



Cornell Waste Management Institute  
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## CWMI Update – October 2018

### *Educational Events*

- **Recognizing Informal Recyclers – A New Paradigm for Waste Management – the Case of Bogota** – Federico Parra, October 12, 12:20 pm, Abby and Howard Milstein Auditorium, Milstein Hall, Cornell University: For more than two decades, the work of waste pickers in Colombia was systematically pursued or restricted by public policies on waste management, given that the prevailing model privileged the activities of collection, transport and burial of waste in the hands of private companies. This presentation provides a narrative policy analysis regarding the impact on public policy conducted by the organized waste-picker population who, since the 1990s, defend their right to remain in their work and grow in it. The consequent paradigm shift has Colombia passing from a scheme of "collection, transportation and burial of waste" (almost exclusively in the hands of "private enterprises") to a scheme that prioritizes recycling and recognition and remuneration of the waste pickers as providers of the public service of recycling.
- **Livestock Mortality Disposal Workshop:** October 17, 2018 10:00 am – 2:30 pm at Bilow's Farms, LLC, 1105 County Route 24, Malone, NY 12953. Lunch will be provided. Join Franklin County Soil and Water in a workshop to discuss composting and burial rules and guidance, as well as problems and solutions that will encourage new and existing facilities to compost mortalities, explore incineration, digestion and any other disposal ideas that protect human, livestock and environmental health. There will be demonstrations on how to open a pre-existing compost pile and how to build a compost pile. **RSVP:** Please call Franklin County Soil and Water at 518-651-2097 by Oct 15.
- **Necropsy Demonstration and Mortality Composting:** October 19, 2018 1:00 pm – 3:00 pm at the VanLieshout Family's Brabant Farm, 6166 Happy Valley Rd., Verona, NY.
- **Legacy Lead Town Hall at Brooklyn College:** October 19, 2018, 1 – 5 pm at the Brooklyn College Student Center, Brooklyn, NY. Join the New York City Legacy Lead Coalition to learn from and honor the work of Dr. Howard Mielke from Tulane University, one of the first researchers to identify lead in soil as a risk to human health. Come listen to and speak with community members, experts, and stakeholders from the Legacy Lead Coalition, including Brooklyn College, Columbia University, Cornell University, the Mayor's Office of Environmental Remediation, the NYC Compost Project, the NYC Parks Department, Neighbors Allied for Good Growth (NAG) and many more. More information and registration link at <http://legacylead.net/>.
- **2018 Annual NYS Recycling Conference** held at the Otesaga Resort Hotel, Cooperstown, NY. Please visit <https://www.nysar3.org/page/annual-recycling-conference-23.html> for more information, including the agenda and registration materials

- Tuesday, November 6, 11:30 am – 4:15 pm: **Pre-Conference Workshop: Recycling Organics To Reduce Erosion and Build Soils.** Use of compost, a recycled product, for controlling erosion and sedimentation can reduce costs, increase effectiveness of revegetation and promote environmental protection. Compost blankets, berms and socks can reduce soil loss and improve soil moisture retention. The day will feature a virtual tour illustrating the effectiveness of these tools as well as a demonstration of soil infiltration and run-off with Cornell's Soil Health Truck.
- Wednesday, November 7 – Thursday, November 8: **The National Sword and Quality Impacts on Recycling.** Today's recycling professionals are facing unprecedented challenges, including vanishing markets, rapidly escalating costs and intractable contamination problems. Yet, these challenges can lead to innovative approaches in the sustainable materials management economy of the future. NYSAR3's annual conference will delve into how recycling professionals are facing the current challenges and exploring new ways forward.
- **New York City Urban Soils Institute 3<sup>rd</sup> Annual Symposium, "Urban Soils and Remediation":** December 6-7, 2018, New York City. More details and registration information to come at <https://www.usi.nyc/>.
- **NOFA-NY 2019 Winter Conference, "Climate of Change":** January 18-20, 2019, Saratoga Hilton and City Center, Saratoga Springs, NY. More information about the 37<sup>th</sup> annual organic farming and gardening conference can be found at <https://www.nofany.org/events-news/events/2019-winter-conference>; registration coming soon.

## **Educational Materials**

- **On-demand Composting Webinars**
  - **Composting – The Basics** (<http://www.conservationwebinars.net/webinars/composting-the-basics/?searchterm=composting>). This webinar provides viewers with an understanding of the principles of successful composting of animal manure, bedding, food wastes and other types of organic material. Composting is a known strategy for management of animal manure as part of the agricultural waste management system. The principles of proper composting will be discussed. Discussions will also include the composting process, trouble shooting techniques, what is considered compost, how properly composting organic waste impacts food safety.
  - **Composting – Animal Mortality** (<http://www.conservationwebinars.net/webinars/composting-animal-mortality>). This webinar provides viewers with an understanding of the principles of successful composting of animal mortality in routine and emergency situations. Mortality composting is a known strategy of the agricultural waste management system. The principles of proper mortality composting will be discussed. Discussions will also include the composting process, trouble shooting techniques, what is considered compost, how properly composting animal mortality impacts biosecurity.
- **Mortality Disposal: Looking for Solutions.** Notes from two meetings that took place in September to discuss how to handle the recent changes in rendering in NYS are on pages 4 – 5 of this document.

