Animal Mortalities Facility- Freezers – Interim BMP Proposal

We request that you grant interim approval for a very promising nutrient management practice that utilizes on-farm freezer units for the storage of routine poultry mortality until it can be removed from the farm and recycled into valuable commodities.

We believe this BMP to have great potential in assisting each of our state's efforts to meet (and hopefully exceed) our stated TMDL goals. Interim status will allow us to begin incorporating the benefits of this new BMP in our watershed implementation plans going forward.

Spurring innovation and identification of new BMPs is one of the Program's stated goals and we look forward to adding this innovative practice to the menu of nutrient management options already available.

Background

One of the largest challenges the poultry industry currently faces is recycling or repurposing the byproducts of growing chickens. Though much of the focus has been on manure, routine mortality accounts for a great deal of material in the watershed that must be addressed too roughly 23,000 tons were generated on the Delmarva Peninsula alone in 2013. This amounts to nearly 250,000 lbs of N and 75,000 lbs of P_2O_5 of reduction potential, annually.

Originally, this material was disposed of in large pits in the ground behind the chicken houses; however, because of the potential impact on nearby surface and groundwater resources. Most growers in the watershed now use composting to manage their routine mortality. When done properly, the closely managed process recycles carcasses into a nutrient-rich compost for farm fields.

The reality of composting is that managing the resources for a proper mixture of ingredients to properly decompose the nutrient and microbiologically dense material is an often overlooked priority amongst farm operations. The result is a potentially hazardous compost destined for land application.

Moving from pit burial to composting was a great step, but ultimately the end result is the same – nutrient rich material is still having an impact on our water resources.

On-Farm Freezer Units for Routine Mortality

Instead of composting, routine mortality can be temporarily stored in large on-farm freezer units for collection after the flock is gone. A refrigerated bio-secure vehicle arrives between flocks to take the material off-site for recycling into valuable commodities outside the agricultural nutrient cycle.

For that reason, this mortality management method is a value added solution that solves a nutrient problem compared to other mortality BMPs contributing to more phosphorous and nitrogen. Poultry mortality contains twice as much nitrogen, pound for pound, compared with average litter. The result of composting is a richer, more massive stream of nutrients.

This BMP is not only more cost effective, its impact is more concrete and easier to verify. For example, the efficacy of cover crops or vegetative buffers is subject to the variability of site conditions; the efficacy of other BMPs can be dependent upon proper installation or management of the practice. Neither issue is applicable to this BMP and that sort of certainty in results is extremely important to the future of the Program as stated in the 2014 CBP report titled Strengthening Verification of Best Management Practices: "[V]erifying that practices are being implemented correctly and are reducing nutrient and sediment pollution as expected will be critical in measuring success."

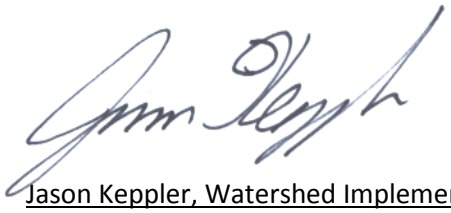
The first farms here in the watershed to fully adopt the practice did so almost five years ago with the help of the Delaware Department of Agriculture and the Delaware Nutrient Management Commission. (See 2013 DNMC Annual Report) Since that time, the practice has become an NRCS approved BMP in nearly all watershed states. (See, e.g., NRCS Practice Code 316). Cost-share funding is also widely available now through federal and state agencies.

For all of the reasons outlined above, we request that you grant interim approval for on-farm freezer units credit for the alternative use of routine poultry mortality and assign this BMP nutrient reduction estimates for phosphorous and nitrogen as a combination BMP where by nutrients are conceptually moved from storage and handling losses to the available manure nutrients and then alternative use transport is applied, like manure transport out of the watershed.

