelated copper and is used once a cycle after pumping and pH is maintained at 6.5. Rate is 1 gal. to 60,000 gals. and price is \$52.50 per gal. Chem-A-Co., 5903 E. Pierce St., Monticello, Ind. 47960; ph 800 383-5566).

“We like what we’re seeing - a lot less odor than there was in the past, especially in oppressively hot, humid weather. It’s neighbor friendly and fairly pocketbook friendly, too,” Clyde says. “I’m hoping not only to reduce odor, but to stabilize nitrogen and, therefore, my fertilizer value as well.

“If this product is all it’s cracked up to be, we’ll use it at our 19 other production facilities, too.”

Cliff Derewianka, Waskatenau, Alberta: “I’ve used it for about three years,” says Cliff who uses the feed additive “**Eze-Zyme SWB**” or SWB in his 60-sow operation (Eastman Feeds, 715 Marion St., Winnipeg, Manitoba, Canada R2J 0K6; ph 204 233-1112. U.S.: 1801 N. Cliff, Sioux Falls, S. Dak. 57103; ph 800 658-3980). It’s a combination of a digestive enzyme and DE-Odorase, an ammonia-binding yucca extract (Alltech Inc., 3031 Catnip Hill Pike, Nicholasville, Ky. 40356; ph 606 885-9613, fax 6736). The feed additive is designed to improve feed efficiency and reduce odor and sludge build-up in pits. It’s mixed in at a rate of 2 lbs. per ton for a cost of about \$2.50 per pound (Canadian).

“A crust still forms on top of the manure before I empty it,” says Cliff. “But I feel there is less odor emitted from the pit at agitation than there was before. I think it reduces the danger of releasing poisonous gases and endangering animals in adjacent pens since I

don’t remove animals from the buildings when I agitate.”

Donald Herzog, Rapelje, Mont.: Donald uses the feed additive **MSE** (Maximum Stabilized Enzyme), a combination of enzymes, bacteria, yeast, and fungi, in his 250-sow farrow-to-finish operation (Reliefe Corp., 235 South Cumberland Ave., Russellville, Ark. 72801; ph 501 331-3603). It’s mixed 2 lbs. to the ton. Comes in 33-lb., 5-gal. pails and sells for about \$100 per pail.

“We started using it 12 years ago to improve feed efficiency,” he says. “I haven’t a shred of scientific evidence to prove it, but we believe it reduces odor, too.”

Dana Scott, Logansport, Ind.: Dana started using **Biorite**, a microbial additive containing whey, a couple years ago (Solidex Technologies Inc., 4758 West 950 South, Kewanna, Ind. 46939; ph 219 857-2041).

“I’ve been real satisfied. It stopped the foaming in our pits. It breaks up the solids, raises nitrogen content in the manure, and gets rid of the ammonia smell in the build-

ings,” says Dana, who has a 400-sow farrow-to-finish operation.

“We use it at the recommended rate of one foil packet (\$19.95) dissolved in a pail of water to 100,000 gals. per week. We start using that rate just after pumping and until we get the pit working right. Then we back off the weekly use recommendation to keep our cost down.”

Roland Hoeger, St. Olaf, Iowa: Roland has been using **Manu-Rx** at his 1,500-head finishing operation for about a year (Numan Industries Inc., 644 W. Winthrop Ave., P.O. Box 394, Addison, Ill. 60101; ph 630 628-7199, fax 7295). The bacteria/enzyme combination is mixed with water and added to his 50,000-gal. pit every time it’s emptied to neutralize odors and reduce solids. Found at least 70 percent effective in reducing swine odor in an Iowa State University test, it comes in 1 gal. containers that sell for \$185 and is used at the rate of 1 gal. to 50,000 gals.

“At first, I didn’t think it was doing much,” Roland says. “But the second time



Photo by William D. Flemming

Photo shows Roper unloading whey to control odor in his lagoon. He treats the lagoon once a week with whey he gets from area cheese plants.

He Uses Cheese Whey To Control Odor In Lagoons

“Until sound science proves them effective, I don’t plan to use any commercial odor control product,” says David Roper, a Kimberly, Idaho, pork producer who’s experimenting with what he believes is a promising odor controller. The best thing is, he gets it for the asking right in his own backyard.

“We’re using low solid content whey that we get from area cheese processing plants,” says Roper, who has a 140-sow farrow-to-finish operation and a 1.5 million gal. lagoon. “Introducing low pH level whey into the lagoon keeps the ammonia in the manure from volatilizing, which is what smells and irritates the eyes and nose. The decrease in pH level increases the solubility of ammonia. Plus, whey introduces beneficial microbial ‘bugs’, which help break down solids faster.”

But Roper admits the system has a few problems.

“For example, if you add too much whey, you could end up with an odor other than the ammonia odor you’re trying to control,” he notes.

A soil scientist with USDA’s Agricultural Research Service at Kimberly agrees.

“They help control ammonia volatilization,” says Chuck Robbins. “But you’re

still left with other volatile components which are also odor producing.”

Nevertheless, Roper is certain he’s on to something.

“It changes the odor significantly for the better,” he insists.

For a lagoon his size, Roper says the solution is to add 3,000 to 6,000 gals. of wash water whey a week, which is composed of less than 6 percent solids.

He and his brother-in-law Reed Gibby haul it in 5,000 to 6,000 gal. tanker truck loads from four area cheese processing plants. They also feed high solid content whey to their hogs and sell whey to other pork and dairy producers for feed and lagoon treatment as well.

High solid whey concentrate (up to 60 percent) for feed sells for up to \$40 per ton delivered. Whey containing less than 6 percent solids for lagoon treatment sells for the price of delivery.

Where whey isn’t readily available, any low pH, high acid by-product of industry could be used in its place, Roper says.

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