

**VERMONT AGENCY OF AGRICULTURE, FOOD AND MARKETS (AAFM)
AGRICULTURAL INNOVATION BOARD (AIB)**

MEETING MINUTES

DATE: January 22, 2024

LOCATION: Vermont Agency of Agriculture, Food and Markets 94 Harvest Lane, Williston, VT 05495 –
Conference Room 210 / Virtual Microsoft Teams Meeting

Member	Present	Absent
St. Pierre, Amanda		x
Beckford, Roy	x	
Hazelrigg, Ann	x	
Chamberlin, Jonathan	x	
Pajak, Abbi	x	
Ransom, Earl		x
Rebozo, Ryan	x	
Schubart, Steven	x	
Owen, Sarah		x
Harper, Wendy Sue	x	
DiPietro, Laura	x	
Dwinell, Steve	x	
Griffith, Morgan	x	
Guests in Attendance		
Stephanie Smith Pam Bryer Jill Goss Zach Szczukowski Steve Cash Sydney Miller (VT Bee Lab) Gene Harrington (Biotechnology Innovation Organization) Emma Shouldice (Shouldice & Associates, LLC) Lisa Fantelli Heather Darby (UVM Extension)		

Meeting called to order: 1:00 PM EST

Meeting adjourned: 3:05 PM EST

Next meeting: Monday February 26, 2024, 1-4PM

Agenda:

1:00 PM – Welcome & introductions

1:05 PM – Agenda, previous meeting minutes, report review

1:30 PM – Update on NY Birds and Bees Protection Act regulating neonicotinoid treated seeds – Gene Harrington, Biotechnology Innovation Organization

2:15 PM – Neonicotinoid research results & update – Dr. Heather Darby, University of Vermont

3:00 PM – Discussion regarding next topic to address

3:45 PM – Public Comments

4:00 PM – Adjourn

New Action Items

Action	Responsible Party	Complete? (date)
Provide Morgan with additional suggestions for next topics for AIB to address	AIB Members	
Provide Morgan with questions or topics to ask Reed Johnson (OSU) to address during February presentation	AIB Members	
Review Bills currently introduced in Legislature relevant to pesticide use and prepare to provide comments at February meeting	AIB Members	
Roy will follow up about who from UVM is planning on conducting farmer survey and topics they are planning on addressing	Roy Beckford	
Include Ag Input Survey Agenda item for February 26 meeting and bring previous survey questions for discussion	Morgan Griffith	

Ongoing Action Items

Action	Responsible Party	Complete? (date)
AIB members let Morgan know if eligible for per diem reimbursement to receive necessary paperwork	All eligible AIB members	

Welcome & Introductions, agenda, previous meeting minutes & action item review

- 12/11/2023 meeting minutes accepted without edits
- Final report of recommendations regarding use of neonicotinoid treated seeds was issued to Secretary Tebbetts and Agency of Agriculture, Food and Markets (AAFM)
 - This report was also shared with the chairs of both the House Committee of Agriculture and Senate Committee of Agriculture
- Calendar Year 2023 Annual report was finalized and submitted to legislature on Jan 12
- AAFM was asked to present AIB recommendations to House and Senate Ag committees
 - Summarized final recommendation document and included some additional information, upon request, about diamide insecticides

Update on NY Birds and Bees Protection Act regulating neonicotinoid treated seeds – Gene Harrington, Biotechnology Innovation Organization

