Chesapeake Bay Agricultural Data Projects - Fertilizer

Agriculture Workgroup

November Conference Call Meeting

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UNIVERSITY OF MARYLAND EXTENSION

Solutions in your community

Chesapeake Bay Program

A Watershed Partnership

Mark Dubin
Senior Agricultural Advisor

University of Maryland Extension - College Park
College of Agriculture and Natural Resources

Department of Environmental Science & Technology
mdubin06@umd.edu

EPA Chesapeake Bay Program Office
mdubin@chesapeakebay.net

Chesapeake Bay Agricultural Data Projects - Fertilizer

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- Virginia Commercial Fertilizer Data Research Project
  - Ongoing Progress:
    - The previous versions of the Chesapeake Program Watershed Models (CBWM) over the past 35-plus years have represented agricultural fertilizer nutrient inputs as an "add-on" to met crop production needs.
    - Access to published data on commercial fertilizer use has been very limited and/or with scale limitations.

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- Virginia Commercial Fertilizer Data Research Project
  - Ongoing Progress:
    - The current Phase 6 version of the Chesapeake Program Watershed Model (CBWM) is the first to use commercial fertilizer data inputs to represent agricultural fertilizer nutrient inputs at the county-scale to met crop production needs.
    - The new ability to use commercial fertilizer data nutrient inputs directly in the Phase 6 CBWM opens up new possibilities for the future.

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- Virginia Commercial Fertilizer Data Research Project
  - Proposal: Future Opportunities
    - To develop a Virginia-based pilot research project to collect and analyze commercial fertilizer "point-of-use" application data at the county-scale in comparison to currently available "point-of-sale" for representing annual nutrient use in agricultural production systems.

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- Commercial Fertilizer Data Research Project
  - Basis for Pilot: Definitions
    - "Point-of-sale" – aggregated commercial fertilizer product sales records maintained at the company or corporate office location.
    - "Point-of-use" – non-aggregated sold commercial fertilizer product data associated with the location of application.

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- Commercial Fertilizer Data Research Project
  - Basis for Pilot: Location
    - Virginia's public and private partners have been evaluating options to improve commercial fertilizer data for several years.
    - Interest from academic, industry, and jurisdictional partners to compare current "point-of-sale" commercial fertilizer data with "point-of-use" data at the county-scale.

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- Commercial Fertilizer Data Research Project
  - Basis for Pilot: Current Data
    - Commercial fertilizer "point-of-sale" national data currently available from the Association of the American Plant Food Control Officials (AAPFCO).
    - Data currently limited to 2014 or earlier – soon to be five years of data non-availability.

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- Commercial Fertilizer Data Research Project
  - Basis for Pilot: Current Data
    - AAPFCO "point-of-sale" is used in the Phase 6 CBWM for representing the use of fertilizer for as an agricultural crop nutrient source at the county-scale.
    - "Point-of-sale" data for the six Chesapeake Bay states is aggregated regionally and then distributed to each Bay watershed county annually based on crop need.

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- Commercial Fertilizer Data Research Project
  - Basis for Pilot: Current Data
    - "Point-of-sale" data not currently available for the six Chesapeake Bay states is held constant to the last year of AAPFCO data by the Phase 6 CBWM – currently 2012.
    - The Phase 6 CBWM 2-year milestone updates in 2019 will include new AAPFCO data for 2013-2014.

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- Commercial Fertilizer Data Research Project
  - Basis for Pilot: Questions
    - Can "point-of-use" fertilizer data be effectively collected and aggregated at the county-scale for counties in the Chesapeake Bay Watershed?
    - Would significant differences be seen at the county-scale between "point-of-sale" and "point-of-use" methods for representing annual fertilizer use?

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- Commercial Fertilizer Data Research Project
  - Proposed Pilot: Partners
    - A collaborative research pilot project has been proposed in Virginia to answer these questions for future consideration.
    - Partners –
      - VA Commercial Fertilizer Companies
      - VA Department of Conservation and Recreation
      - Virginia Tech Blacksburg
      - University of Maryland College Park

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- Commercial Fertilizer Data Research Project
  - Proposed Pilot: Process
    - Six counties are proposed to be the focus of the pilot research project –
      - Three primarily fertilizer nutrient sourced counties
      - Three primarily manure nutrient sourced counties
    - Agricultural fertilizer "point-of-use" data will be collected for a one-year period.

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- Commercial Fertilizer Data Research Project
  - Proposed Pilot: Process
    - Agricultural "point-of-use" data will be aggregated at the county-scale to safeguard personal identify information (PII) of companies and customers.
    - "Point-of-use" data will be compared to the Phase 6 CBWM "point-of-sale" based data at the county-scale for the one-year period.

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- Commercial Fertilizer Data Research Project
  - Proposed Pilot: Process
    - Agricultural "point-of-use" data will be aggregated at the county-scale to safeguard personal identify information (PII) of companies and customers.
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- Commercial Fertilizer Data Research Project
  - Proposed Pilot: Results
    - At the conclusion of the pilot a joint LGU project report will be published on the resulting data comparisons and of the research process and analysis methodologies.
    - Estimated pilot project completion date – late 2020 to early 2021.


Questions?