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

MEETING MINUTES

DATE: November 13, 2023

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	х			
Beckford, Roy		х		
Hazelrigg, Ann	х			
Chamberlin, Jonathan	х			
Pajak, Abbi	х			
Ransom, Earl		х		
Rebozo, Ryan	х			
Schubart, Steven	х			
Owen, Sarah		х		
Harper, Wendy Sue	х			
DiPietro, Laura	х			
Dwinell, Steve	х			
Morgan Griffith	х			
Guests in Attendance				
Jill Goss				
Stephanie Smith				
Clark Parmelee				
Bradley Mitchell (Syngenta)				
Zach Szczukowski				
Emma Shouldice (William Should	ice & Asso	ciates)		
Jonathan Wolff (Biotechnology Ir	novation			
Organization / CropLife America)				
Matt Wood				
Patti Casey				
Steve Cash				
Lisa Fantelli				
Brooke Decker				
Margaret Laggis				
Kimberly Obrien (Bayer Crop Science)				
Doug Johnstone				
Bethany Creaser				
Alexander Sereno (USDA Risk Management Agency)				
Riley Titus (Crop Life America)				

Meeting called to order: 1:00 PM EST

Meeting adjourned: 3:26 PM EST

Next meeting: Monday December 11, 2023, 1-4PM

Agenda:

1:00 PM – Welcome & introductions

1:05 PM – Agenda, previous meeting minutes & action item review

1:10 PM – AIB member discussion Neonicotinoid treated seed BMP framework for discussion Determine BMP recommendations

2:00 PM – Potential impact of non-neonicotinoid treated seeds to crop insurance discussion – Alexander Sereno, Regional Director USDA Risk Management Agency

2:30 PM – AIB member discussion continued Neonicotinoid treated seed BMP framework for discussion Determine BMP recommendations

3:45 PM – Public Comments

4:00 PM – Adjourn

New Action Items

Action	Responsible	Complete?
	Party	(date)
Send any other ideas for recommendations to the Secretary or additional	AIB	
comments to Morgan	members	

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	
What is the price difference for neonicotinoid vs diamide treated seed?	AAFM	
Is there historical pest incident data we can access prior to introduction of NTS?	AAFM	
AAFM will continue to gather more information about the impact on crop insurance if NTS are not in use	AAFM	11/13/23
Compare crop acreage numbers to seed tonnage reports	AAFM	
Literature review for research relevant to halo effect of neonic treated seeds and/or comparison of neonic treated seeds to diamide treated	Jill Goss Morgan	
seeds	Griffith	

Provide AIB with summary of observations from evaluation of 4 different	Heather	10/26/23
seed lubricants	Darby / Jeff	
	Sanders	
Send information/research and articles shared by Dillon with AIB	Morgan	9/26/23
members about Bayer's efforts to reduce dust	Griffith	
Send paper that was published this year about corn seed maggot	Heather	10/15/23
impacts	Darby	
Review/recap AIB learnings to date (highlight of what we know relevant	Morgan	10/16/23
to the key topics listed in legislative charge)	Griffith	

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

- 10/16/2023 meeting minutes accepted without edits
- No additions/modifications to agenda