- The Assembly approved Bill was not sent to the Governor's office for consideration until December 2023
 - Dec 22, 2023 Governor Hochul signed the [Bill with chapter amendments](#)
- The Bill had broad support including environmental groups, organic groups, farm bureau, etc
- The key change in the chapter amendments proposed by the Governor was to substitute the waiver process in for the previous provision for the NY Department of Environmental Conservation to suspend the ban.
 - The amendment made an ongoing waiver process instead of the ability to suspend bill
- Chapter amendments still have to go through the legislative process – the amendments have been introduced in bill form
 - The measure is expected to pass the legislature in the next 4-6 weeks
- Chapter amendments
 - Effective Jan 1 2029, prohibited for person to sell, offer for sale or use, or distribute unless a waiver is issued by the NY Dept of Environmental Conservation (NYDEC)
 - NYDEC directed to promulgate regulations in order to implement waiver process
 - The law is not specifically for use of treated seed, the language is for seed dealer selling or distributing the treated seed.
 - Waiver is for the farmer to present to seed dealer. Logistics will be defined in the Rule that is developed by NYDEC
 - To be eligible for waiver, farmer must:
 - Complete IPM training
 - Complete pest risk assessment
 - Complete pest risk assessment report
 - Waivers valid for 2 years
 - NYDEC and NY Dept of Agriculture, in consultation with NY State land grant university, must conduct a study to identify practicable and feasible alternatives to the use of neonics by Jan 1, 2026
- There is discrepancy between prohibition language and the waiver. Prohibition language is aimed at distribution while the waiver language is aimed at the use.
- There are also provisions in the law pertaining to ornamental and turf use of neonics, prohibiting uses on ornamental or turf of imidacloprid, thiamethoxam or acetamiprid after Dec 31, 2026 and prohibiting use of clothianidin or dinotefuran after Dec 31, 2024
 - Provision does not apply to pesticide applications made by certified applicators to control invasive species affecting woody plants.
 - There is a provision that the NYDEC can declare an environmental emergency exists that can only be rectified through use of neonics
- Pest risk assessment is not defined, will have to be fleshed out in the regulations/rule to be developed by NYDEC
- Gene hasn't heard of other states with similar bills (except VT), but it is early in the year. For example CT and MN legislation sessions haven't started yet. We anticipate seeing a few more states introduce similar legislation.
- Jonathan Chamberlin doesn't know how this will affect VT agriculture without knowing the details of the waiver process.
- VT bill introduced H.706

- No person shall sell, offer for sale or use, distribute, or use any neonicotinoid treated article seed for soybeans or cereal grains (effective Jan 1, 2027)
- Secretary of Agency of Natural Resources (ANR) (in consultation with AAFM) may issue written exemption order to suspend. Exemption valid for no more than 1 year
 - This is modeled after the NY bill, however, in NY the NYDEC is the State Lead Agency responsible for pesticide regulations, but in VT the AAFM is the State Lead Agency responsible for pesticide regulations.
- Any rules adopted for BMPs for use of neonicotinoid treated seeds shall be repealed on Jan 1, 2027
- Also prohibits the following uses of neonics prohibited
 - Outdoor application of neonic to any crop during bloom
 - Outdoor application to any crop between heading or tassel emergence and harvest
 - Outdoor application to leafy veg, brassica, bulb veg, herbs/spices, stalk stem leaf petiole veg crop groups harvested after bloom
 - Application to ornamental plants
 - Application to turf grass
- ANR can write exemption (valid for 1 year)

Neonicotinoid research results & update – Dr. Heather Darby, University of Vermont

- Webinar series provided information and research updates about neonicotinoid treated seeds and relevant corn pests.
- Webinar tomorrow is a panel of Quebec farmers discussing their transition away from neonic treated seed
 - Over 100 people registered for this webinar, was shared with NY farming community as well
- Impact of Treated Seed on Plant Stands - Borderview Research Farm, Alburgh, VT
 - Replicated trial, treated (neonics) vs untreated (fungicide-only)
 - Look at any yield suppression, monitoring pest damage, soil neonic monitoring and crop data collected
 - Across 5 planting dates in order not to miss pest peak flights (i.e. corn seed maggot (CSM))
 - Started as early as we could (May 10) correlates with when most farmers would start planting in VT
 - Planted approximately weekly until June 9
 - Is representative of the general range of typical planting in VT. It is not advisable to plant into mid-June
 - Average corn population – no statistical difference between treated and fungicide-only from any of the planting dates.
 - For the most part corn populations were very similar across treatments and planting dates
 - Was very cold in May when we planted, so would have expected to not germinate as well, but overall did not see difference

