Agriculture Workgroup (AgWG)
Meeting Minutes
November 17, 2022
10:00 AM – 12:00 PM
Meeting Materials

Summary of Actions and Decisions

Decision: The AgWG approved the minutes from the October AgWG call.

Decision: The AgWG approved the methods used for the Pennsylvania Cover Crop Enhancement Pilot Project for annual verification.

Action: Tom Butler and Jeff Sweeney, EPA, will look into whether spring harvest of winter annual crops is being reported as a crop to NASS and influencing how double crop acres are calculated in the watershed model.

Action: Jackie Pickford, Staffer, will send out the call for nominations for AgWG at- large members. If current at-large members with expired terms would like to be renominated, please contact Jackie (pickford.jacqueline@epa.gov) and Tom (butler.thomas01@epa.gov).

Action: Frank Schneider, PA SCC, will follow up with AgWG members who are willing to assist PSU in acquiring a more robust data set of MUN numbers for the Dairy Precision Feeding BMP. Pennsylvania will return to the AgWG at a future meeting for additional discussion and a potential decision on an approved method for verifying the Dairy Precision Feeding BMP through MUN data.

Introduction

10:00   **Welcome, introductions, roll-call, review meeting minutes** – Jeremy Daubert, AgWG Chair.
- Roll-call of the governance body
- Roll-call of the meeting participants- *Please enter name and affiliation under "Participants" or in "Chat" box*
- **Decision:** The AgWG approves of the minutes from the October AgWG call.

CBP Assignments/Data & Modeling

10:05   **Agricultural Data Inputs (15 min) -** Tom Butler, EPA

Tom Butler, EPA, provided an update on the Phase 7 Agricultural Modeling Team (AMT) and their initial two-day meeting held on November 1st and 2nd.

Accounting & Reporting

10:20   **PA Cover Crop Pilot Study (50 min) –** Aaron Cook, PSU, Mark Dubin, UMD, and Ted Tesler, PA DEP.

Aaron Cook, PSU, Mark Dubin, UMD, and Ted Tesler, PA DEP returned to the AgWG to seek approval of the methods used for the Pennsylvania Cover Crop Enhancement Pilot Project. PA DEP has been working with PSU to match existing data from producer surveys and roadside transect surveys to enhance tracking and reporting of cover crop implementation in PA counties. The process and updated findings were presented at the September and October AgWG meetings. Pennsylvania reviewed the methods document that lays out the proposed process in further detail and addresses questions which were provided by the AgWG at the October meeting. The AgWG was asked to vote on the approval of the methods.

Discussion

Ken Staver: What is the goal here? Are you trying to get more species specific to get more credit per acre?

Ted Tesler: We don't know the planted species with the transect survey because there isn't enough growth to identify the crops in the fall, so we're trying to get additional planting information. Currently, our only reporting option is wheat. Rye reduction efficiencies are significantly greater, though, but we can't report those because we don't have the information. This is trying to address that. We also don't have fertilizer information, which is another limiting factor with the transect survey. There is some anecdotal information from the survey crew, but usually there is no indication of nutrient application. This is a means to get additional info on management actions to report them more accurately.

Ken Staver: So you're trying to get out of the default value mode?

Ted Tesler: Yes.

Ken Staver: If you get species information that will give you higher credits for species other than wheat, but it looks like that will result in other acres previously reported as traditional into now reported as traditional with fall nutrients, which will lessen your reductions.

Ted Tesler: Yes, we might lose some reductions in that respect but it's more accurate data.

Ken Staver: Seems like the old method was pretty good at capturing cover crop presence but not good at capturing the fall nutrient part of it.

Ted Tesler: Correct, this helps to answer that portion of it if we or the AMT chooses to keep data inputs granular.

Dave Montali: Is the PSU survey a component as time goes on or is this a one time thing?

Ted Tesler: The transect surveys are done about every other year but I don't think the matching approach will be done at that frequency. At this point it is on an as-needed basis.

Dave Montali: So you'll use what you learned here to disaggregate what you get from future transect surveys on a county basis?

Ted Tesler: Correct.

Ruth Cassilly (in chat): The transect survey is not approved for reporting cover crops with fall nutrients applied.

Ted Tesler: Yes that's true. We did get a small amount of documented nutrient application in the survey response, so we wanted to take advantage of that information. We thought it was best to throw that into that category instead of not showing the data.

Mark Dubin: To reiterate - this data is only applicable to Lancaster County at this point in time. We will probably see differences county to county. Not using this to apply this across the entire watershed.

Ruth Cassilly (in chat): Thanks Ted for that explanation of why some of those cover crops with fall nutrient acres were reported from the transect survey.