AIB Member Discussion

- <u>6 V.S.A. § 1105a (c)(1)</u>
 - Attempting to fulfill goal established in this statute
 - o AIB has opportunity to share recommendations to the Secretary
 - o Can finish discussion at December meeting
 - **AIB members can send ideas at any time to Morgan to be included in the recommendations
- Neonicotinoid treated seed <u>BMP framework to guide discussion</u> has four general areas that could emerge based on what AIB has heard so far relevant to neonicotinoid treated seeds.
 - Mitigation of potentially adverse non-target dust drift during planting
 - Regulate (with a phase out period and education campaign) the use of talc and graphite as seed lubricant with neonic treated seed
 - Ann at a minimum the BMP we should suggest is that they use a seed lubricant because they have been shown to reduce dust. A higher priority for the more expensive ones because
 - Jonathan important to minimize use of talc and graphite, but some cases the use of talc and graphite is not correlated with dust off. For example, when using a finger pick-up or mechanical planter. Avoid using "Fluency Agent" so as not to reference a specific brand of seed lubricant.
 - Wendy Sue this is fine. We can add that there is a difference in neonic toxicities so we could recommend using lower toxicity active ingredients (lower LD50 to honeybees)
 - Thiamethoxam is most toxic > imidacloprid > clothianidin is less toxic to bees comparatively.
 - It was noted that about 85% of treated seeds sold in Vermont have clothianidin as an active ingredient and the remaining 15% is treated with thiamethoxam.
 - Amanda OK with using a fluency agent, and making that a potential recommendation.
 - Abbi OK with the way that it is worded. No other comment
 - Steven S no comment on wording
 - Ryan [stepped away and did not provide comment]

- Laura wording is contradictory in the framework document, this says regulate and also says minimize or eliminate. We heard from UVM that growers in VT use only talc and graphite. We need to have a "backout" clause in this wording so that we can adjust as we learn and remain flexible.
 - More research about availability and feasibility of non-talc and graphite seed lubricant options
 - Move forward with "minimize" instead of "eliminate"
- AAFM has heard from seed industry that there have been changes in process of seed treatment that will reduce the potential for dust-off
- Reducing the impact from planting operation is important, just need to better understand how to do that.
- Ann asked the question about the possibilities of modifying vacuum planters
 - This topic was discussed by UVM and others and AIB has heard that it isn't a feasible option currently
- Support research about effectiveness, unknown limitations, and market availability of seed lubricant alternatives to talc and graphite
 - Ann yes, support and include research on equipment (i.e. planter modifications to reduce dust)
 - Jonathan yes, and include research on equipment
 - Amanda yes agree, we can brainstorm, but need to understand effectiveness
 - Wendy Sue agree we should support research
 - Abbi agree
 - Steven S agree
 - Ryan agree
 - Laura agree and suggest bring this to the top as a priority over regulating the use of talc and graphite and other seed lubricants.
- Wendy Sue is important to build in a mechanism for review/evaluation. For example, in 3-5 years we reevaluate and deal with any unintended consequences.
- Reduce pollinator activity/exposure around fields being planted
- Recommendation to eliminate flowering plants in border of field during planting
 - Ann need to educate growers about what are attractive plants and what aren't
 - Ryan would benefit from more specificity, what is border? Just mow the field edges? We should differentiate when we are talking about pollinators vs managed honeybees.
 - Steve S agree. Can tighten the language so is not misinterpreted.
 - Abbi early spring is important for pollinators so we would be eliminating pollinator habitat.
 - Amanda agree to this as a recommendation and as an education point. We
 had talked about using this as an ag practice initiative and maybe tie it with
 some form of compensation for doing this practice so as to incentivize it
 - Laura as a recommendation it's fine, not restrictive. However, it still costs money and fuel and affects climate change. There are people that cannot do this practice because there are other programs that the farms are participating in that would not encourage mowing at all and would lead to potential contract violations. Would be interested in how much acreage on which we would be eliminating pollinator habitat through this practice, compared to how much

habitat is remaining. Would think it's a fair amount of land that would be mowed.

