



Chesapeake Bay Partnership: Agricultural Data Research

**Agriculture Workgroup Meeting
Chesapeake Bay Program Office
Annapolis, Maryland
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MARYLAND

EXTENSION

Solutions in your community



Chesapeake Bay Program

A Watershed Partnership

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- **Topic Highlights:**

- Phase 6.0 Model Update Timeline
- Commercial Poultry Research Project Proposal
- Commercial Swine Research Project Proposal
- Potential Future Research Projects
- Questions and Discussion

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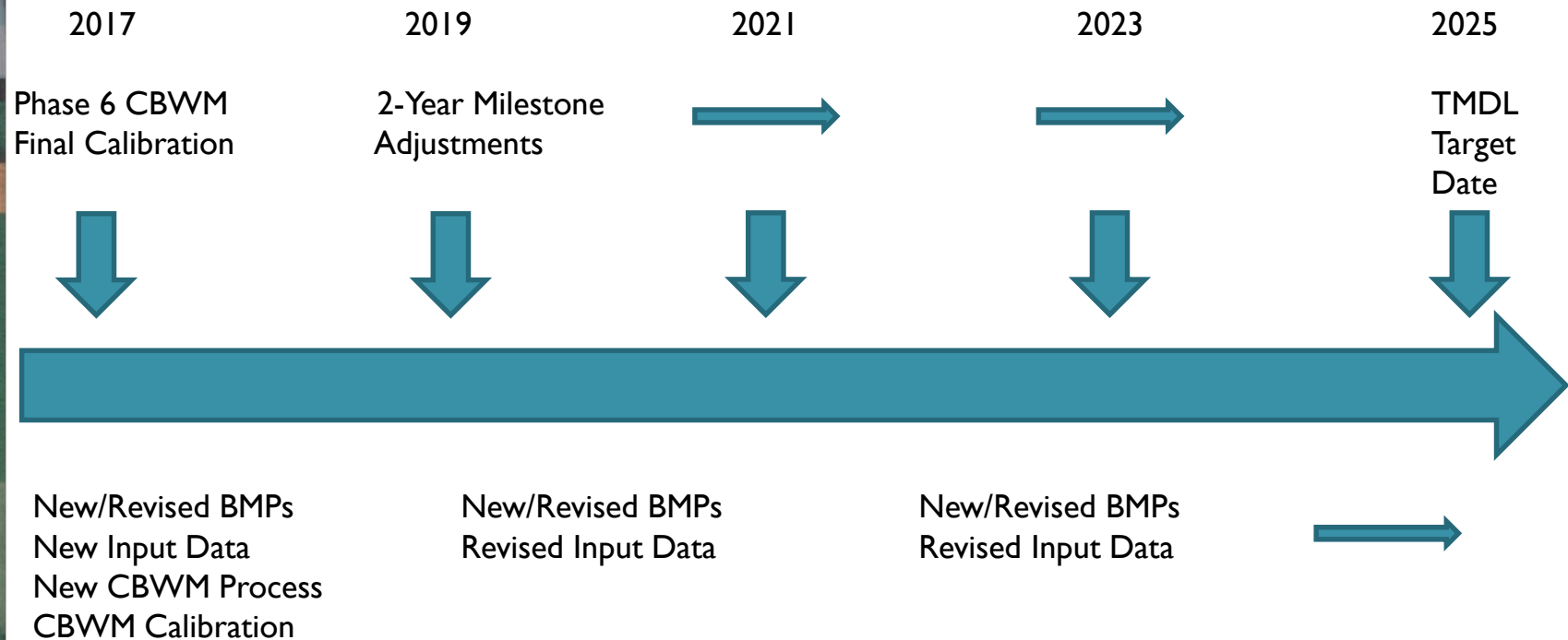
Phase 6.0 Agricultural Input Data



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Phase 6.0 CBWM Timeline



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- Potential Phase 6.0 Agricultural Input Updates
 - Broilers:
 - Poultry Litter Subcommittee report (2013)
 - 1980's - 2012 production and litter analysis data
 - Primarily DE and VA and limited WV data
 - Turkeys:
 - VT Commercial Turkey report (2016)
 - 1980's - 2016 production and litter analysis data
 - VA only data
 - Swine:
 - VT Commercial Turkey report (2016)
 - 2015 - 2016 production and manure analysis data
 - Primarily VA and limited PA data

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- **Proposed Livestock Research Projects:**
 - Accurately represent commercial livestock and poultry production and nutrient generation in the Chesapeake Bay watershed by state and county.
 - Ensure that the future modeling updates reflect possible differences by state versus watershed.
 - Document production advancements such as improved genetics, feed management, facility management and nutrient reduction practices.
 - Addresses a partnership commitment to provide ongoing model data input updates.

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- Proposed Implementation Research Projects:
 - Develop new commercial fertilizer distribution data and advanced nutrient management implementation in the Chesapeake Bay watershed by county.
 - Investigate opportunities to integrate new remote sensing technology into transect surveys for tillage and cover crop implementation.
 - Develop new regional soil and manure analysis data management standards to enable integration of state, university and private laboratory analysis data.
 - Develop new regionally integrated county-scale soil and manure analysis database to track trends.