- A **contact list for sources of carbon and bulking materials** is available at <https://hdl.handle.net/1813/58980> as well as on page 6 of this document.
- **“Carbon Footprint of a University Compost Facility: Case Study of Cornell Farm Services”** has been published in *Compost Science and Utilization*. Click on the link below to access the abstract. Please contact [msp5@cornell.edu](mailto:m5p@cornell.edu) for a copy of the article.

**Happy Composting!**

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## Livestock Mortality Disposal: Looking for Solutions Roundtable Discussions Summary

Managing animal tissue is a significant challenge and responsibility in livestock production. Routine and emergency losses of livestock are significant environmental, biosecurity, and waste management concerns. Livestock mortality due to barn fires, roof collapses, excess heat/drought, ventilation system failures, and floods impacts many livestock operations. Many animals also need to be chemically euthanized due to illness and injury and to avoid suffering. Rendering has been an option for much of this mortality. Due to recent changes, chemically euthanized animals will no longer be accepted in rendering and there are limited alternatives for deadstock in general. NYS landfills reluctantly accept deadstock even in emergencies. Dragging animals out back is not legal and poses a great threat to avian and terrestrial wildlife and pets that might consume the meat. This leaves few disposal options for horse owners, dairies and other livestock operations.

To that end, Cornell Waste Management Institute (CWMI), Cornell Cooperative Extension (CCE), NYS Department of Agriculture and Markets (NYSDAM) and NYS Department of Environmental Conservation (NYSDEC) held two roundtable meetings in September 2018 to discuss all disposal possibilities. The first meeting was held in Oriskany, NY with 41 attendees representing CWMI, CCE from 5 counties, NYSDAM, NYSDEC, two rendering companies, American Dairy, NY Farm Bureau, Natural Resources Conservation Services (NRCS), two solid waste facilities, United States Department of Agriculture (USDA) food safety state inspection services, several veterinarians (both private practice and USDA field veterinarians), personnel from Empire Livestock, two dairy farmers and two private citizens thinking about starting a mortality composting facility. The meeting in Warsaw, NY had 21 attendees representing the same groups with additional representation from the Food and Drug Administration (FDA).

Both meetings began with Dr. David Smith, NYSDAM Division of Animal Industry Director, giving an overview of the situation: At one time, NYS had a vibrant slaughter industry, helped by the small renderers. Regulations, fuel and labor has caused this industry to diminish, narrowing it down to one big renderer, Baker Commodities. Ten years ago, Baker Commodities stopped picking up cattle, but would take deliveries. Then three years ago that stopped as well. Consequently, the small renderers picked up the slack. These operations would debone the animals and send the meat to the pet food industry. One of the bigger pet food operations found pentobarbital in the pet food, and decided that the source was from dead animals coming off farms in NY. As there is zero tolerance for pentobarbital, the small renderers lost that avenue and now need to charge more for pick-up to deliver the product much further away.

NYSDAM is working with department of health to create a regulation that requires a back tag and an injected dye as identification anytime an animal is put down with pentobarbital. Identification will allow everyone down the line who may handle that animal will know that it was euthanized with pentobarbital and it will not be used for pet food. It is hoped that taking these precautions will encourage the pet food industry to take the meat from dead and disabled cows again.

In the interim, composting of mortalities may be the best option. Information on how to compost is available on Cornell Waste Management Institute's website. CWMI's mortality composting page (<http://cwmi.css.cornell.edu/mortality.htm>) contains materials addressing composting as a method to manage livestock mortalities, butcher wastes and road killed animals. All of the information supplied there is free to download and use. The power point used to describe how to compost mortalities is available at <https://hdl.handle.net/1813/58979>.

During each of the meetings, the following was discussed:

- FDA representatives said that there is no specific rule that says pet food manufacturers cannot accept deadstock. However, there is zero tolerance for pentobarbital. CFR 507 – subpart C Hazard Analysis and Risk-Based Preventive Control: Those facilities that manufacture/process pet food or animal feed need to identify hazards and implement preventative control through several measures, including supply chain. Pentobarbital has been identified as a hazard that

needs to be identified. Some companies say they are going to prevent it by not taking any deadstock at all. Others may use some kind of testing method or ask the supplier to control that issue.