- Wendy Sue we need research on this practice as well to understand it's benefits
- Jonathan this is premature, there are a lot of unknowns and unintended consequences that could factor into this as far as neighboring properties, timing of harvest, delayed planting dates, etc. We already talked about recommendations to reduce dust off during planting and then this recommendation implies that we can't control dust-off so instead you have to do this instead. We are trying to coexist with managed honeybees and native pollinators, but then this creates a grey area by recommending removing food for those species. We have not heard enough in discussions of if this is practical or effective. Do not agree with this.
- Notify beekeepers (on property and within 2 miles) within 48 hours of planting. Or AAFM annual press release about corn/soy planting timing with specific notification to beekeepers.
 - Jonathan poorly worded on property and 2 miles away are very different things
 - Ann this seems doable to notify beekeepers on their property
 - Wendy Sue is doable to let beekeepers know on their property, but not sure about the 2 miles away because how do farmers know. The registered beekeepers (majority of them) are mapped with locations.
 - Amanda If there are beekeepers on my property then I have a relationship with so that is OK to notify them, but don't agree with 2 miles
 - Laura is there a distance of expectation for who to notify and what is the planting window. Distance and timing need some clarification. AAFM notification seems fine, but don't mix farmer notification with AAFM press release. Needs to be more clear
 - Abbi possible to add farmers can notify registered beekeepers and agree with Laura. Planting is not a one day event. There is a lot of room for error here that the farmer cant control.
 - Steven S This seems like an area that is difficult to regulate. This is not the most impactful or one that we can regulate as much and agree with Amanda
 - Ryan agree with notifying at least the beekeepers on site.
- Educate growers about seed label language provisions and how to follow
 - Ryan agree
 - Steven S no comment
 - Abbi who would do the education? (not sure, probably joint AAFM, UVM Extension) no other comment
 - Laura education is not bad thing, just be conscious of adding another thing to the farmer's plate, build it in with what they are already doing. Make sure we have all the answers i.e. seed disposal etc.
 - Amanda agree. If it's something that the seed dealers put on.
 - Wendy Sue OK with this language
 - Jonathan would add "support the education to growers" because it can come from many places i.e. receive a pamphlet with buying seed, attend class.
 Supporting education in any form is positive

- Is there any current education on seed label language that you know of? No, but some situations growers will reach out to salesperson or agronomist/consultant, especially when it comes to disposal because seeds are expensive. Educating growers about drift would be beneficial because don't think growers think about drift when the insecticide is on the seed. Don't have any doubt that the growers are aware that there is an insecticide on the seed.
- Is there ever incentive for seed dealers to buy the seed back vs dispose of the seed? Yes dealers will take unopened seed and this is common practice. Typically give the recommendation to plant the opened seed the following year. And there are opportunities to test that seed lot for germination. Manufacturers will give germination test results if they have the same lot to test, or will accept a sample to germ test for the grower.
- Ann agree
- Preservation of pest management flexibility
- Provide mechanism for choice of insecticide treatment only option is to encourage seed dealers to provide non-NTS
 - Jonathan you can order in September but then that is what you are going to have at planting time, no flexibility to change your seeds closer to planting time. Complicated logistics for additional options. My biggest concern is that growers have this option, but then lose the flexibility to change their order closer to planting time. Would only work in a perfect year.
 - Wendy Sue if there is a way to do it, I would support that.
 - Jonathan I don't know if incentive on dealer will do much because they will
 just provide what the consumer/grower wants. The incentive should be on the
 grower side of things so that the demand is there for non-NTS. The only option
 is completely untreated seed not non-neonic, my understanding is that there
 isn't feasibility to have alternative insecticide or fungicide only treated seeds. In
 Canada they have diamide treated seed, but we cannot transport seed across
 the border.
 - Amanda agree with Jonathan. Farmer perspective on ordering seed is that typically order at end of year to get a better price on seed, but have to consider if you have the money to pay for seeds at this time. In a perfect world would have all your information from the previous year (yield, scouting, soil test results etc.) to guide the seeds to purchase for the next year. But don't always get the opportunity to get all this information. It would be extremely challenging to be able to use this information to order seeds by September. My other concern is the unintended consequences. We don't know the effect on our crops. We just heard from the insurance perspective that we are riskier than our sister states and are investing more in crop insurance than other states have to. This puts us at a financial disadvantage because our expenses are already higher. Really concerned about unintended consequences of taking out a technology that other states can still use.
 - Laura how do we "promote" and "encourage"? overarching the seed companies are not producing seeds that don't have neonic treatments. This is a definite challenge. It will be hard to understand the loss impact of taking away

this tool. All the states need to be together on this so to work together in encouraging seed dealers to provide more options.

