

Preconference Workshop Composting Mass Animal Mortality during Animal Disease Outbreaks and Natural Disasters

Since the 2015 Highly Pathogenic Avian Influenza (HPAI) outbreak in the Midwestern United States, composting has become the primary animal carcass disposal method for mass poultry mortality events due to disease or natural disasters. It has been used in every major avian influenza outbreak the US since 2015 and was used to manage poultry mortality caused by the flooding that followed Hurricanes Matthews and Florence in 2016 and 2018.

Composting was also used to dispose of swine carcasses during the COVID-19 supply chain disruption of 2020. The current plan for responding to a potential African Swine Fever outbreak in the United States also includes composting as the primary carcass disposal option.

Instructors: Gary Flory, Bob Peer, Mark King and Bobby Clark

Fee: \$215 for USCC members, \$265 for nonmembers

Duration: 1:00 PM to 4:30 PM

CCOM™/CCP™ PDHs: 3.5

Agenda

- Current Carcass Disposal Options
- The evolution of composting
- In-house composting vs outside windrows
- Large scale carbon sourcing challenges
- Composting in a disease outbreak vs a natural disaster
- Preparing for an livestock disease outbreak or supply chain disruption
- A hybrid disposal option-Above Ground Burial

About the instructors:

Bob Peer

Bob is the Agricultural Program Manager for at the Valley Regional Office of the Virginia Department of Environmental Quality (DEQ) in Harrisonburg, Va. Bob has worked for DEQ for 20 years, and provides the technical guidance for the inspection program as well as complaint investigations of agricultural facilities in the Shenandoah Valley. Bob serves on the Va. Poultry Disease Task Force and Catastrophic Livestock Mortality Taskforce as a technical expert on carcass disposal. Bob has over 16 years of experience in emergency response in poultry disease outbreaks, primarily in carcass disposal. He served in carcass disposal during the 2002 Va. Avian Flu outbreak, 2007 West Virginia and Virginia Avian Flu outbreaks, and as a subject matter expert for composting carcasses in the Midwest High-Pathogenic Avian flu outbreak in 2015-

2016 (Minnesota, Nebraska, and Indiana). Bob also served as a subject matter expert in the Hurricane Florence recovery efforts for flooded poultry houses in North Carolina in 2018. Bob helped conduct a composting demonstration in 2004 that provided the guidance for utilizing in-house composting of market age turkeys in the 2007 outbreaks, and the Midwest outbreak in 2015-2016. He and Gary Flory, and others developed the protocol that was the basis for the current USDA carcass composting protocol. He has assisted in training several state emergency disease response teams in carcass disposal, as well as USDA-APHIS staff.

Gary Flory

Gary Flory is the Agricultural Program Manager for the Virginia Department of Environmental Quality. In this role, Gary provides leadership on numerous issues surrounding the nexus of agriculture, the environment and public health. Gary has been a lead investigator on numerous research projects focused on providing new tools in the fight against animal diseases and natural disasters affecting agriculture. Gary also founded [G.A. Flory Consulting](#), a global consulting firm, to help clients with a range of services including animal disease and natural disaster response, agricultural emergency planning, and emergency response training. Gary has conducted trainings, given presentations and deployed on numerous animal disease outbreaks around the country and internationally to a number of countries including the Dominican Republic, Vietnam, Tunisia, Korea, Cambodia, Laos, Malaysia, and Azerbaijan. He also serves as a technical reviewer and Subject Matter Expert on agricultural issues for a variety of organizations including the United States Department of Agriculture (USDA), United States Environmental Protection Agency (EPA), Food and Agriculture Organization of the United Nations (FAO), and the World Organization for Animal Health (OIE). Gary currently serves on FAO's African Swine Fever Global Pool of Expertise.

In addition to numerous other articles, reports, and guidance documents, Gary was a lead author of FAO's recently released document, [Carcass management guidelines – Effective disposal of animal carcasses and contaminated materials on small to medium-sized farms](#) and USDA's [Catastrophic Livestock Composting Protocol](#) and [Mortality Composting Protocol for Avian Influenza Infected Flocks](#).

Mark King

Mark is a native of Winthrop, Maine, where he enjoys spending time hunting and fishing. He has a Bachelor's Degree in Biology from the University of Maine and a Master's Degree in Zoology from Southern Illinois University.

In 1991, Mark started working with the Maine Department of Environmental Protection as an Environmental Specialist. In 1993, he joined the Maine Compost Team (a collaborative interagency group consisting of representatives from the Maine DEP, Department of Agriculture, State Planning Office, and the University of Maine Cooperative Extension) where he developed an expertise in composting.

In 1997, Mark served as one of the founders of the internationally acclaimed, "Maine Compost School", and currently serves as Director, as well as actively participating in course instruction.

Mark provides on-going technical assistance to new and existing compost facilities through facility siting and design support, operations assistance, and compost process trouble-shooting. Mark has worked with all levels of compost facility size and design, and has developed an expertise with medium and large-scale facilities. Currently, he is promoting statewide composting of pre and post-consumer food residuals as an alternative to costly landfill disposal.

Bobby Clark

Virginia Cooperative Extension Agent-Bobby has been involved in carcass composting research since 2002 for both poultry and livestock. Bobby has served as a Subject Matter Expert (SME) for carcass composting in the Avian Flu outbreak in 2015-2016, and the Hurricane Florence response in 2018.