Greg Albrecht: If the Lancaster County pilot gets approved, what would you learn from future work that will help the AgWG pick up these ideas and apply to other counties?

Ted Tesler: We wanted to pave the way if other states wanted to use this type of method. Trying to better classify and reflect what's happening. Using the wheat as a default was very difficult to explain to the public.

Greg Albrecht: Is there new information that would come from implementing this in the future?

Ted Tesler: Transect is helpful for getting the planted acreage, which will inform the non-harvested acreage. The matching exercise with the PSU producer survey is giving us those management decisions such as species type and additional planting information. We didn't look

at dates or planting methods because we wanted to keep it simple and just focus on species type.

Dave Graybill (in chat): Please ID the species you see in the commodity cover crop category.

Aaron Cook: 13 acres of wheat, 50 acres of rye.

Ken Staver: So the double crop acres are wheat or winter cereal planted that was fertilized in the fall and the intention is to harvest it?

Ted Tesler: Correct.

Seth Mullins: Why is this coming to the AgWG? How is this different from other data collection and BMPs that other states are doing?

Mark Dubin: The verification of practices happens at the source sector workgroup, which for this is the AgWG. This particular methodology is creating a hybrid approach. We have approvals for producer surveys and transect surveys for cover crop. This is combining those datasets in a new way to create a new verification process that hasn't been done before.

Seth Mullins: So if another state has to do something similar, that foundation is already laid and will be easier to put forward?

Mark Dubin: Correct. It would still have to be reviewed to make sure it fits in the same framework of this same methodology.

Dave Graybill (in chat): Thanks for the answer. I can see how that mix of crops will change with each county because of livestock needs, climate across the watershed and community preferences.

Ken Staver: Let's say dairies are applying fall manure using rye because it ends up being foraged. Would cover crops with fall manure be captured in NASS data? Never looked at what the numbers for Lancaster look like in the NASS data from a standpoint of are these acres being captured at all or are farmers just not reporting NASS haylage acres?

Ted Tesler: That is something the AMT will look at - where reported acres are coming from different data sources and how they compare.

Ken Staver: I'm not doubting what you're presenting. Just wondering if we have corn silage and ryelage acres being counted as double crop acres in the model when, in contrast, you're thinking of this as corn silage with a rye cover crop. For example, is it being counted as a corn silage acre in NASS with a cover crop BMP, but that acre may already be counted as a double crop acre because of the way our double crop reporting works. If this is happening with a lot of acres then it's an issue of double counting. It's also getting kicked into a lower nutrient land use category.

Ted Tesler: Good point Ken. We are focused on the non-harvested portion.

Mark Dubin: There are some mitigating factors there. Lancaster has a sizable plain sect farming community that doesn't typically report to USDA. We are limited to what NASS is reporting.

Ken Staver: Are there significant haylage acres or a category that captures acres of harvested winter cereal forage reported to NASS? If not, then we don't need to worry about it.

Mark Dubin: This is a subject that the AMT will look at.

Greg Albrecht: It varies across the watershed. Loretta suggested a survey to get a sense for how farms are completing that section while reporting to NASS. In the southern part of NY, it is considered a corn silage crop.

Jeff Sweeney: I'll look into it.

Tom Butler (in chat): Hey Ken, can you please give me the wording of the question that you want answered? is it something like: "Does the NASS data used in CAST have a category for spring haylage?"

Greg Albrecht (in chat): Hey Tom, I think it would have to be specific to a small grain haylage, so it's not confused with, say, a first cutting of a perennial grass/legume stand for haylage.

Ken Staver (in chat): Tom, With Greg's clarification, the question is whether spring harvest of winter annual crops is being reported as a crop to NASS and influencing how double crop acres are calculated in the watershed model.

Dave Montali: Commodity cover crops (CCC) are cut off in the model because they can only be applied to small grains or double crop land uses in the model. The applicability of CCC ought to be allowed on haylage. I'm losing track of Ken's concern because if this is foraged then it has to be a CCC. As long as the county has enough small grain acres and double crop acres, then it will be reported and there is no double counting.

Ken Staver: I think it's an aspect of the same problem - how winter cereals that are harvested in a non-grain fashion in the spring are handled in the model.

Dave Montali: I think we should simplify this for Phase 7. The complexity is undermining the validity of reporting of winter cover.

Ken Staver: The cover crop expert panel did not want to deal with the CCC as a cover crop practice because it's a nutrient management issue.

Frank Schneider: Motion to approve this methodology.

Ken Staver: I second it.

Ken Staver: The transect method can't be used for reporting cover crops with fall nutrients applied, but what does that mean for this whole discussion?

Jeremy Daubert: The transect survey cannot verify if it has nutrients applied or not.

Dave Montali: The rationale is that it's a hybrid approach, which removes that ban on the transect, right?