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- Research Data Priorities by State
 - Broiler Production:
 - Priority for DE, MD, PA, VA, WV
 - Low priority for NY
 - Turkeys:
 - Priority for PA, VA, WV
 - Low priority for DE, NY
 - Swine:
 - Priority for MD, PA, VA
 - Low priority for DE, NY, WV
 - Dairy:
 - Priority for MD, NY, PA, VA
 - Low priority for DE, WV

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- Research Data Priorities by State
 - Fertilizer Distribution:
 - Priority for DE, MD, PA, VA, WV
 - Low priority for NY
 - Laboratory Analysis Data:
 - Priority for DE, MD, PA, VA, WV
 - Low priority for NY
 - Remote Sensing:
 - Priority for DE, PA, VA

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Commercial Poultry Project Proposal



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- Commercial Broiler Research Project Proposal
 - Partners:
 - VT/UM project staff and interns
 - Broiler producers
 - US Poultry and Egg Association and integrator companies
 - State agricultural agencies
 - Scope:
 - Collect data from 2014 – 2018
 - Integrate data from producers, integrator companies, and state agricultural agencies
 - Survey in DE, MD, PA, VA, and WV
 - Production – category types, number of operations, and annual populations by county
 - Litter – nutrient generation and management
 - Product:
 - Statistical analysis of data by production category, state and year
 - Recommendation report developed for AgVWG review and approval in mid-2019
 - Funding:
 - VT/CBPO Cooperative Technical Assistance Grant
 - Industry matching funds

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- Commercial Turkey Research Project Proposal
 - Partners:
 - VT/UM project staff and interns
 - Turkey producers
 - US Poultry and Egg Association and integrator companies
 - State agricultural agencies
 - Scope:
 - Collect data from 2014 – 2018
 - Integrate data from producers, integrator companies, and state agricultural agencies
 - Survey in DE, MD, PA, VA, and WV
 - Production – category types, number of operations, and annual populations by county
 - Litter – nutrient generation and management
 - Product:
 - Statistical analysis of data by production category, state and year
 - Recommendation report developed for AgVWG review and approval in mid-2019
 - Funding:
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Commercial Swine Research Proposal

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- Commercial Swine Research Project Proposal
 - Partners:
 - VT/UM project staff and interns
 - Swine producers
 - Swine integrator companies
 - State agricultural agencies
 - Scope:
 - Collect data from 2014 – 2018
 - Integrate data from producers, integrator companies, and state agricultural agencies
 - Survey in DE, MD, PA, VA, and WV
 - Production – category types, number of operations, and annual populations by county
 - Manure – nutrient generation and management
 - Product:
 - Statistical analysis of data by production category, state and year
 - Recommendation report developed for AgVWG review and approval in mid-2019
 - Funding:
 - VT/CBPO Cooperative Technical Assistance Grant
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**Animal Waste Management Systems
Sampling**

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- Manure and Litter Sampling
 - All manure and litter samples collected by project staff will use National ASTM sampling procedures.
 - Liquid manure samples will be collected using a measured column sampler for integrated depth sampling.
 - All composite manure samples will be analyzed by Clemson University Laboratory.
 - Project analysis results will be compared to previous analysis results from the same operation.

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Livestock Bio-Security Protocols

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- Bio-Security Farm Hygiene Program
 - Respect All Entrance Prohibitions on Farms and Houses.
 - No entrance into Any House During an Outbreak under ANY conditions.
 - Upon Arrival, Report to Farm Manager Immediately.
 - Use disposable boots and gloves before taking samples.
 - Leave Vehicle Outside Production Area- WALK.

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- Bio-Security Farm Hygiene Program
 - Wear Boots and Gloves that can be disinfected or disposable and left in proper disposal container at farm.
 - Obtain samples from under house storage unless holding pond is in mixture process.
 - Put sample into container. Rinse off outside. Spray until moist with Lysol or Virox.
 - Put sample into Ziploc Bag. Spray off with Lysol or Virox and put into shipping container and place into truck.

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- Bio-Security Farm Hygiene Program
 - All sampling materials must be washed, and disinfected with Clorox or Virox solution.
 - Dry with paper towels.
 - Paper towels gloves etc. must be placed into plastic bag and sealed for disposal.
 - Remove all dirt mud, straw and debris from wheels and wheel wells. Spray area with Virox or Clorox solution.

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Additional Developing Projects



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- Potential Future Research Projects
 - Dairy:
 - ASABE nutrient excreted data currently represented in Phase 6.0
 - Pilot survey dairy producers
 - Partner with milk cooperatives and industry associations
 - Partner with state agricultural agencies
 - Fertilizer:
 - AAFPCO fertilizer distribution sales data currently represented in Phase 6.0
 - Pilot survey of retail fertilizer sales data in select counties
 - Partner with fertilizer supply companies and industry associations
 - Soil/Manure Analysis Data:
 - Limited county-scale soil analysis data currently represented in Phase 6.0
 - Establish regionally consistent soil and manure sampling procedures and data
 - Partner with land grant university, state and private laboratories
 - Develop regional soil and manure analysis data report
 - Remote Sensing:
 - Pilot remote sensing technologies for cropland BMPs, i.e. crop residue management
 - Partner with state transect survey programs and National CTIC program

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Research Data Management



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- Research Data Management
 - Grower information protected from FOIA by research at VT. Identification coding used instead of operator names. Ex: Pa-07-03-16-34
 - Paper survey information entered into Excel on VT/UM laptops and provided to PI on weekly basis.
 - PI will aggregate and summarize data to create a draft report for Ag Workgroup review and comment.
 - PI will respond to comments and create a final report for approval by Ag Workgroup for Phase 6.0 modeling tools.



Questions & Comments

