



BMP GUIDE UPDATE & ANIMAL MORTALITY MANAGEMENT EXPERT PANEL MEMBERSHIP

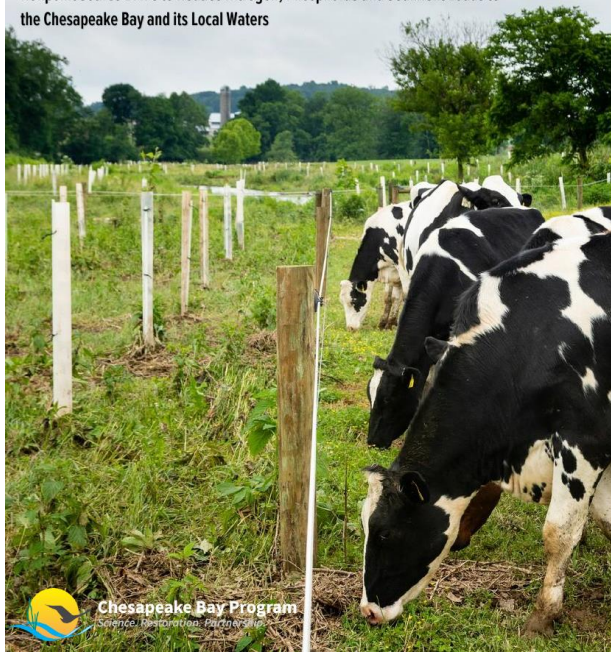
Jeremy Hanson, Virginia Tech
Presented to Agriculture Workgroup
August 16, 2018



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

Quick Reference Guide for Best Management Practices

Nonpoint Source BMPs to Reduce Nitrogen, Phosphorus and Sediment Loads to the Chesapeake Bay and its Local Waters



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.

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-2-1. 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



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 Reference Sheet A-2: Nutrient Management

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- “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

BMP GUIDE NOW AVAILABLE



ANIMAL MORTALITY BMP PANEL MEMBERSHIP

For AgWG approval



RECAP OF PROCESS

- Proposed membership distributed for feedback on July 10
- Requested feedback by July 31
- Feedback received from:
 - Chris Brosch, DDA
 - Gary Flory, VA DEQ
 - Beth McGee, CBF
 - Kristen Hughes-Evans, Sustainable Chesapeake
 - Mary Gattis, ACB/LGAC
 - Gene Yagow, Va Tech (retired)/STAC



SUMMARY OF FEEDBACK

- Positive endorsement (“looks good”)
 - Kristen Hughes-Evans, Sustainable Chesapeake
 - Mary Gattis, ACB/LGAC
 - Gene Yagow, Va Tech (retired)/STAC
- Misc questions/input
 - Beth McGee, CBF
- Requested additional panel member(s) from Chesapeake Watershed
 - Gary Flory, VA DEQ
 - Chris Brosch, DDA (suggested someone with DelMarva poultry experience in particular)
- Three individuals suggested for consideration: George “Bud” Malone (UD-Extension, retired); Gary Flory (VA DEQ); Bob Peer (VA DEQ)
 - Each individual provided CV/bio and signed conflict-of-interest form to Jeremy
 - Jeremy worked with Doug Hamilton (Panel Chair) to review/consider the best path forward

Panel membership for AgWG approval + 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
<i><u>Panel Support</u></i>		
<i>Jeremy Hanson</i>	<i>Virginia Tech</i>	<i>Panel Coordinator</i>
<i>Brian Benham</i>	<i>Virginia Tech</i>	<i>VT Principal Investigator</i>
<i>Jeff Sweeney</i>	<i>EPA CBPO</i>	<i>CBPO Modeling Team and Watershed Technical Workgroup rep</i>
<i>Mark Zolandz</i>	<i>EPA Region 3</i>	<i>EPA Region 3 regulatory rep</i>
<i>Loretta Collins</i>	<i>University of Maryland, CBPO</i>	<i>AgWG Coordinator</i>
<i>Mark Dubin</i>	<i>University of Maryland, CBPO</i>	<i>Senior Ag Advisor</i>

*added as 8th panel member following partnership feedback, updated materials posted on AgWG calendar entry



NEXT STEPS

- Today: Request AgWG decision, approval of membership (with addition of Bud Malone)
- Once membership is approved: 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 AgWG as requested



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QUESTIONS?