

Composting: Large Egg Producer's Answer To Manure Management

John Gingerich
Wegman's Egg Farm

Editor's Note: The following is a presentation given at the Cornell Poultry Conference on July 6, 1994.

The Egg Farm division of Wegman's Food Markets is an egg production complex located near Wolcott, N.Y.

Approximately 600 tons of finished feed is produced weekly, which is fed to 720,000 layers (soon to be 840,000) and 240,000 pullets. When inputs are invested into chickens, output is expected.

In this case, we are primarily interested in converting feed and water into eggs (currently approximately 300,000 dozen per week). However, there are other products of this process as well. Some of the energy produced is released in the form of heat, and some in the form of manure — more than 550 tons per week on a fresh basis.

How do we deal with it? Over the years, different methods have emerged. Until 10 years ago, all of the manure was handled on a daily basis. Cable-drawn scrapers brought the manure to an auger which loaded in onto a truck. The manure was hauled to lagoons sites on our cropland area where it was stored, then spread seasonally for fertilizer. It was a system with significant labor in handling and rehandling, as well as having significant equipment and maintenance costs.

Next came high-rise houses where manure drops from the birds on a second level into the lower level where it is stored, dried down somewhat (50-55 percent moisture), cleaned twice yearly using a skid-steer loader, and spread on the land. Definitely an improvement, but with the downside of fly problems and wintertime ammonia in the houses.

Most recent is the turbo design where manure collects on boards under the cages. Ventilation air moving over the manure dries it before it is scraped down through the slots into the pit below. This yields a very dry product (20-30 percent moisture) which is removed twice yearly. The ammonia problem is almost entirely eliminated in the upstairs bird area.

Recycling manure in its raw form as fertilizer to produce corn to feed back to the chickens wouldn't be too bad if it weren't for the world that we interact with. Much of our cropland drains into bays which, in turn, drain into Lake Ontario.

Too much manure over too long a time period has the potential of leeching excess nutrients (especially phosphorous) which can be damaging to the ecosystem. In reality, that problem may be more one of perception. We regularly monitor one particularly critical stream in several points, and find that the most significant pollutant sources are human rather than agricultural.

This does, however, bring up the most critical environmental creature we interact with — people. It is with these creatures that we can have a real problem. In the summertime, lagoons smell and give off flies. When liquid manure is spread, it just plain stinks. While the odors of spreading high-rise manure isn't as bad, if flies were breeding in it when spread, they can make enemies quickly with the neighbors. Turbo manure is also capable of boosting fly breeding.

The people we interact with today are less and less tolerant. They are quick to complain about odor, flies, pesticide spraying, mud or manure on the roads, and even dust from tilling the land. Lately, we have had people claiming resulting illness. Lawyers are consulted, and threats of various kinds are made (including calling the media).

The reality is that in order to survive and thrive in the future, there has to be a better way. We do not believe in being held hostage by problems, but rather to turn them into opportunities. Doing that, however, is a real challenge.

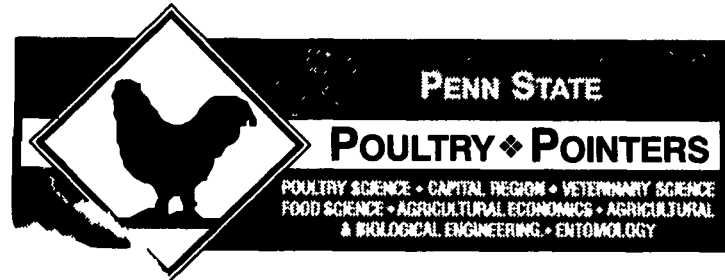
For the past few years, we had contracted with a company who used our high-rise manure for compost. They processed that product for retail sales. Even though they have gone out of business, we saw potential in the composting of manure.

Last summer, we constructed a composting facility with six 20 x

200 foot bays, utilizing a Farmer Automatic turner. This facility has the capacity to turn out up to 8,000 tons of composted manure per year. This is a stable product which can be stored, and is an excellent fertilizer product which, when spread, does not give off odor. Pathogens are also killed in the composting process.

Our immediate market for the product is for agricultural application, both for our own land as well as to sell to other farms. In the long term, marketing both in the landscaping and retail arena has potential. However, some further processing may be needed for those markets.

Our most immediate challenge is the daily manure cleanout. We still have facilities for over 300,000 layers as well as all the pullets producing over 40 ton daily of 70 to 80 percent moisture manure. This represents our greatest



environmental problem, because it is too wet to compost. However, if we mix the very dry turbo manure with it, it becomes compostable.

Our strategy is to gradually convert more of the older facilities to new turbo buildings in order to be able to blend a proper moisture manure so that we can compost all of our manure. This will bring the facility up to full operating capacity.

If composting is looked upon as being the magic solution to all problems, well, challenges still present themselves. First, the facility to do this is expensive. Secondly, the composting process in itself

creates significant odor. We are simply moving the odor from the point of spreading to the point of composting, so we have a different set of neighbors who are upset. We are working on technical solutions to this. We have made some progress, but need to make more. We know that solutions exist, but they are expensive, and their adaptations to our facility are not fully proven.