- Tried to dig up any seeds that did not come up as a plant in order to inspect for insect damage.
 - Found maybe 1 wireworm in whole trial
 - Most seeds that did not grow were rotted, not insect damage
 - Alburgh had great year despite all the flooding
 - Average Yield had no statistical difference between treated and fungicide-only
 - Did see difference in yield by planting date, which is expected. June 9 planting date had highest yield (usually see this in mid-May planting date, but was cold in mid-May so maybe it lagged behind)
 - Did see more yield in treated vs untreated from June 9 planting date, but was too much variation so did not show a statistical significant difference
 - Tracked Corn seed maggot adults with sticky traps at the Alburgh sites
 - Have learned we have to put our sticky traps out earlier, because first flight likely occurred in April (traps were put out in May) – so may have missed the first flight at some monitoring sites
 - Saw second flight around June 8 (around June 9 planting date), so hypothesized that the lower untreated yield may have been due to CSM peak flight. But didn't see CSM in non-germinated seeds that were dug up and inspected.
 - Feel more confident in CSM identification and monitoring techniques for next year
 - Soil neonicotinoid levels
 - Planting location was in field that had not had corn in over a decade, and hadn't knowingly planted NTS in this part of the farm for over a decade. However, all the planters are the same and conducting research in areas surrounding this site. So there was potential for neonic contamination
 - 0-2.5in surface soil sample did not detect neonics, 2.5-6in depth samples found neonics in pre-plant sample in 75% of samples with average concentration of 6 ppb.
 - Hypothesizing that using the same planter was chance for neonic contamination at this site
 - Sampled this field at Topdress (June 21) and 100% of samples detected neonics (11.3ppb average)
 - Don't have post plant sample results yet.
 - Going to repeat in 2024
- Treated vs untreated (fungicide-only) at different farm sites in VT
 - Planted all these trials with UVM planter, so knew how many seeds going into the ground
 - Average Corn population differences seen
 - Franklin untreated had a higher population than treated
 - So dry at this site that planter didn't plant the seeds deep enough so was a lot of uneven germination
 - Not insect related damage observed
 - Saw more damage from birds feeding on seed

- Yield data was not collected at farm sites, some of the fields were complete loss because of weather conditions.
- Going to repeat at farm sites in 2024
- Discovery Acres is a study on a commercial farm in St Albans Bay with existing edge of field monitoring capabilities
 - Acreage with and without tile drainage, heavy clay soil
 - Collect water from tiles and from surface runoff from fields and tested for nutrient losses and now also pesticide movement off field
 - Planting site is in 3rd year of corn silage with historic use of NTS
 - Collected soil samples pre-plant and at Topdress
 - Pre-plant 0-2.5in: 87% detect frequency (3.95ppb avg), 2.5-6in: 43.4% frequency (4.65ppb avg)
 - At Topdress 94% detect frequency (3.72 ppb) was whole fraction of soil not separated by depth
 - Soil sampled on random soil sampling grid
 - Don't have post plant data yet
 - Collected water samples – can only collect when water is flowing off field or out of tiles [hope for rain event water to percolate through soil and not run off surface or through tile]
 - first water sampled June 16 (approx. month after plant)
 - July 3 next sample date had highest neonic level of the season (about 2.25ppb)
 - July 25 clothianidin concentrations declined considerably and now are not seeing any detectable levels of neonics in samples collected
 - Only get water from surface or tile when saturated ground and minimal rainfall or when significant rain event. Have to have a run off event to collect water samples
 - This study is continuing for a number of years
 - How long after planting were high detections? About a month and a half. Heather thinks that the higher detection is corresponding to higher rainfall events.
 - These peak levels are similar to levels seen in literature after planting
 - Would be great to correlate the flow with the levels detected
 - Have a lot of water data to sort through, have been transparent with everything we are learning and finding.
 - This is Jewett brook watershed, ultimately all the water will end up there. The reason why this project is located here is because Jewett brook is one of the most impaired watersheds in VT
 - Don't have many replications of samples because of limited sample collection due to low number of events when water was flowing through tile or running off the field as surface run-off.
- Hoping to expand research this year to include more treatments
 - May be interested in evaluating diamide seed treatment options