- Abbi maybe the mechanism is to continue further research to understand untreated seeds long-term impacts. Need time.
- Steve S farmers and most Americans want to have choices in how our food is grown. If this is a change that VT wants to see then we need to partner with other states (agree with Laura). Accepting that we don't have a choice in what we buy and grow is not really a choice to me.
- Ryan [stepped away and did not provide comment]
- Steve Dwinell we are between a rock and a hard place because of limited options. We are a small market. The idea here is to give farmers a choice, they can choose to use or not to use. don't know how we get there though.
- Ann we should present a united front and work with our neighboring states like NY. We need to be a bigger market.
- Support development of payment program for non-NTS crop loss. Provide subsidies to cover crop insurance premium increases.
 - Ann would be great, but don't know who has the money to subsidize.
 - Jonathan my understanding from Alex was that you will not specify when getting insurance that you are planting non-NTS, but your yield loss/increase in replant/increase in claims will affect insurance of others in the geographic area. So the payments would have to go to more than just the farmer choosing non-NTS.
 - Wendy Sue I think this is a good idea, but seems like there are a lot of issues around it.
 - Laura if the state wants people to take this risk then they should financially support the people making this choice. We need to have an idea of how much money this would be to go to the legislature. How much money across the state? How many farmers will take this risk? How much seed will be available? What does worst case scenario look like? It may not be that big based on availability of seed.
 - **follow up question to USDA RMA if paying \$0.10 per \$1.00 where does other \$0.90 go?
 - Abbi incentives can affect positive change, but if the financial implications of the incentive don't come close to the cost of implementing then the farmers won't look to the incentive to change their behavior
 - Steve S thank you to Laura for bringing up point about insurance companies
 - Ryan [stepped away and did not provide comment]
- Support development of seed reimbursement program that provides incentive to purchase Non-NTS. Helps relieve risk of having to purchase seed early in the season.
 - Ann incentives would be great, just don't know how it works.
 - Jonathan Are we incentivizing non-NTS because we think other practices aren't going to work the same way and we really need to push demand to have the nontreated seeds? Questioning why incentivizing someone to not use neonic treated seeds instead of pushing using an alternative. There are better ways to accomplish goal of non-neonic. We are admitting this stuff is inferior and will have losses on the back end, and we are trying to compensate for those losses with money. I have no problem with incentivizing it but think priority should be on reducing off-site drift.

- Wendy Sue I'm OK with it, but this discussion has brought up a lot of questions about it.
- Laura get the sense that seed industry is hearing this conversation and is actively working on this issue. So Jon's point is valid because incentivizing this would be out of date as seed industry. It would be interesting if the Legislature requested an update from seed industry to learn about what technology improvements are being worked on. This would be really important to share from the industry to the state of VT. Is it the most viable option to get the outcome?
- Amanda don't believe in subsidies long term. Maybe agree on a trial roll out for those that try it and research it would get some compensation. Working with insurance companies is going to be challenging. We don't deal with a lot of insurance companies to deal with in VT because of our loss factor, so don't want to add another challenge.
 - Laura hard to research on farms because everyone has used neonic seeds and has residual in soils so halo effect may be a factor and how effective would the research really be? Not sure what opportunities we would have for researching the use of non-NTS, when in last decade, every corn field has used neonic treated seeds.
- Abbi no additional comments
- Steve S agree long term incentives are not practical. I think about why we grow corn in the first place.
- Develop information in collaboration with UVM on decision making about types of pests and management practices and develop regional monitoring reports/tracking prevalence of the pests.
 - Ann yes agree we need to educate growers on practices relevant to the pest
 - Jon absolutely
 - Wendy Sue agree
 - Laura there is a lot of people (i.e. technical service providers, UVM extension, growers) does it make sense for the state to do this type of pest monitoring? How much value does this give? Will the pest pressure still not be that great? Would it be better to have a public fed map to show where pests seen? It is a lot of resources for the state to monitor.
 - Amanda Don't have an answer for how to do this. Information is great.
 Farmers do a lot of scouting in their everyday work, just don't know how to quantify it into enough information to help. If we take away this technology and then there is a development of the pest, then what is our next choice, because we have taken away the technology?
 - Abbi defer, I don't know if I support or don't because it looks like this depends on a lot of people taking on additional responsibilities and don't know what change will come of it. So don't have answers to that.
 - Steve S agree with the comments about how would we regulate this and the amount of work and the benefit that would come from it.
- o Ecosystem support
- Maintain agricultural production but encourage development of pesticide free pollinator habitat
 - Steve S can't argue with increasing pollinator habitat. No further comments.

