THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

Department of Agricultural Resources
225 Turnpike Road, 3rd Floor, Southborough, MA 01772
www.mass.gov/agr

MDAR
MASSACHUSETTS DEPARTMENT OF AGRICULTURAL RESOURCES

Maura T. Healey	Kimberley Driscoll	Rebecca L. Tepper	Ashley E. Randle
GOVERNOR	LIEUTENANT GOVERNOR	SECRETARY	COMMISSIONER

PESTICIDE BOARD SUBCOMMITTEE MEETING MINUTES

October 15, 2024

BOARD MEMBERS IN ATTTENDANCE

Michael Moore, DPH, Food Protection Program, (Chair)	Present
Taryn LaScola, MDAR, Designee for Commissioner Randle	Present
Meg Blanchet, DPH, Designee for Commissioner Goldstein	Present
Nicole Keleher, DCR, Designee for Commissioner Arrigo	Present
Richard Berman, Commercial Applicator	Present

The Board did meet or exceed the minimum number (3) of members present to form a quorum and conduct business.

A. REVIEW OF MINUTES FOR September 17, 2024

Motion: R. Berman
Second: N. Keleher
Discussion: None
In Favor: R. Berman, N. Keleher, M. Moore, T. LaScola, M. Blanchet
Opposed: None
Abstained:

B. PRODUCT REGISTRATIONS

Motion: That the Pesticide Board Subcommittee registers the pesticide products listed on the EIPAS PR October 15, 2024, Subcommittee cover sheet with the exception of the following products:

1. Harrell's ProtectMAX Chlorothalonil 6L T&O Fungicide, EPA Reg. No. 91234-112-52287,
2. Harrell's ProtectMAX Chlorothalonil DF T&O Fungicide, EPA Reg. No. 100-1694-52287,
3. Allstar Herbicide, EPA Reg. No. 228-757,
4. Invicar 2SC, EPA Reg. No. 83100-65,
5. Premise Foam, EPA Reg. No. 101563-99, and
6. StriCore, EPA Reg. No. 279-3628-67690.

Moved: R. Berman
Second: N. Keleher
Discussion: None
In Favor: M. Blanchet, R. Berman, T. LaScola, N. Keleher, M. Moore
Opposed: None
Abstained: None

Motion: That the Pesticide Board Subcommittee has determined that the use of the following products may pose unreasonable adverse effects to the environment as well as to pollinators, when taking into account the economic, social, and environmental costs and benefits of their use in the Commonwealth and are thereby restricted. This is pursuant to the Subcommittee's decision on March 1, 2021, to modify the registration classification of products containing neonicotinoids, including **imidacloprid**, that have outdoor non-structural uses or outdoor non-agricultural uses on the label from general to state restricted use:

1. Premise Foam, EPA Reg. No. 101563-99, containing imidacloprid

Moved: R. Berman
Second: T. LaScola
Discussion: None
In Favor: M. Blanchet, R. Berman, T. LaScola, N. Keleher, M. Moore
Opposed: None
Abstained: None

Motion: That the Pesticide Board Subcommittee has determined that the use of the following products,

1. Harrell's ProtectMAX Chlorothalonil 6L T&O Fungicide, EPA Reg. No. 91234-112-52287, containing chlorothalonil,
2. Harrell's ProtectMAX Chlorothalonil DF T&O Fungicide, EPA Reg. No. 100-1694-52287, containing chlorothalonil,
3. Allstar Herbicide, EPA Reg. No. 228-757, containing sulfentrazone, and
4. Invicar 2SC, EPA Reg. No. 83100-65, containing methoxyfenozide,

may cause an unreasonable risk to man or the environment, when taking into account the economic, social, and environmental costs and benefits of their use. This determination is based upon the leaching potential and toxicological concern of these substance as defined in the "Protection of Groundwater Supplies from Non-Point Source Pesticide Contamination" Regulations. Therefore, the Subcommittee hereby modifies the registration classification of agricultural/commercial pesticide products containing chlorothalonil, sulfentrazone, and methoxyfenozide from general to restricted use for groundwater concerns.

Moved: R. Berman
Second: N. Keleher
Discussion: None
In Favor: M. Blanchet, R. Berman, T. LaScola, N. Keleher, M. Moore
Opposed: None
Abstained: None

C. RODENTICIDES

LaScola provided information relative to request sent to the Subcommittee by the Harvard Law School Animal Law Policy Clinic to conduct an individual review of the anticoagulant rodenticides while also suspending the registration of these anticoagulant rodenticide.

LaScola informed the Subcommittee about the Department's efforts with outreach to organizations that deal with injured wildlife and domestic animals, which was done in response to more frequent questions about whether pesticide enforcement had conducted a lot of investigations related to rodenticides and if any trends had been noticed. LaScola indicated that the Department does not receive a lot of inquiries on this, but has taken notice of cases reported in the media. In an effort to get a better understanding and picture of the rodenticide incidents with wildlife, MDAR has reached out the wildlife clinics, MA Fish & Wildlife, and veterinarian associations to make them aware of MDAR's pesticide regulatory program and its role related to rodenticide use and the importance of sharing incident reports. Following the outreach, the Department received additional reports. However, many of these reports do not include sufficient information to conduct a proper follow up and investigation. It is also recognized that in many cases resources are insufficient to obtain the necessary information.

