New Approaches to Poultry Litter Management in the Chesapeake Bay Watershed:

Win-Win Pathways for Agriculture and the Bay

Executive Summary

Delmarva Land & Litter Work Group

August 5, 2015

Program Overview

Through the Delmarva Land and Litter Project, a "kitchen cabinet" Work Group composed of a diverse cross section of grain growers, poultry producers and integrators, academic experts, extension agents, along with conservation and business partners, came together to assess progress in managing nutrient pollution associated with the storage, transport and land application of poultry litter on the Delmarva Peninsula. One of the group's primary objectives was to broaden the dialogue with producers and value chain stakeholders on ways to utilize manure and poultry litter beyond what is needed to support crop production. The Work Group's mission was to review the "current state" of litter management and identify economically viable agronomic, technological or market based strategies, solutions and management models that can be deployed to abate agricultural nutrient pollution and utilize poultry litter that can no longer be land applied on phosphorous saturated soils.

Vision and Goals

Delmarva farmers and their agri-business partners are respected stewards of the land, guardians of natural resources and champions of the rural cultural heritage in the Chesapeake Bay watershed:

Together with our partners, we commit to provide catalytic leadership to accomplish the following goals by 2025:

- *Delmarva agriculture is regionally neutral in importing and exporting nutrients, and wherever possible, nutrients are recycled locally to support sustainable agricultural operations; and*
- *Nutrients are utilized in farming operations without negative environmental impacts.*

- In the Chesapeake Bay watershed, <u>all sectors</u> have a responsibility and moral obligation to reduce nutrient pollution.
- Land application of animal manure and litter (M/L) for crop production remains the primary method of managing manure in the Chesapeake Bay Watershed. When M/L can be land applied at proper agronomic levels, this remains the most cost-effective and technologically feasible method of managing manure.
- In some areas, the long history and repeated application of manure and other fertilizers on the Delmarva Peninsula has resulted in soils saturated with excess Phosphorous that can increase nutrient runoff and leaching to the Chesapeake Bay and its tributaries.
- Technology continues to develop slowly and is emerging based on economies of scale and return on investment.
- The technologies for producing these value added products are not mature, hence there is a growing need within the animal agriculture sector to have full service providers available if the technology is to be deployed appropriately.
- Government and market incentives to offset investments, costs of maintenance of existing and new technology systems and marketing of manure and litter byproducts are needed in order to enable agricultural producers to achieve pollution reduction goals while remaining economically viable in the long-term.
- Despite regulatory concerns, moderate growth of the poultry industry continues on the Peninsula.

Win-Win Pathways

Despite the substantial progress that has been achieved over the past five years in reducing poultry nutrient pollution, much work remains to be done to accomplish the ambitious pollution reduction goals established under the EPA's total maximum daily load program.

As members of the Delmarva Land and Litter Work Group, we recommend that efforts to address nutrient pollution associated with poultry production on the Delmarva Peninsula should remain focused primarily along two pathways:

    a) *Responsible land application of animal manure and litter; and*

    b) *Alternative uses and markets for manure/poultry litter.*

In support of these efforts we have identified five major recommendations for the consideration of policy makers, government officials, farmers, chicken growers, poultry integrators, agribusiness value chain partners, universities, conservationists and environmentalists, other Chesapeake Bay stakeholders and land management project funders. If implemented, we believe that significant progress could be achieved in meeting the nutrient reduction goals that have been established for the agricultural sector. The end result would be pathways for land management that will improve the health and productivity of agriculture and the Bay, while strengthening the economy that preserves and protects the region's rural cultural heritage.

1. **Create and Support a Landscape Scale, Multi-Stakeholder Leadership Platform for Addressing Agricultural Nutrient Pollution**
2. **Invest in Mass Balance Research and Analysis**
3. **Support and Fund a Virtual Poultry Nutrient Management Resource and Demonstration Program**
4. **Standardize Regulations for Manure and Litter Storage, Transport and Use**
5. **Create and Fund Financing Mechanisms That Support Bundled Technologies**

Path Forward

Through our work together exploring new ways to abate pollution associated with the storage, transport and land application of poultry litter on the Delmarva Peninsula, we have come to appreciate the reality that environmental, economic, energy and quality of life goals are all interconnected. Rather than pursuing each separately using our own individual lenses to assess options and measure progress, a better way forward would be for our communities to come together, forge consensus on the future we seek, and collaborate in actions to achieve shared goals. Maintaining a healthy bay and a vibrant agricultural economy in ways that support both will require a mammoth undertaking characterized by fresh thinking, a willingness to experiment with new approaches and the formation of trust relationships with communities that for decades have too often pursued win-lose, rather than win-win strategies. Aided by advancements in technology and our commitment to the stewardship and wise management of our natural resources, we are prepared, in a subsequent phase of work, to provide catalytic leadership in solving poultry related nutrient pollution problems on Delmarva. We invite other partners to join us in addressing this epic challenge.

3

Delmarva Land and Litter Project Leaders
2014-2015

Chip Bowling Grain Producer Newburg, MD	Beth Sise Mountaire Farms Millsboro, DE
Bill Brown Poultry Extension Agent Georgetown, DE	Andrew McLean Poultry Producer Sudlersville, MD
Allen Davis Grain and Poultry Producer Galena, MD	Bob Monley Technical Consultant. Lebanon, OH
Ray Ellis Ellis Farm Inc. Millsboro, DE	Michael Phillips Perdue Farms Salisbury, MD
Bob Frazee MidAtlantic Farm Credit Westminster, MD	Jennifer Rhodes Senior Extension Agent Centreville, MD
Jim Hanson Dept. of Ag. & Resource Economics University of MD, College Park, MD	Hans Schmidt Grain Producer Sudlersville, MD
Bobby Hutchison Grain Producer Cordova, MD	Paul Spies Chester River Association Chestertown, MD
Sean Jones Milk Producer Massey, MD	Mike Twining Willard Agri-Service Worton, MD
Drew Koslow Choptank Riverkeeper Easton, MD	Ernie Shea (Facilitator) Natural Resource Solutions Lutherville, MD
Bud Malone Poultry Consultant Princess Anne, MD	Ethan Gilbert Natural Resource Solutions Lutherville, MD