



COLLEGE OF
AGRICULTURE &
NATURAL RESOURCES

2017

AGRICULTURAL NUTRIENT MANAGEMENT PROGRAM ANNUAL REPORT



HELPING AGRICULTURAL
PRODUCERS MANAGE
NUTRIENTS SINCE 1989

Introduction

This report highlights the work of the College of Agriculture and Natural Resources' (AGNR) Agricultural Nutrient Management Program (ANMP) in fiscal year 2017 (FY 2017).

The ANMP is funded by the Maryland Department of Agriculture (MDA). The program provides (1) nutrient management planning services to Maryland farmers through a network of nutrient management advisors located in all county Extension offices and (2) continuing education and technical support to certified nutrient management consultants and certified farm operators via nutrient management specialists located on the College Park campus. In addition, the program includes a programming effort to continually update the AGNR's nutrient management software products.

The guiding principle behind nutrient management planning and implementation, as outlined in the Maryland Water Quality Improvement Act of 1998, is that nutrients applied in any form should balance with plants' nutrient needs. In agricultural production systems, managing nutrients to meet, not exceed, crop needs may increase profitability and improve the health of the Chesapeake Bay and its tributaries.

Regardless of land use, improperly or excessively applied nutrients can leach into the groundwater or exit landscapes via runoff from precipitation and then migrate into Maryland's waterways. Once in the water, excess nutrients upset the Bay's ecological balance by causing algal blooms and contributing to eutrophication and degradation of wildlife habitat.



2017 Progress and Achievements

Under the ANMP, College of AGNR's nutrient management advisors:

- prepared nutrient management plans for 28 Manure Transport Project clients, allowing transportation and application of manure on 5,759 acres;
- wrote nutrient management plans or updated them to partially fulfill permit requirements for 190 CAFO or MAFO clients;
- conducted the Phosphorus Site Index for 214 clients on 1,174 fields encompassing over 19,700 acres;
- implemented the Pre-Sidedress Nitrate Test (PSNT) for 26 producers with a total of 2,484 acres. This resulted in an estimated reduction of over 5,400 pounds of nitrogen applied;
- implemented the Fall Soil Nitrate Test (FSNT) for over 130 fields in 7 counties. This resulted in an estimated reduction of over 34,000 pounds of nitrogen applied;
- wrote 546 new nutrient management plans for 233 Maryland producers for approximately 18,600 acres. The nutrient management advisors updated 6,309 plans for 1,530 clients farming approximately 264,500 acres. (Figure 1).

