

Managing Phosphorus in Organic Residuals Applied to Soils

a Symposium produced by Univ. of Massachusetts/Amherst Extension

November 2, 2016 - Marlborough, MA

Program

8:15 **Registration** (coffee and tea)

Background: Defining the Phosphorus Problem

8:45 **Welcome and Introduction: What the Phosphorus!**

Mary Owen, Extension Turf Specialist, University of Massachusetts Amherst

Policy, Regulation and Management of Organic Residuals

Ned Beecher, Executive Director, North East Biosolids and Residuals Association (NEBRA)

Fertilizers and soil amendments from organic residuals are in common use around New England. Some are strictly regulated for quality and application methods while others are subject only to guidelines. All provide benefits to soils. Ned will summarize Massachusetts policies and regulations that increasingly prohibit landfill disposal of organic residuals and encourage their recycling to soils covering current management practices, treatment, testing and application methods.

Phosphorus Trends in New England Soils

Katie Campbell-Nelson, Extension Vegetable Specialist, University of Massachusetts Amherst

This session will include a review of phosphorus trends seen in soil and residual tests from New England labs. The goal is to identify what we know about phosphorus levels based on our current testing methods around the region. The information in this talk is provided thanks to the cooperation of the following University Extension Soil Labs: Pennsylvania State University, University of Connecticut, University of Vermont, University of Maine, and University of Massachusetts.

Analysis of Phosphorus

Analysis and Interpretation of Phosphorus in Soils and Residuals

Dr. John Spargo, Director, Agricultural Analytical Services Lab, Penn State University

This session will address test methods, extracts, reporting units & results with an emphasis on measuring techniques and interpretation of results.

Phosphorus Availability from Organic Residuals

Dr. Amy Shober, Associate Professor and Extension Specialist Plant and Soil Sciences, University of Delaware

This session will include the impacts of aluminum (Al), iron (Fe), calcium (Ca) and magnesium (Mg) on phosphorus (P) availability in organic residuals.

Phosphorous Dynamics and Mitigation in Soil

Jennifer Weld, PhD Candidate, Soil Science Project Associate, Penn State University

This session will include an overview of how phosphorus behaves in soils, a description of the phosphorus index and whole farm phosphorus balances to set critical phosphorus levels. Managing soil test phosphorus over crop rotations will also be addressed among other P mitigation practices.

12:15– 1:30 Networking Lunch (provided) – Visit Exhibits and our Sponsors!

1:30 *Interpretation and Recommendations: Round Tables and Panel Discussions*

- **Agricultural Crops** round table discussions.

Key questions: What problems in phosphorus management are you currently facing? What are some examples of promising mitigation practices? Where are the gaps in research, education and implementation? How can we continue using organic residuals responsibly?

Discussion Facilitators:

- *Katie Campbell-Nelson, UMass Extension Vegetable Program*
- *Ned Beecher, NEBRA” Industry perspective and new approaches.*
- *Bruce Hoskins, Soil Testing Program, University of Maine*
- *Dr. John Spargo, Director, Agricultural Analytical Services Lab, Penn State*
- *Dr. Masoud Hashemi, UMass Extension: Responsible manure and other residuals use and P cover cropping for P management.*
- *Andrew Carpenter, Northern Tilth, NEBRA Member: P management alternatives for dairy.*
- *Anthony Drouin, Casella Organics, NEBRA member: P management from organic fertilizers.*

- **Turf** panel and audience discussion *Facilitator: Mary Owen, UMass Extension*

Key questions for turf: How does the use of composts and other organic residuals impact turf , soil, soil P and the movement of P from the turf system? What analyses, interpretation and guidelines are needed? What are the BMPs for using these materials? Is there research needed to answer the questions for which the answers are not clear?

Panel:

- *Dr. William Dest, University of Connecticut, Emeritus*
- *Dr. Scott Ebdon, University of Massachusetts*
- *Dr. Jason Henderson, University of Connecticut*
- *Dr. Geoff Kuter, Agresource Inc.*
- *Ted Wales, Hartney Greymont, Needham, MA*

Discussion Summaries: Questions & Concerns Related to Phosphorus

2:40-2:55 Break

3:00 Question and Answers with *Dr. John Spargo, Dr. Amy Shober, Jennifer Weld*

3:30 Closing Remarks *Mary Owen, University of Massachusetts Amherst*