BMP GUIDE UPDATE & ANIMAL MORTALITY MANAGEMENT EXPERT PANEL

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Watershed Technical Workgroup

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VIRGINIA TECH

Chesapeake Bay Program
Science. Restoration. Partnership.

All photos from Chesapeake Bay Program: https://flic.kr/ps/rYeEj

Chesapeake Bay Program Quick Reference Guide for BMPs

A-2. Nutrient Management

General Information

Nutrient management planning has been a common practice for decades, as it helps the farmer maximize profits by balancing crop yields and nutrient inputs. Nutrient management has four basic components: nutrient source, rate, placement and timing. Under a Nutrient Management Plan, each of these four components is managed at the field or sub-field scale in a manner that supports crop productivity, achieves high nutrient use efficiency by the crop and minimizes nutrient loss.

Figure A-2-1. A tractor spreads liquid manure on a field. All crops need nutrients such as nitrogen and phosphorus to grow, and farmers can get those nutrients from animal manure, commercial inorganic fertilizers or both. Source: Chesapeake Bay Program

CBP Definition(s)

Nutrient Management (NM): The implementation of a site-specific combination of nutrient source, rate, timing, and placement into a strategy that seeks to optimize agronomic and environmentally efficient utilization of nitrogen (N) and phosphorus (P). Improvement in nutrient-use efficiency necessitates documentation of nutrient management implementation strategies that are suitable for independent verification.

The BMPs for Nutrient Management are categorized into *Core Nutrient Management* and *Supplemental Nutrient Management* for both N and P. *Supplemental NM* is further divided by *Rate*, *Placement*, and *Timing*.

Nitrogen Core Nutrient Management: Applications of nitrogen are made in accordance to all of the following elements as applicable:

- Land-grant university recommendations for nitrogen applications at field level.
- Manure analysis and volume, using either test or book values to determine nitrogen content.
- Calibration of spreader/applicator.
- Yield estimates and cropping plan at the field level.
- Cropping and manure application history at the field level.

Phosphorus Core Nutrient Management: Applications of phosphorus are made in accordance to all of the following elements as applicable:

- Land-grant university recommendations for phosphorus at the field level. This may include recommendations resulting from advanced assessment (i.e. P Index, etc.) that recommend higher P application rates where the risk of P loss is low.
- Soil test for phosphorus levels at the field level. This requirement may be waived if restrictions on manure applications (rate, timing, and placement) are imposed that limit P application rates and management to the same degree as if the soil test result for phosphorus was in the "high" category.
- Manure analysis and volume using either test or book values to determine phosphorus content.
- Calibration of spreader/applicator.

Figure A-2-2. A crop consultant collects a soil sample to test nitrogen availability in the soil. A test like this helps decide how much nitrogen the growing crop needs for optimum production. Source: NRCS Photo Gallery

BMP GUIDE NOW AVAILABLE

- "BMP Guide" is online
  - chesapeakebay.net/bmpguide
- Currently includes all Ag practices, except
  - Biofilters, poultry litter amendments, lagoon covers
  - Practices currently under review or soon to be reviewed (e.g., water control structures, mortality composters)
  - Interim practices
- Septic and other remaining BMPs to be added in next update
- Intended as a living document
  - New/revised BMP reference sheets following WQGIT approval of panel reports
  - Errata/corrections periodically as able

ANIMAL MORTALITY BMP PANEL

Approved by AgWG on Aug. 16

Panel membership approved by AgWG + panel support roster

Name	Affiliation	Role
Doug Hamilton, PhD, PE	**Oklahoma State University**	**Panel Chair**
Thomas Bass	**Montana State University**	**Panel Member**
Amanda Abnee Gumbert, PhD	**University of Kentucky**	**Panel Member**
Ernest Hovingh, PhD	**Pennsylvania State University**	**Panel Member**
Mark Hutchinson	**University of Maine**	**Panel Member**
Teng Teeh Lim, PhD, PE	**University of Missouri**	**Panel Member**
Sandra Means, PE	**USDA NRCS, East Nat'l Tech Support Center**	**Panel Member**
George "Bud" Malone	**Malone Poultry Consulting; University of Delaware Extension (retired)**	**Panel Member**
Panel Support		
Jeremy Hanson	*Virginia Tech*	*Panel Coordinator*
Brian Benham	*Virginia Tech*	*VT Principal Investigator*
Jeff Sweeney	*EPA CBPO*	*CBPO Modeling Team and Watershed Technical Workgroup rep*
Mark Zolandz	*EPA Region 3*	*EPA Region 3 regulatory rep*
Loretta Collins	*University of Maryland, CBPO*	*AgWG Coordinator*
Mark Dubin	*University of Maryland, CBPO*	*Senior Ag Advisor*

NEXT STEPS

- Aug 16: Approved by AgWG
- Currently: Finalize agreement b/w Va Tech and OK State; will begin to schedule and plan first set of calls, public stakeholder session and face-to-face meeting
- Can provide periodic updates to WTWG as requested/needed

QUESTIONS?

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