- Also interesting comments from Reed Johnson (OSU) about dust movement and he is interested in possible collaboration to evaluate potentially more abrasion resistant seed coating. He feels that seed treatments have become more stable and would like to evaluate that.
 - Reed Johnson seemed to think that using seed lubricants alternative to talc and graphite did not make a difference
- Farmers were interested and concerned about neonic effect on beneficial insects and overall soil structure and soil health.
 - The overall soil health was declining with use of neonic treated seed (John Tooker research)
- Trying to be open and transparent and receive feedback from interested parties. Trying to collaborate with Cornell to take advantage of their research capabilities and to create regional research and monitoring information hub.

Discussion regarding next topic to address

- One of the assignments of the AIB is to review and comment on legislation relevant to pesticide use
- There are currently 3 bills relevant to pesticide use that have been introduced in legislature:
 - [H.706](#) - An act relating to banning the use of neonicotinoid pesticides
 - [S. 197](#) - An act relating to the procurement and distribution of products containing perfluoroalkyl and polyfluoroalkyl substances and monitoring adverse health conditions attributed to perfluoroalkyl and polyfluoroalkyl substances
 - [S. 272](#) - An act relating to the regulation of second-generation anticoagulant rodenticides
- **at Feb. meeting, members who would like to make comment on these bills will have time to do so
- Bill is introduced then is assigned to committees. The committees consider and vote to pass on to another committee and then crosses over to the House or Senate for consideration.
- Is there a cost associated with Bill? No fiscal impacts in neonic bill as introduced
- The PFAS bill would potentially have an impact on AAFM revenue collection because may impact registration fees collected from some products.
- Agricultural Input Survey 2024 discussion
 - We may want to keep some questions consistent to get continual data
 - We should plan on doing it in 2024
 - Think that issuing the survey now would be the good time to do it because farmers are less busy in the winter
 - No downside to having more feedback
 - Statute says that the survey should be administered to inform recommendations made in the annual report
 - UVM does do some surveys, including annual surveys
 - Perhaps AIB can collaborate with UVM to try and increase participation
 - UVM is careful about sending out too many surveys in order not to overwhelm the farming community

- **Roy will follow up about who from UVM is planning on conducting farmer survey and topics they are planning on addressing
 - AIB is not able to financially incentivize survey participation
 - Can we utilize the association meetings coming up?
 - Veg and Berry is next week and Tree Fruit is in February
 - ** have survey agenda item in Feb 26 meeting bring questions from last time to discuss.
 - Plan on meeting every 4th Monday of the month for 2024
 - We should also talk about ways to expand pollinator habitat. As a future agenda item what are our options.
 - Other potential topics to address are diamides
 - WSH: microplastics seems to be a big issue and I think we should look into this too.
 - Wendy Sue provided a literature review of microplastics in agriculture:
 - [Microplastics in agroecosystems: A review of effects on soil biota and key soil functions](#)
 - Pam Bryer (AAFM Agrichemical Toxicologist) started looking into this and mentions it is overwhelming to think about how much plastic is on farms
 - Yes, members agreed to put on microplastics on the list for future topics
 - Laura: pointed out that we are having challenges with preliminary studies involving microplastics because is a space of new innovations and methods are not standardized for the variety of matrices that are involved in agriculture (i.e. soil, compost, digestate, etc).
 - AAFM has an ongoing study currently and VT DEC has another study just starting that are relevant to depackaged food waste and microplastics
 - Maine work is focused on PFAS
 - Any microplastic results from State studies are potentially a year or more away.
 - **members provide any questions they would like Reed Johnson to address at his Feb 26 AIB presentation to Morgan

Public Comments

- None provided

** - indicates action item