



Chesapeake Bay Program
SCIENTIFIC AND TECHNICAL ADVISORY COMMITTEE

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December 13, 2012

Frank Coale, Chair, Chesapeake Bay Program's Agriculture Workgroup
University of Maryland
1439 Animal Science/Ag. Engineering Building
College Park, MD 20742

Mark Dubin, Coordinator, Chesapeake Bay Program's Agriculture Workgroup
410 Severn Avenue
Suite 112
Annapolis, MD 21403

Dear Dr. Coale and Mr. Dubin:

The Chesapeake Bay Program's (CBP) Water Quality Goal Implementation Team (WQGIT) and the Agriculture Workgroup (AgWG) requested that CBP's Scientific and Technical Advisory Committee (STAC) host a joint workshop with the CBP's AgWG in October, 2010 to assess the next generation of agricultural conservation tools. The workshop brought together agricultural scientists, producers, state and federal stakeholders and agribusiness experts to discuss best management practices (BMPs) with the potential of reducing nutrient loads to the Chesapeake Bay and its tributaries. A summary of the workshop's proceedings, findings, and recommendations can be found in the attached report.

Workshop participants had the opportunity to attend breakout sessions on the following topics: nitrogen management; alternative manure uses; dairy feed management; phosphorus management; ammonia emissions management; and livestock manure management. Presenters in each breakout session discussed the most current scientific knowledge about BMPs and nutrient management techniques. Presenters then led participants through a procedure to identify the most appropriate BMPs and approaches that could be widely adopted in the short-term and the long-term to reduce nutrient losses from agricultural lands. These short-term and long-term techniques are described in detail in the report and selected techniques are summarized below:

Nitrogen Management

- Short-term: Expand use of cover crops especially on sites with high residual nitrogen levels; expand crop and soil nitrogen tests with feedback through adaptive management.
- Long-term: Incentivize nitrogen BMP adoption by increasing economic incentives and improving manure nitrogen use efficiencies; expand adaptive management tools.

Alternative Manure Uses

- Short-term: Improve cost-effectiveness of proven manure technologies that have yet to be commercially deployed.
- Long-term: Aggregate farm-scale projects for regulatory permitting and environmental marketing; provide a regulatory "safe harbor" for innovative manure uses while the technologies are tested and confirmed.

Dairy Feed Management

- Short-term: Incentivize reductions in nitrogen and phosphorus in dairy feed; verify feeding levels using milk urea nitrogen and manure phosphorus testing.
- Long-term: Integrate whole-farm planning into farm management systems to address the critical interactions of precision feeding and nitrogen and phosphorus management.

Phosphorus Management

- Short-term: Expand incorporation or injection of sludge and animal manure; evaluate limits on phosphorus applications during winter months; increase efforts to establish uniform phosphorus management planning among states.
- Long-term: Reduce soil phosphorus levels to agronomic optimum levels across the watershed by developing whole-farm phosphorus management plans.

Ammonia Management

- Short-term: Modify diets by reducing excess crude protein; expand use of injection or conservation tillage to incorporate manure.
- Long-term: Reduce losses from animal housing by using non-litter flooring in poultry houses and urine separation in dairy barns.

Livestock Manure Management

- Short-term: Streamline state and federal CAFO standards; encourage incorporation of organic phosphorus into the soil using manure injection equipment, and eliminate litter application on soils with high concentrations of phosphorus.
- Long-term: Develop new markets for manure with state and federal support; develop a possible watershed clearing house for alternative manure technologies.

All STAC reports are meant to promote conversation among stakeholders about specific improvements that can be made to the restoration effort based upon the most current science. For this reason, STAC requests that the Agriculture Workgroup consider the suggested short-term and long-term approaches to reducing nutrient losses from agricultural lands. STAC also requests a written response by February 13, 2013 from the Agriculture Workgroup to the specific recommended approaches above. STAC is particularly interested to hear if the state and federal partners are using or will promote the approaches listed above to reduce nutrient losses from agricultural lands. If not, what are the barriers to implementation from the state and federal perspective, and which scientific and/or technical analyses might STAC sponsor that could move these actions forward?

Thank you for taking the time to support this effort and consider the findings of this STAC workshop report. STAC looks forward to working with the Agriculture Workgroup, the Protect and Restore Water Quality GIT, and all the partners on this issue in the future.

Respectfully,



Chris Pyke
Chair, Chesapeake Bay Program's Scientific and Technical Advisory Committee

Cc: Nick DiPasquale, Larry Merrill, Rich Batiuk, Katherine Antos, Gary Shenk