- Abbi support the groups that are already doing this type of work rather than reinventing the wheel. Seems like great idea, but is also is very vague
- Laura is a good idea, but if we are reducing dust and off-target movement it's hard to balance the interplay with other suggestions in this framework.
 Fundamentally comes down to more research.
- Amanda great to encourage it, but how does it get implemented (financial support from the state? Money from seed?). Is great however we can do it in a way that we know is going to make a difference and doesn't have unintended consequences. Just don't know how it would be presented, but support on some level.
- Wendy Sue I like these ideas, can see connections with making land available for water to avoid major flooding events, could also be tapped into master gardener program (promoted through their program). They can be the point person for questions. Is good alternative based on knowledge that these technologies may result in us having to remove some pollinator habitat around corn fields.
- Jonathan I don't see this as a big part of what we are working on. NRCS and AAFM already have programs doing this. This is a broad stroke, but it's too broad.
- Ann we are doing a good job already relevant to this. Master Gardener, Greenhouse and landscape programs, pollinator person working with the vegetables growers all as part of federal grant to UVM. Master Gardeners are great first line of defense for this.
- Laura state owns significant amount of crop land, if this was taken away it would have a significant negative impact on farmers. Suggest utilize non-ag state land only.
- Pollinator monitoring (similar to mosquito monitoring)
 - Might not be a topic for the AIB, it just needs to happen. AIB will not comment on this. This would be for non-managed pollinators. State will continue discussion about this potential program
- o Training/education
- Developing information for VT growers on ways to reduce impact
 - Ann there are lots of bullet points to add to this (i.e. delayed planting, conservation tilling, etc) and will be group effort for the different audiences
 - Jonathan is great to give producers information. As long as it's information and not a means to take away the tool for producers. We often use Cornell's scouting reports (they have more resources to have these types of programs) to pass along to growers. Most of this information is relevant to our growers, so the more you can give to producers about pest scouting reports the better.
 - Wendy Sue education is great and support developing things that help growers with scouting and everything else
 - Amanda agree training and education is important, but is not a tool to take away the technology that we are discussing. Training and talking about it and providing information is one of the first steps. Any time behaviors can be modified on growers' own will makes implementing it down the road easier. Needs to be more research, but education should be a big part of whatever we decide going forward

- Laura agree, this should be higher up in the things that we know we should do. This should include updates on the technology of what is coming/what is being tested and what it means for growers. Make sure farmers get the research.
- Abbi education and training is paramount to affecting change as long as on the right topics and we are being sensitive to the effects that all of this is having on farmers and pivoting if we need to.
- Steve S all for training and education. No further comments.
- Any other recommendations for the Secretary that should be included?
 - ** let us know if there are more points/comments/thoughts you want to include
 - No board members have additional comments at this time
- We need to make sure recommendations need to have opportunity to revisit and revise recommendation as we learn more.
 - This is important that the preamble to any report to legislature is clear the interest in protecting pollinators but also the challenges that producers are up against in having options.