Mark Dubin: The idea is that we're using both visual and nonvisual methods for verification. The transect is only visual, which is why we can't use it to document whether nutrients are applied. If you're putting nutrients on, we'd use a nonvisual verification method to document that management decision, which will be combined with the transect as a visual verification method - that's where we can use the hybrid approach to resolve the challenge we have with getting that additional management information.

Ruth Cassilly: The advantage to combining these two approaches is that the PSU survey cannot be extrapolated because the survey respondents are not randomized. The transect survey results are extrapolated. By combining the two, it allows you to extrapolate the results to the county. If we only used the PSU survey, we couldn't extrapolate those county-wide.

Decision: The AgWG approved the methods used for the Pennsylvania Cover Crop Enhancement Pilot Project for annual verification.

Action: Tom Butler and Jeff Sweeney, EPA, will look into whether spring harvest of winter annual crops is being reported as a crop to NASS and influencing how double crop acres are calculated in the watershed model.

11:10 **Update on Dairy Precision Feeding (40 min)** – V. Ishler, PSU, R. Rosemond, Berks County, and C. Becker, Lancaster County.

In response to a request from PA to revise the tracking and reporting criteria for CBP Dairy Precision Feeding (DPF) BMP, Dr. Virginia Ishler, Penn State, came to the AgWG in June 2021 to discuss the potential for utilizing Milk Urea Nitrogen (MUN) as a means to quantify DPF implementation. Dr. Ishler returned to provide a quick review of her presentation. Rainey Rosemond and Carly Becker then gave an update on the MUN results and dairy farm feeding assessments completed since then. Following the presentation, there was time for discussion and the AgWG was asked for feedback on a path forward.

Discussion

Dave Graybill (in chat): what is the value of N that is attributed to each dairy cow in CAST, currently?

Tom Butler (in chat): Dave from the current CAST documentation see terrestrial inputs page 11. The values are in table 3-4. Dairy Lactating Cow, Dry Cow and Heifer from ASAE 2005 for manure values 4,404.33 0.042221 0.006764. These figures can be found here: https://cast-content.chesapeakebay.net/documents/P6ModelDocumentation%2F3TerrestrialInputs.pdf

Helen Golimowski (in chat): Is there going to be a BMP expert panel for this? Also, Dr. Ishler, do you know how predominant this practice is?

Mark Dubin (in chat): Helen, there was a BMP expert panel on DPF some years ago that Dr. Ishler and I participated in, and the panel recommendations are still in effect. The panel did review the use of MUN at that time, but the research data was limited. Consequently, MUN data alone was not sufficient to report DPF. This research project is designed to revisit the former panel recommendations to determine if they should be reconsidered with the new data. We will be asking the AgWG for a decision on a path forward and to see if other jurisdictions would be interested in contributing data. Thanks!

Greg Albrecht: NY is interested in further discussion.

Jeremy Daubert: State extensions should be involved too.

Frank Schneider: Haven't had much luck with extension and getting contacts for co-ops.

Greg Albrecht: I wonder if we could frame it as helping to meet their climate goals we would have better luck moving forward.

Frank Schneider: A listing of co-ops would be helpful and then we can draft a letter explaining the process to them. Right now we're looking for commitment from other states to help us get data.

Dave Graybill (in chat): great report. All the things found are what I would expect because cows have differences, management is always challenging, weather impacts crop quality, equipment breakdowns happen at the worst times and there isn't always $ available to update to better equipment. I would love to help show you how to find the right avenue with co-ops.

Elizabeth Hoffman, MDA (in chat): In MD we'd be open to supporting the effort to obtain data, we've also been trying to explore this practice and close data gaps in capturing this practice being implemented on operations.

Ricky Whitmore (in chat): Frank can you keep me up to date with follow up and what comes out of it?

Frank Schneider, SCC (in chat): Yes.

Action: Frank Schneider, PA SCC, will follow up with AgWG members who are willing to assist PSU in acquiring a more robust data set of MUN numbers for the Dairy Precision Feeding BMP. Pennsylvania will return to the AgWG at a future meeting for additional discussion and a potential decision on an approved method for verifying the Dairy Precision Feeding BMP through MUN data.

Announcements

11:50 **New Business & Announcements (5 min)**
- THANK YOU, TED TESLER (PA DEP)!!
- Welcome Tom Butler, EPA-CBPO, as our interim AgWG Coordinator!
- **Pennsylvania in Balance Conference: December 12-14, 2022.** Lancaster, PA.