The challenges continue to present themselves. However, we continue to believe that hidden in the problem is a silver lining of opportunity for a valuable by-product.

Fire Drills Not Just For School Anymore

BOALSBURG (Centre Co.) — Imagine waking from a sound sleep to the cries of "Fire! Fire!"

Jumping out of bed you notice the glow of yellow light dancing like flames on the wall. Glancing out the window on your way out of the bedroom you realize that the glow is coming from your barn.

As you run down the stairs your mind races through thoughts of

what to do. Call the fire department. Use the fire extinguisher or a hose to douse the fire. Get the horses out of the barn.

Reaching for the phone, your mind is still racing when you suddenly realize that you cannot remember the number for the fire department, not to mention your address. You run outside to get help only to find mass chaos.

Horses are in the barn squealing and people are running frantically.

By the time the fire department has been notified, precious moments have been lost along with everything in your barn. Horse have died and people have been injured. It's unfortunate. It's also preventable.

Fire escape plans are followed and routinely practiced in many schools, businesses, and homes throughout the country. However, few farms or stables have implemented fire safety practices.

Times are changing, though. On Sunday, Oct. 13, several horse owners and members of a local fire company gathered at Slab Cabin Farm in State College. The purpose of the gathering was to learn how to develop a plan to prevent a tragedy similar to the one above.

The clinic started with Krisdean Beattie, an emergency medical technician and registered nurse at the Hershey Medical Center, discussing first aid care for people injured at a fire scene. She was followed by Dr. E. Scott McAllister, an equine practitioner from Centre Hall, who explained ways to care for horses injured in fires. Afterwards, National Equine Safety Association (NESA) representatives discussed the causes of fires and ways to prevent them. Then the group gathered outside for a mock drill.

Smoke billowed out of barn doors and windows.

"Fire in the barn!"

At the sound of the cry Philip Jodon, owner of Slab Cabin Farm, came from a nearby shed. He walked briskly to the barn, pausing only briefly to feel the door for heat. Then he opened the door and walked into the smoke-filled building. Moments later his wife Sherry walked into the barn — she was delayed by calling the fire department.

When Philip emerged out of the smoke seconds later, he was leading a blindfolded horse. Quickly pulling the blindfold from the horse's head, he lead it to a nearby pasture. He turned the horse loose and chased it away from the gate. Then he walked briskly back for another horse. Sherry going to the pasture with a second horse, and passed by him. Not a word was spoken. The relay continued until the two managed to "save" five horses. It took less than four minutes.

Through practice the Jodon's will be able to reduce their time of evacuation, but more importantly those observing learned the importance of barn fire drills. Horses do not react the same as people, and it is important to be prepared for any situation that may arise when horses are involved.

The Pennsylvania Equine Council (PEC) plans to offer fire safety programs across the state. For more information, contact Bonnie Darlington, PEC secretary, at P.O. Box 570, Boalsburg, PA 16827, (814) 364-9826.

Agriculture Department To Boost Industry Marketing Efforts

HARRISBURG (Dauphin Co.) — Pennsylvania agricultural organizations can double their promotional dollars by participating in the Pennsylvania Agricultural Product Promotion and Marketing Matching Grant Program, Agriculture Secretary Charles G. Brosius said.

"The Department of Agriculture is pleased to offer this matching grant program to help commodity organizations inform consumers about our high quality, nutritious, bountiful food products," Brosius said. "Each matching grant creates a public/private partnership that will help to increase sales for the commonwealth's number one industry — agriculture."

Pennsylvania nonprofit agricultural product promotion and marketing organizations are eligible to submit applications. Funding may be used to pay the cost of agricul-

tural product promotion and marketing projects, the cost of a portion of the organization's contribution to a national or regional agricultural promotion or marketing project, the cost of education programs conducted by the applicant, and/or the cost of trade shows.

To receive a matching grant, applicants must provide funds in an amount at least equal to the amount requested. The minimum amount of a matching grant request is \$1,000.

The deadline for submitting a completed application is Dec. 1. For more information or to obtain an application, contact Mike Varner in the Bureau of Market Development at (717) 783-9948.



BUY, SELL, TRADE OR RENT THROUGH THE

CLASSIFIED ADS

PHONE: 717-626-1164 or 717-394-3047
FAX 717-733-6058

Mon., Tues., Wed., Fri. 8 AM to 5 PM; Thurs. 7 AM to 5 PM

**ROPE IN
SOME EXTRA
CASH!**

Advertise With A
Lancaster Farming
CLASSIFIED AD...

Phone: 717-394-3047
or 717-626-1164



**1a CONSTRUCTION
EQUIPMENT**

125-C INTERNATIONAL
TRACK LOADER, 75%
U/C, excellent condition.
Asking \$13,500.
(215)598-3528.

1969 Case 1150 w/ripper,
4+1 bucket, good mach
\$6500.00 Call
(301)371-9346

1975 Int. Backhoe series
3500A, encl. cab, X-Hoe,
good cond, \$7500. Call
(301)371-9346