

Welcome to ...

Naturally Speaking!

BUSINESS Management

PRESORTED
STANDARD
U.S. POSTAGE PAID
FORT DODGE IA
PERMIT 486

Maximizing the Value of Manure as a Means to Improve Profitability of Beef Feedlots

As beef feedlots look for ways to increase profitability, one that should be considered is the value of manure for land-application and nutrient utilization by growing crops, especially as the price of commercial fertilizers continues to escalate. **The economic value of manure makes it a good source of revenue!**

The challenge during manure storage and application is that nitrogen compounds are volatile and when lost, the potential fertilizing value is diminished. Nitrogen loss can be 25% or greater in many situations.

The recent research at the University of Nebraska that is discussed in the Technical Talk section of this newsletter demonstrated that feeding Micro-Aid® helps capture and conserve a significant portion of this lost manure value through its positive impact on reduced ammonia volatilization and nitrogen loss. Micro-Aid® pans had similar N losses at day 30 and d 60 (P = 0.84), as well as, had lost approximately 30% less (33.7 vs. 48.1%; P < 0.05) N than Control pans at day 60. **This positive increase in manure nitrogen represents a significant increase in potential fertilizing value of manure when applied to cropland and is attributed to a reduction in volatilization of nitrogen into ammonia.** This 30% reduction in nitrogen loss is consistent with numerous other Micro-Aid® datasets. In summarizing 21 other experiments, Micro-Aid® reduced ammonia emissions, on average, by 44.7%.

Using industry average numbers for the cost of commercial fertilizers, the fertilizing value of feedlot manure can range from \$20 to \$40 per head marketed. However, when the measured benefits of Micro-Aid® are accounted for, there is an **increase in fertilizing value in excess of \$2.75 per head**, which is in addition to the economic value gained from the performance and environmental benefits of feeding Micro-Aid®.

Micro-Aid® in all feed all the time is an excellent tool to maximize the value of manure for its fertilizing purposes and improve profitability of beef feedlots.

**MICRO-AID® in all feed,
all the time.**

DPI GLOBAL
17656 Ave. 168
Porterville, CA 93257



Return Service Requested

More than 200 university and commercial studies validate performance and odor control success!
MICRO-AID®
Be pro-active on environmental issues with your livestock operation.



This newsletter, prepared for DPI GLOBAL, is not designed to render legal advice or legal opinion, and should not replace the counsel of a qualified professional. Environmental regulations vary widely from state to state. Legal advice can only be given by a licensed, practicing attorney, and only when related to actual facts of a situation. Copyright© 2005 by DPI GLOBAL Volume 9, Issue 2, May, 2013

With over 45 years of market success and hundreds of positive research experiments, Micro-Aid® is a technology you can bank on! As we continually work with our customers to demonstrate the value of Micro-Aid® to their operation, the benefits of Micro-Aid® can be summarized in **three key points:**

1. **Maximum Animal Performance Efficiency**
2. **Capturing and Containing Manure Fertilizer Value**
3. **Improving your Production Facility Environment as well as your Neighbor's**

Expect to see these three key points highlighted in the marketing advertisement below as it is published in various industry publications. As well, we're using our 2013 newsletter issues to focus on each of the three points. "Maximum Animal Performance Efficiency" was covered in the previous issue (Volume 9, Issue 1), while the topics of the other articles in this current issue of Naturally Speaking will focus on "Capturing and Containing Fertilizer Value".

MICRO-AID®
Value You Can Bank On!

Over 45 Years of Market Experience and Hundreds of Research Trials

MICRO-AID®
in all feed, all the time

Feed MICRO-AID® for...

- **Maximum Animal Performance Efficiency**
Aids in achieving maximum production and most importantly feed efficiency
- **Capturing and Containing Manure Fertilizer Value**
Retains nitrogen normally lost during storage in a more stable form
- **Improving your Production Facility Environment as well as your Neighbors'**
Reduced odor and noxious gases for the health of your animals and workers along with healthier neighbor relations



INDUSTRY

Hot Topic

News from the U.S. Pork Center of Excellence

During the last several years, DPI GLOBAL has made extensive efforts to better understand and demonstrate the value of manure for land-application and nutrient utilization by growing crops, especially as the price of commercial fertilizers continues to escalate. Ultimately, **the economic value of manure makes it a good source of revenue!**

These efforts were further brought to light by a recent article written by Dr. David Meisinger, Executive Director of the U.S. Pork Center of Excellence and titled **“Manure can be the difference between profit and loss”**. Following is the article, which includes some thoughts from DPI’s own, Dr. Randy Walker...

With the changes in the cost structure of the pork production industry, there is a changing dynamic with regard to who is in the best position to survive. For many years, there has been a real incentive to specialize and grow the business. Small producers became mid-sized, while those mid-sized producers followed the signs to become large volume producers. A few even became pork powerhouses. Most in this latter category became specialized in some activities. While most of the mega producers chose to control their own feed manufacturing, few remained in crop farming. With the rise in feed costs, and with the value of swine manure, this may not be the wisest choice anymore.