- Limiting the use of pentobarbital as a means of euthanasia – many of the attendees were surprised that cattle were being put down with pentobarbital. The veterinarians that attended indicated that in many cases, the farmer and/or the vet were uncomfortable with both captive bolt and shooting, so pentobarbital was the method of choice. This prompted discussion on education for veterinarians, as well as others that may be called upon to euthanize animals, on how to properly put them down with other methods.
- Most horses ARE put down with pentobarbital – there was concern about using a back tag and the injection in horses as horse owners consider them pets and it could be upsetting to them. In addition, horses are not supposed to end up in the pet food chain.
- Many disposal options were discussed; landfilling, burial rules and guidance, as well as problems and solutions that will encourage new and existing facilities to compost mortalities, explore incineration, alkaline digestion and any other disposal ideas that protect human, livestock and environmental health.
  - Landfilling: Landfills are hesitant to take mortality even in a disaster or disease outbreak. Landfills in other states accept NYS horses for a tip fee of \$500-600
  - Burial Rules and Guidance: In NYS it is legal to bury but there is no pathogen kill, dead animals are closer to the water table and nutrients from each dead animal need to be accounted for in Concentrated Animal Feeding Operations (CAFO) and comprehensive nutrient management plans (CNMP)
  - Incineration: There are few incinerators that can manage livestock and building a crematorium is expensive and hard to permit.
  - Alkaline Digestion: Cornell has an alkaline digester to manage disposal of necropsies from the School of Veterinary Medicine. They also offer private HydroCremations (with return of ashes) of companion animals, horses and small to large farm animals, for a fee of \$100 – 2000, depending on the size of the animal.
  - Rendering: This is really the best option as meat has value and can be used in certain animal feed.
- Public perception is very important, especially for a centralized compost facility. On-farm composting probably will not be noticed as much though.
- Traceability through good record keeping or tagging animals.
- Livestock markets are still available, so increase education for farmers to make culling decisions early.
- Does MOPAC WANT the material to come back? Can we talk to them and find out EXACTLY what their requirements are for them to take NY's deadstock? Can we put this into the requirements NYSDAM is working on?
- For composting, NYSDEC part 360-361 rules allow on-farm composting of the farm's mortalities (farms are exempt and can compost their own deadstock). Part 361-3.2(a) Exempt Facilities (4) A composting facility located on a farm for animal carcasses. If the farm is not located on a CAFO, no more than 10 carcasses per year can be from off-site sources and the animal carcasses must be placed within the compost pile on the day received. Once animals are received from other farms or if they are sent to a centralized facility, that facility needs to be

registered with the DEC. Part 360 and 361 rules can be found at <https://www.dec.ny.gov/regs/2491.html>.

- Deadstock need to be accounted for on all CAFO farms. There must be a plan for disposal and associated nutrients accounted for in their CNMP.
- Attendees who are considering opening a centralized facility wanted to know if there might be some government funding available. The response was, not at this time, but it might be possible.
- If composting mortalities, the hardest part is finding enough wood chips and other carbon. There is an app called chip drop that may be able to help with that. <https://getchipdrop.com/>. A contact list for sources of carbon and bulking materials is available at <https://hdl.handle.net/1813/58980>.

CWMI is happy to facilitate more of these roundtable discussions in other parts of the state as well as provide classes and demonstrations on mortality composting. Classes are already in the planning stages in Clinton, Oneida, Montgomery, Tompkins and Ontario counties. Please e-mail Jean Bonhotal ([jb29@cornell.edu](mailto:jb29@cornell.edu)) or Mary Schwarz ([msp5@cornell.edu](mailto:msp5@cornell.edu)) to set one up.

Contact List for Sources of Carbon and Bulking Materials (Fill in the blanks and post in an easily accessible location as a reference)

Tree Service Company (such as Asplundh)	Contact: _____ Phone: _____ Fax: _____ E-Mail: _____
Local (Town/Village) Highway Department	Contact: _____ Phone: _____ Fax: _____ E-Mail: _____
County Highway Department	Contact: _____ Phone: _____ Fax: _____ E-Mail: _____
State Highway Department	Contact: _____ Phone: _____ Fax: _____ E-Mail: _____
Utility Company (Telephone, Cable)	Contact: _____ Phone: _____ Fax: _____ E-Mail: _____  Contact: _____ Phone: _____ Fax: _____ E-Mail: _____
Landscapers	Contact: _____

	Phone: _____ Fax: _____ E-Mail: _____  Contact: _____ Phone: _____ Fax: _____ E-Mail: _____
Logging Companies	Contact: _____ Phone: _____ Fax: _____ E-Mail: _____  Contact: _____ Phone: _____ Fax: _____ E-Mail: _____
Arborists (Tree Care Specialists)	Contact: _____ Phone: _____ Fax: _____ E-Mail: _____
Sawmill (non-pressure treated only)	Contact: _____ Phone: _____ Fax: _____ E-Mail: _____
Lumber Yard (non-pressure treated only)	Contact: _____ Phone: _____



	Fax: _____ E-Mail: _____
Local Parks Department	Contact: _____ Phone: _____ Fax: _____ E-Mail: _____

Suitable carbon sources include:

- Wood chips about 2" or less in size
- Yard trimmings and brush trimmings 2" or less in size
- Shavings (with larger pieces mixed in)
- Chopped hay/straw
- Ground corn stover
- Oat/Sunflower hulls