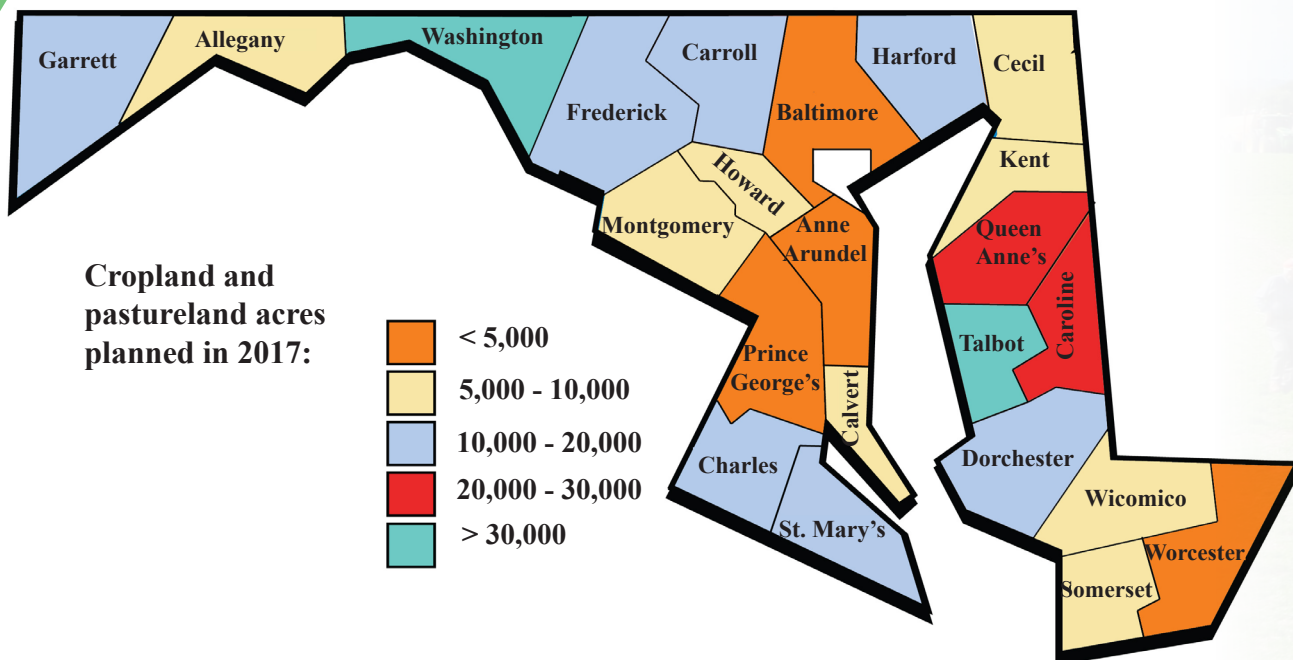


Figure 1. Farmland acres planned per county in fiscal year 2017 by AGNR nutrient management advisors.

Continuing Education

MDA and the College of AGNR co-sponsored continuing education programs to help certified nutrient management consultants and certified farmers meet their continuing education requirements in FY 2017.

- Thirty-one (31) people attended a nutrient management field day, *Practical Experiences in Nutrient Management*. Workshop topics included:
 - soil nitrate testing,
 - phosphorus risk assessment tools,
 - manure spreader calibration,
 - silage yield checks,
 - corn grain yield checks,
 - safe use of drive-on scales for yield checks and spreader calibration, and
 - soil health assessment tools.
- Two face-to-face *How to Write a Nutrient Management Plan* workshops had 20 attendees.
- Two webinars had 117 attendees and offered four one-hour continuing education units in FY 2017. Sessions were offered via the University of Maryland's web conference system. The topics were:
 - *Go Early, Go Deep-Effective Cover Cropping for Nitrogen Capture*
 - *Changes to Nutrient Management Regulations*
 - *Weathering Water Extremes in the Changing Climate of the Mid-Atlantic Region*
 - *Adaptation Strategies for Climate Change*
- AGNR coordinated with other organizations to provide Maryland certified clients with information about continuing education opportunities sponsored by eXtension's Livestock and Poultry Environmental Learning Center (LPELC), the American Society of Agronomy's webinars, and the USDA-Natural Resources Conservation Service's (USDA-NRCS) East Technology Support Center webinar series.

Pre-certification Exam Training

Twenty-six (26) individuals attended Fundamentals of Nutrient Management—a course designed to help participants prepare for the MDA nutrient management certification exam.

Farmer Training and Certification

- Fifty-nine (59) farmers were certified through the *Farmer Training and Certification* (FTC) initiative to write their own nutrient management plans. Three hundred forty-eight (348) certified farmers have maintained their certification by complying with continuing education requirements. To date, 650 farmers have been certified through this training initiative.
- After initial certification, University of Maryland nutrient management specialists assisted farmers with updating nutrient management plans and using *NuMan Pro* software.
- Five plan writing help sessions were offered at four different locations to provide certified farmers with assistance in updating their nutrient management plans.

AGNR's nutrient management advisors developed plans for:



23 orchards



8 vineyards


186 clients who were under enforcement for noncompliance

206 clients who participated in the Maryland Agricultural Water Quality Cost-Share (MACS) cover crop program

Nutrient Management Software

Major programming was underway in FY 2017 to add functionality for streamlining the development and documentation of the various multi-year rotations and other options allowed under the Phosphorus Management Tool and the transition phases leading up to its full implementation. The results of that effort, *NuMan Pro 5.0*, on schedule for release in January 2018, will allow nutrient management consultants to prepare nutrient management plans that conform to Maryland Nutrient Management regulations with emphasis on documenting compliance with transition phases to the Phosphorus Management Tool.

ANMP Web Site

The ANMP web site (<http://extension.umd.edu/anmp>) provides users with access to general information about the program, training materials, publications and resources for developing nutrient management plans. The ANMP also maintains a web page listing training opportunities and current events on the social media site, Twitter (www.twitter.com/UMANMP). 



In Closing

ANMP's efforts are dual-focused. The Program provides support to the nutrient management planning community through educational opportunities, technical support and software development. It also provides support to agricultural producers through the development of nutrient management plans. These efforts encourage compliance by agricultural producers with the Water Quality Improvement Act, thereby documenting agriculture's contribution to Maryland's Total Maximum Daily Load commitments.

Photo Credits

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