Sincerely,

Chris Brosch, Nutrient Management Program Administrator

Delaware Department of Agriculture



Jason Keppler, Watershed Implementation Program Manager

Maryland Department of Agriculture

Ancillary Benefits of Animal Mortality Facilities BMP

Though the scope of the BMP Expert Panel process is largely limited to loading or effectiveness estimates for nutrient- and sediment-reducing technologies and practices, the Program wisely allows for the identification of any ancillary benefits beyond impacts on nitrogen and phosphorus loads. There are several very important ancillary benefits of employing this BMP:

1. Instant "New" Manure Storage Capacity

Recent regulatory changes have rendered nearly all existing manure storage sheds to be per se inadequate and the issue is even more pressing in Maryland as the new PMT regulations go into effect. The State has said it will have to build more storage sheds either on farms or in centralized locations, but the cost and time required to build new structures is an impediment.

This BMP could be part of the solution. More than 30% of the current manure shed storage capacity is lost to the composting process. The last time compost is turned it is moved into the manure storage where it must be segregated from litter to reduce the risk of fire. Moreover, many growers don't compost properly so litter brokers must use even more of the manure shed to complete the process. It's possible that existing farms could recover another 15-25% of capacity: Farms adopting this BMP would no longer need a composter, which could be immediately re-purposed for manure storage.

2. Growers Can Save Thousands in Operational Costs Annually

This management method is much more cost-effective than composting because of the drastic reduction in the amount of time and labor required as well as eliminating the money spent on fuel and maintenance for a tractor. The average farm on Delmarva can realize more than $1,600 a year in operational savings. Imagine a foolproof BMP that was less costly – farmer compliance and the benefits of the BMP would be realized.

3. Less Costly and Foolproof BMP Ensures Compliance and Results

The easiest way to ensure nutrient management practices are being implemented correctly is to make the practices themselves easier to implement. Full farmer compliance is much more likely with a BMP that is not only foolproof but also less costly to operate – ensuring all predicted nutrient reduction benefits are realized.

4. Improved Quality of Life by Eliminating the Smells, Flies and Scavengers

The Bay Program is not only about clean water, but also quality of life for the watershed's inhabitants and visitors. Eliminate the smells, flies and scavengers associated with composting. Much better for the grower's family – and the neighbors. In fact, freezer units were recently added to the industry's Good Neighbor Relations BMP List.

5. Greatly Reduce Biosecurity Risks

The industry has beefed up biosecurity procedures in recent years, but most focus on humans who come in the front door invited. The back door, however, has been left wide open for non-human visitors – though they arguably were invited in too: The composting shed is in essence an open air food source for local scavengers including foxes, raccoons and buzzards. Depending upon the scavenger, "local" could mean a 5-50 mile radius from the farm – a range that undoubtedly includes a water source serving non-local animals, such as migratory waterfowl.

Of course, the composter is also home to a robust fly population. A fly's range is much more limited than the scavenger's – but a fly doesn't need to go far from the composter to pose a serious risk. Flies are known to carry several poultry pathogens, including Salmonella, E. coli, Campylobacter and avian influenza virus.

Of course, better biosecurity also means less mortality and less composted material that must be spread on fields.

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Ed Kee
Secretary of Agriculture
E. Austin Short
Deputy Secretary

Poultry,Whole Rendered Carcass

Submitted by: Greener Solutions LLC
26073 Hidden Acres Lane
Millsboro, Delaware 19966

Lab Id: 150300-01
Brand: Whole Carcass Rendered
Code:
Date Sampled: 10-Apr-15
Container:
Lot Quantity:

Lab Number:
Approved:
Weight/Container:
Sampled:

Analysis	Units	Guaranteed	Found	Remark
Total Nitrogen (N) (Combustion), %	%		6.956	
Total Nitrogen (N) (Combustion), lbs/Ton	lbs/Ton		139.119	
Ammoniacal Nitrogen, %	%		0.009	
Ammoniacal Nitrogen, lbs/Ton	lbs/Ton		0.170	
Total Phosphate (P2O5), %	%		2.059	
Total Phosphate (P2O5), lbs/Ton	lbs/Ton		41.174	
Soluble Potash (K2O), %	%		0.756	
Soluble Potash (K2O), lbs/Ton	lbs/Ton		15.122	
Total Moisture	%		5.165	
Dry Matter	%		94.835	

REMARKS:

Daniel B. Woodall
State Chemist

Note: Any claim of errors should be made within 10 days in order that they may be promptly investigated.

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