- o A collaborative forum where motivated leaders throughout Pennsylvania's agricultural and environmental community can come together and collectively identify funding and collaborative strategies that can help us ensure vibrant, productive agriculture while meeting water quality goals for the Commonwealth's rivers and streams and the Chesapeake Bay.
  - o [Register by December 14](#).
- **AgWG At-Large Membership Nominations: Upcoming Timeline.**
  - o **Nov 2022 – Jan 19, 2023**: Call for nominations.
  - o **Jan 20, 2023:** Poll will be sent out to voting membership (signatory and mid-term at-large) to rank nominees.
  - o **Feb 16, 2023:** Confirmation of new at- large members.
- **Charges from Management Board to WQGIT regarding CAST-2021** - still pending
- **Ag Modeling Team distribution list:**
  - o If you would like to be included on the AMT distribution list, please enter your information in this poll: https://forms.gle/Y7NoVZRM3yVGGgqK8
- **Nov 2022 - Jan 2023: NFWF's Chesapeake Ag Networking Forum.** (Virtual).
  - o More information/Registration: https://sites.google.com/view/2022canf/home
  - o Contact: Joe Toolan, Manager of CB Programs (joe.toolan@nfwf.org)
- **NRCS Ag BMP Crediting - NEIEN Appendix Proposal**
  - o AgWG determination at future meeting on options presented in [September](#)
- **Animal Mortality Expert Panel Technical Appendix**
  - o Most recent draft technical appendix available [here](#)- CBPO working through revisions based on feedback.
  - o Contact Jeremy Hanson (hansonj@chesapeake.org) with questions/comments.

11:55 **Review of Action and Decision Items (5 min)**
12:00 **Adjourn**

Next Meeting
Thursday, December 15: 10AM-12PM, Call-in Zoom

Participants

Jeremy Daubert, VT	Ruth Cassilly, UMD CBPO
Kathy Brasier, PSU	Mark Dubin, CBPO/UME
Jackie Pickford, CRC	Tom Butler, EPA CBPO
Greg Albrecht, NY	Helen Golimowski, Devereux Consulting
Frank Schneider, PA SCC	Ricky Whitmore, Adams County Conservation
Seth Mullins, VA DCR	District, Gettysburg PA
Cindy Shreve, WVCA	Karl Blankenship, Bay Journal
Jeff Sweeney, EPA	Carlington Wallace, ICPRB
Jeff Hill, YCCD	Kyle Kotzmoyer, HRG
Jenna Schueler, CBF	Holly Walker, DE DNREC
Ken Staver, UMD	Ted Tesler, PADEP
Paul Bredwell, US Poultry & Egg	Aaron Cook, Penn State University
RO Britt, Smithfield Foods	Maranda Smith, Lebanon County Conservation
Emily Dekar, USC	District
Gurpal Toor, UMD	Alex Echols, Campbell Foundation

Scott Heidel, PA DEP
Clare Gooch, DE DNREC
Johanna Willieme, Lebanon County
Conservation District
Dave Montali, tetra tech, wv, MWG
Matt Monroe, WV Dept of Agriculture
Kristen Saacke Blunk, Headwaters LLC
Tim Rosen, ShoreRivers
Elizabeth Hoffman, MDA

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Hunter Landis, VA DCR
Matt Royer, PSU
Grant Gulibon
Rainey Rosemond, Berks County
Cassie Davis, NYSDEC
Virginia Ishler, PSU
Carly Becker, Lancaster County

**Common Acronyms

AgWG- Agriculture Workgroup
AMT- Agricultural Modeling Team (Phase 7)
BMP- Best Management Practice
BMPVAHAT- BMP Verification Ad Hoc Action Team
CAST- Chesapeake Assessment Scenario Tool (user interface for the CBP Watershed Model)
CBP- Chesapeake Bay Program
CBPO- Chesapeake Bay Program Office (houses EPA, federal partners, and various contractors and grantees working towards CBP goals)
CBW-Chesapeake Bay Watershed
CCC - Commodity Cover Crop
CRC- Chesapeake Research Consortium
DPF – Dairy Precision Feeding
EPA- [United States] Environmental Protection Agency
MUN – Milk Urea Nitrogen
NEIEN- National Environmental Information Exchange Network
NFWF- National Fish and Wildlife Foundation
PA DEP- Pennsylvania Department of Environmental Protection
PSC – Principals' Advisory Committee (CBP)
PSU- Penn State University
STAC- Scientific & Technical Advisory Committee
TMDL- Total Maximum Daily Load
WQGIT- Water Quality Goal Implementation Team
WTWG- Watershed Technical Workgroup
UMD- University of Maryland
USDA-ARS- United States Department of Agriculture-*Agricultural Research Service*
USDA-NASS- United States Department of Agriculture-*National Agricultural Statistics Service* USDA-NRCS- United States Department of Agriculture-*Natural Resources Conservation Service*