When corn prices rise, there is a lateral increase in seed, fertilizer and other inputs for crop farming, including energy costs. With the price of corn tied to the cost of a barrel of oil, when energy costs go up, so do corn prices, fertilizer prices, etc. Therefore, when corn prices increase and fertilizer prices increase, the value of swine manure as a replacement sparing commercial fertilizer continues to increase.

Randy Walker with DPI GLOBAL has shared their software tool, the **Micro-Aid® Value Proposition Model**, which takes into account hogs, corn and manure. It shows that for these hog operations that raise at least some of their own corn, there is never a time when they are not profitable. If hogs are not profitable, then manure carries the day. I am sure that is why, even in these tough times of profitability for the hog enterprise with high feed costs, many pork producers are able to not only survive but thrive.

During the Ohio Pork Congress this year, there were several excellent educational presentations about applying hog manure...new technologies, value, systems, and producer testimonials. One of the speakers had a lot of data which demonstrated that for all these trials using hog manure compared on an equal basis with commercial fertilizer, the hog manure trials exceeded the commercial fertilizer in corn yields. This was true even in extremely dry conditions like the last growing season. Or maybe I should say especially in seasons like last season. I am convinced that one of the reasons for the incremental improvement is due to micronutrients that are not considered in commercial fertilizer. The reason for the advantage in dry years could well be due to the organic matter in manure, which holds moisture.

For those pork producers who understand that the manure produced has value but who do not necessarily have a use for it on crop ground, they find a neighbor to work out an agreement for application of the product. The neighbor of course must be close and must also see a value in using the manure which usually means that the hog farmer is getting rid of the manure at something less than full value. In fact the Hord Swine Management Group in Ohio who gave one of the talks says that they work out arrangements so that they can at least cover the cost of application. Therefore, they are not really getting nearly all the value to help offset their hog production costs.

It has been interesting to watch how different farmers have captured value in their operations whether it is from some niche marketing, selling by-products or roaster pigs, or from extracting the most value from manure. I have heard of several producers who have said that pork is a by-product of their production as they are only in the business for the manure for their crop ground.

Randy talks of input and output integration. He explains that input integration is just as important but does not usually get as much attention as output integration. The latter would involve contracts for the pigs with a packing company and for the manure if the producer does not have the capacity to utilize all or any of it. He states that one of the reasons that input integration will become more important is that corn is being selected more for specific traits. A good example would be corn that is raised for ethanol production would not necessarily be that good for pig nutrition. By having control over their own corn production, producers can utilize and have control over varieties of corn that best suit their needs.

At this point in the hog cycle, it is apparent that those pork producers who can control their inputs and get full value for their outputs will be the ones who will survive.



TECHNICAL

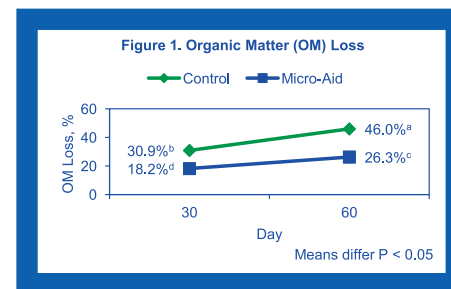
Talk

Micro-Aid® Minimizes Organic Matter and Nitrogen Loss of Feedlot Manure

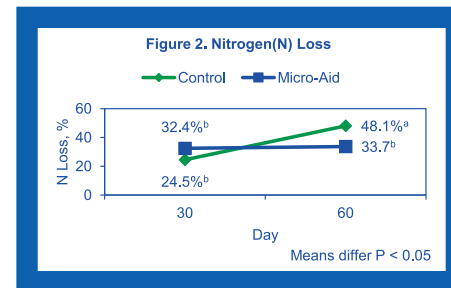
The experimental objective was to simulate the feedlot pen surface and determine the effect of Micro-Aid® supplementation on organic matter (OM) and nitrogen (N) loss of beef feedlot manure.

Sixty aluminum-pans were arranged in a 2x2 factorial to study the effects of Micro-Aid (manure collected from steers fed a diet with or without 1 g/head/day of Micro-Aid®) and time (4 treatments with 15 replications). On day 1, soil (60%) and manure (40%) were weighed into each pan and then completely mixed together to simulate the hoof action of cattle. Pans were kept in a temperature-controlled room for either 30 or 60 days, at which point, OM and N were determined.

An advantage of Micro-Aid® is the fact that it is excreted along with fecal matter to continue working within the waste management system to enhance the activity of the microbial population responsible for the conversion of undigested nutrients into more stable organic compounds. At both time points, Micro-Aid® pans lost approximately 42% less OM than Control pans.



Recent efforts have focused on the association between reduced N volatilization due to Micro-Aid® and concurrent increased N content of manure, resulting in greater potential fertilizing value. This is clearly demonstrated as Micro-Aid® maintained N loss between time points (lost only 3% after day 30) and then minimized N loss vs. the Control by the end of the experiment (lost approximately 30% less).



DID YOU

Know?

Scan the following bar code with a downloadable app on your smart phone to learn more about the opportunities for Micro-Aid to Capture and Contain Manure Fertilizer Value!

