

PADEP Enhanced Cover Crop Reporting Pilot Project

Initial Presentation AgWG Meeting July 21, 2022

The Team

Pennsylvania DEP is working with the Principal Investigators below to complete this pilot effort:

- Penn State University, Matt Royer and Adjunct Professor Aaron Cook, responsible for the development of the PSU Voluntary Producer Surveys for Pennsylvania's Department of Agriculture
- Susan Richards with Capital Resource Conservation and Development Area Council (Capital RC&D), responsible for the development of Pennsylvania's annual county Transect Surveys
- Mark Dubin, University of Maryland, Chesapeake Bay Program Office Agricultural Advisor

Our Purpose

Pennsylvania is exploring ways to correlate data between the Penn State Producer Survey with the Capital RC&D Transect Surveys to enhance the utility of the observed Transect field data for annual progress reporting

This pilot effort seeks to identify areas where representative data overlap and if those correlations are sufficiently matched to be expanded to the broader county Transect Survey.

The results of this work could identify important management action attributes such as nutrient application, planted cover crop species, and other crop management responses available from the Producer Survey

Transect Survey Collection Method

- Initiated with the National Crop Residue Management Survey by CTIC and continued with “Park the Plow” in 2007 for Tillage Residue reporting
- Approved for Traditional Cover Crops by AgWG - Nov. 21, 2016
- Routes and Waypoints developed in counties with >50k Crop Acres
- Conducted on two-year rotations, roughly 13-14 counties per year
- Three Member Team - Driver, Observer, Recorder over 2-3 days
- QC Field Inspection conducted by experienced agronomists, typically retired USDA-NRCS personnel
- Fall Observations – Planting of Winter Cover and Prior Crop Type
- Spring Observations – Fate of Winter Cover, New Crop, Residue %

Transect Survey Data Fall Collection Form

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Penn State Producer Surveys

- Initiated in 2016 on a pilot basis and Approved for progress reporting by AgWG – July 14, 2016
- The survey was repeated in 2020 in the four Phase 3 WIP “pilot counties” (Lancaster, York, Adams, and Franklin)
- 10% QC Field Inspection and records check conducted by PSU Extension Staff following spring data collection
- The current 2022 Producer survey is being run in Pennsylvania’s remaining Tier 2 & 3 counties not surveyed in 2020 (14 counties, representing the 2nd and 3rd quartile of PA load sources)
- Can be repeated as PSU staffing and state funding allow, not currently forecasted

What Cover Crop Information the Penn State Producer Survey Asks:

- What species (or mixture) was planted,
- The planting date,
- How many acres of each type
- The method of planting,
- Whether they received a fall manure nutrient application and/or received or will receive a spring nutrient (manure or fertilizer) application before March 1, and
- Whether the producer plans to harvest any acres in the spring for forage or grain

Project Pathway and Timeline:

- Biweekly meetings began in April 2022 and scheduled through August 2022, planned biweekly continuance through conclusion
- Lancaster County selected as the pilot for concurrent 2020 reporting data and a sound foundation of Producer Survey respondents (989)
- Investigation Steps
 - Assemblage of Transect Route Waypoints and Producer Survey Respondents (through 7/22)
 - Identification of matching respondents and data components between surveys (through 8/22)
 - Statistical Assessment of response agreement (through 9/22)
 - Presentation of findings and lessons learned (through 10/22)
- Status Updates to the Ag WG as project proceeds (on-going)

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