Potential impact of non-neonicotinoid treated seeds to crop insurance discussion – Alexander Sereno, Regional Director USDA Risk Management Agency

- Administers the federal crop insurance program and serves the northeast.
- Are you able to provide an estimate for how crop insurance premiums may change if seeds without neonicotinoid treatments were chosen by a grower?
 - There would not be a change
 - The Risk Management Agency (RMA) is managed by an appointed Board of Directors and this Board approved a rating methodology in 2010. Rates are set by past experience in a given area (rate on a county crop basis). We would create a rate based on historical experience in that county for that crop. There is not a surcharge for seed treatments.
 - There would not be a change to the rate in the immediate term
 - If there is a change to growers' choices that leads to increases in losses then there may be increases in premiums down the line
- If we were to have more replants due to non-treatment of seeds, would that roll into increase premiums down the line?
 - If there were more losses then it would be reflected in premiums in future years, just not in the first year.
- Is your rating based on yield or profit?
 - Loss ratio is the ratio of indemnity paid out divided by the premium taken in. The target of this loss ratio is 1.0
 - The lost cost ratio is the indemnity paid out divided by the liability insured over a 20year period.
 - Not everyone in county pays exactly the same rate.
 - There is a reference yield (average yield in county) and producers who produce more than that yield get a premium discount and those producers who produce less than the reference yield pay more in premiums. Premium per acre depends on yield.
 - Ex. 10 ton yield on corn and have 75% yield coverage level, you have guarantee of 7.5 tons. If tonnage fell below 7.5 ton then you are eligible for indemnity payment.

- If a grower chose to plant seeds without neonicotinoid insecticide treatment and their insured crop suffered significant insect damage, would they be eligible for a claim?
 - Probably yes, <u>coarse grains crop provisions</u> covers corn, sorghum and soybeans. Section 9 explains covers causes of loss, and RMA does cover losses from insects, but not damage dur to insufficient or improper application of pest control measures. Probably wouldn't cover if no control measures were taken but if the producer didn't have treated seed but followed local extension recommended practices (determined by local agricultural expert) then it probably would be a covered loss. Appropriate control measures are not defined by RMA, but depend on local agricultural experts what appropriate control measures are.
- Would there be a difference between crop insurance premiums for organic (completely untreated seeds) crops and crops that were planted with fungicide-only treatments?
 - Yes, there would be. RMA breaks out organic transitional and organic certified as different practices.
 - Rate or risk attributed to these practices is the same but different yields and prices associated with the practices. The risk assessment is not different, but the yields and prices are.
 - Grower insures the yield and the price differently, but the rate risk assessment is the same for other practices
- Do you know if you have had anyone plant with non-neonic seeds and had claims?
 - I haven't done research on that.
 - We insure most of the corn in VT
 - Across all states no one is asking about non-neonic treated seeds
 - This is the first time that anyone has asked us about this directly.
- How is Vermont doing in terms of losses you have had to insure?
 - This year we are expecting a lot of losses because of flooding and moisture this season
 - It's all relative. The best place to grow corn is not VT. My impression is that Vermont does not have many losses compared to other northeast states.
 - Last 10 years in VT corn, loss ratio is 1.05 (so on target) and lost cost ratio is 9.7% so for every \$1.00 we insure we pay our \$0.10 in indemnity. This year would be worse because of flooding.
 - In the Midwest the lost cost ratio would be less 10%. In NY the ratio is 6.5% (so VT has been a little more riskier in that time period), NH (has much less insured crop than VT) their lost cost ratio is 2% (so much lower risk).
 - 10% is reasonable amount of risk, although high for Midwest.

BMP recommendation status & next steps

- Work plan status & next steps
 - Dec meeting moved to Dec 11 1-4pm in order to have more time to write report
 - We have annual report due in January 2023
 - We must have recommendation to Anson by December 2023 to fulfill legislative charge.

Public Comments

None

** - indicates action item