

**AGNR**

# Agricultural Nutrient Management Program

SERVING MARYLAND AGRICULTURAL PRODUCERS SINCE 1989

UNIVERSITY OF  
MARYLAND  
EXTENSION



## 2019 ANNUAL REPORT

In 2019, the University of Maryland Agricultural Nutrient Management Program developed nutrient management plans for over

**260,000**

Maryland acres, serving

**1,300+**

Maryland farmers, and provided in-person training to

**120**

Maryland farmers, consultants, and agency personnel.



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# Maryland's largest economic sector is agriculture, and its greatest natural resource is the Chesapeake Bay. The University of Maryland Agricultural Nutrient Management Program (UM-ANMP) protects both through nutrient management planning and implementation.

The guiding principle of the Maryland Water Quality Improvement Act of 1998 is that nutrient supply balances crop nutrient requirements. Nutrient management plans provided by the UM-ANMP contain crop-needs-balanced recommendations that can increase farm profitability and improve the health of the Chesapeake Bay and its tributaries. Excessive nutrient applications cause an upset to ecological balance by removing oxygen and decreasing light penetration in Bay water.

Funded by the **Maryland Department of Agriculture (MDA)**, the UM-ANMP serves farmers, consultants, and the Maryland public. Duties include development of nutrient management plans for farmers via advisors located in county **University of Maryland Extension (UME)** offices, presentation and development of continuing education programming via UM-ANMP nutrient management specialists, and maintenance and support for nutrient management software, NuManPro 5.0.

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## Nutrient Management Plan (NMP) Development Statistics

NMP development services are a primary function of the UM-ANMP. Plans are developed by nutrient management advisors located in UME offices in each county across Maryland. Planning services are provided free of charge.

### FY 2019 Highlights

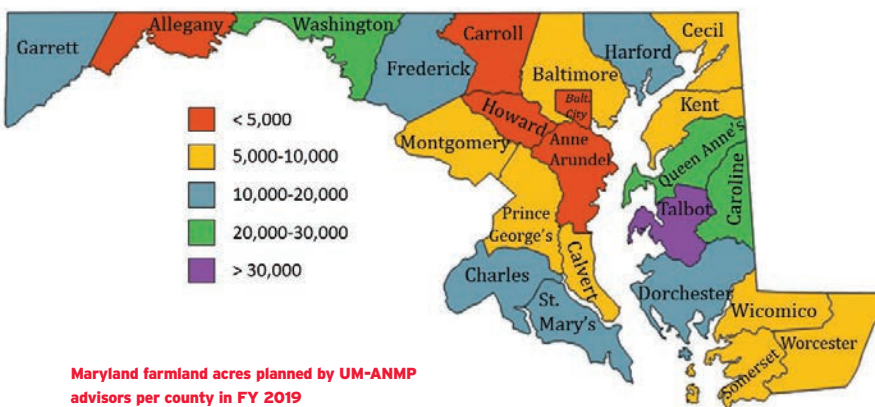
- 260,187 total acres planned (243,677 updated and 16,510 new)
- 1,364 clients
- 319 clients received multiple-year NMPs, covering 18,506 acres
- 109 clients received NMPs who were under MDA enforcement for non-compliance
- 903 animal operations (Alpaca: 2, Beef: 304, Dairy: 107, Horse: 164, Mule: 1, Poultry: 156, Sheep: 19, Swine: 6, Mixed: 144)
- 121 CAFO and MAFO clients
- 107 new and updated "no land" NMPs
- 40 management units of tree fruits, small fruits, and grapes
- 860 fields, managed by 180 clients, were analyzed for risk of phosphorus loss



### FY 2019 Manure Transport Highlights

**19** clients received manure with the Maryland Manure Transport Program and

**65** clients transported manure outside of this program.



Maryland farmland acres planned by UM-ANMP advisors per county in FY 2019

## Training Sessions and Continuing Education Unit Opportunities

The UM-ANMP provides high-quality continuing education, training, and help sessions for farmers, consultants, and others with an interest in Maryland agricultural nutrient management. Featured here are some of the many ways our program accomplished this outreach in FY 2019.



### Practical Experiences in Agronomy

**Description:** Demonstrations and activities to enhance any certified farmer or certified nutrient management consultant's skill set. Topics: calibrating manure spreaders, corn yield checks, sprayer calibration, and grain drill calibration.

**Central Maryland Research and Education Center** | 15 Attendees

### Farmer Training and Certification

**Description:** Farmers learn how to write NMPs for their operation that meet MDA's regulations. Participants receive a course binder, take an exam to become certified to write their own plan, and obtain nutrient applicator voucher credits.

**Wye Research and Education Center**  
10 Attendees

**Frederick** | 7 Attendees

**Baltimore City** | 13 Attendees

### Plan Writing Help Sessions

**Description:** Certified farmers receive assistance developing an updated NMP from UM-ANMP nutrient management specialists.

**Six Locations Across Maryland**  
25 Certified Farmer Attendees

### Fundamentals of Nutrient Management

**Description:** Two-day training course designed to prepare attendees for MDA's nutrient management certification exam.

**Annapolis** | 27 Attendees

### How to Write a Nutrient Management Plan

**Description:** Participants learn how to write a NMP from beginning to end and how to use NuMan Pro NMP software.

**Montgomery County** | 12 Attendees

**Wye Research and Education Center**  
10 Attendees





## FY 2019 Nitrogen Highlights

# 7,821

pounds of nitrogen were saved across

# 3,571

acres using the FSNT.

# 33,731

pounds of nitrogen were saved across

# 2,695

acres using the PSNT.

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## Additional Services and Software Updates

UM-ANMP advisors assist and instruct farmers with soil and manure tests, manure spreader calibrations, and yield checks. Advisors also conduct **Pre-sidedress Nitrate Tests (PSNT)** for corn and **Fall Soil Nitrate Tests (FSNT)** for fall-planted wheat and barley in-house, free of charge. PSNTs and FSNTs conducted during the growing season measure soil nitrate availability to the crop and whether nitrogen fertilizer is needed at planned rates. This testing can save farmers money and prevent excess nitrogen from entering surface water.

### Software Updates

- Release of NuMan Pro version 5.0
- Recommendations for new crops (including industrial hemp)
- Updated starter recommendations for some vegetable crops
- Rotation builder feature to accommodate requirements for clients in University of Maryland Phosphorus Management Tool (UM-PMT) transition management phases
- Updated National Soil Information System (NASIS) soil survey data



Industrial Hemp Research

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**Happy Retirement**  
to Dr. Patricia Steinhilber.  
Thank you for nurturing the  
UM-ANMP for more than  
25 years.



**Welcome**  
to Dr. David Ruppert,  
the new program director  
for the UM-ANMP.