MDAR would like to explore some options to get a clearer understanding of what potential exposure is happening in the environment and, if so, what it that means. Options to gather more robust information are currently being explored. At this time, MDAR would like to inform the Subcommittee that the department is trying to take this step in an effort to get a better understanding of the issue. The decision for the Subcommittee to make at this time is whether or not it tables the discussion of an individual review until more is known about efforts to obtain more robust information.

Berman suggested that the Department continue with the efforts to get more feedback and information. Berman also pointed out that additional regulatory information is anticipated to be released by U.S. EPA, including a final biological evaluation relative to endangered species later this year and an interim decision sometime next year. Those developments are expected to bring in more clarity about measures such as which products will be classified as general and restricted use.

Moore inquired about whether a possible individual review will be done by staff or a contractor. LaScola indicated that this request is not a legislative directive and that no funding was provided. Therefore, the Subcommittee can decide whether an individual review will be done, and if so, staff will be compiling information for the Subcommittee to review and evaluate.

LaScola indicated that follow-ups and updates on this discussion can be part of upcoming meetings to keep the Subcommittee informed about the developments and efforts to collect more robust information. Based on these updates, the Subcommittee can then make a decision regarding an individual review. The Subcommittee members indicated that they are all in agreement with this approach.

D. GLYPHOSATE SCIENTIFIC REVIEW

LaScola reminded the Subcommittee that it had decided several years ago to conduct an individual review of glyphosate. Recently, the Glyphosate Commission completed its task, and the scientific review was shared with the Subcommittee. At this time, MDAR would like to check in with the Subcommittee and find out if there is any additional information that should be included in the package for the individual review. The package would include the scientific review, EPA's registration review documents, and a summary of monitoring studies that MDAR conducted. Keleher asked if public comments of the scientific review were available. LaScola indicated that both Phase I and Phase II reports of the scientific review included summaries of public comments. Moore asked if the Subcommittee needed more time to digest the information and come up with suggestions for additional information. Blanchet stated that she needed more time to review. LaScola stated that MDAR will start compiling information that normally is included for an

individual review and that Subcommittee members can reach out to MDAR staff if they identify any additional information needs. LaScola suggested to have another check in at an upcoming meeting before the individual review is put on the agenda. The Subcommittee indicated to be in agreement with that approach.

E. NEW ACTIVE INGREDIENT

Miller presented information on the new active ingredient pethoxamid in the product StriCore, EPA Reg. No. 279-3628-67690. StriCore is a systemic preemergence and early post-emergence herbicide for control of various grasses and annual broadleaf weeds. The safety data sheet indicates it contains at least 30% petroleum compounds and 5-10% ethyl lactate and benzoic acid, which are naturally occurring, low toxicity food additives.

Pethoxamid is classified as a Group 15 'long chain fatty acid inhibitor' that impedes very long chain fatty acid synthesis and cell division. This is the same mode of action as in acetochlor and metolachlor. The active ingredient (AI) is absorbed by roots and young shoots of plants.

Handling precautions: The StriCore label signal word is 'Warning', due to primary eye irritation hazard. This may be at least partially due to the effects of ingredients other than pethoxamid, since EPA states the technical product carries the signal word, 'Caution'. Baseline PPE is required (long-sleeved shirt, long pants, shoes, socks) as well as waterproof gloves and protective eyewear. The restricted entry interval (REI) is 12 hours.

StriCore is labeled for use on a range of turf and ornamental sites, including residential, commercial, and institutional lawns and landscapes. Other allowed sites are golf courses, sod farms, utility rights-of-way, roadsides, railways, industrial areas, and field-grown ornamentals. The label states it is intended for use on residential areas by professional applicators, so there are no homeowner uses.

Standard water protection language prohibits direct application to waters, areas where surface water is present, and to intertidal areas below the mean high-water mark. Additional groundwater protection language requires a 50-foot setback between mixing or loading sites and uncapped wells, sinkholes, and water bodies unless an impervious pad is used.

The application rate is up to 1.5 pounds a.i./acre, with a 1.5-pound maximum allowed annually. Pethoxamid can be applied via aerial, ground, and chemigation equipment. Moisture is necessary for activation in soil. Spray drift management language directs users not to apply when wind speeds exceed 15 miles per hour and to also avoid application when speeds are less than 2 miles per hour. The product must only be applied when drift potential onto adjacent sensitive areas is minimal. Sod farms have a pre-harvest interval (PHI) of 90 days. Label language states, 'Do not use StriCore on food-producing trees, vines, or plants.' The active ingredient pethoxamid is approved by EPA for some corn and soybean uses, but the end-use product being considered today, StriCore, is not.

Studies used in assessing risks to human health show that pethoxamid exhibits low acute oral toxicity (Toxicity Category III). Primary eye irritation and dermal toxicity are also Category III. Toxicity via the inhalation route of exposure is Category IV, or lowest level of toxicity, as is skin irritation potential. However, it has been found to be a dermal sensitizer.

Liver and thyroid are the primary target organs in rats, the most sensitive species. In dogs, the most sensitive effects were in the gastrointestinal system. Potential signs of neurotoxicity such as ataxia, decreased motor activity, and loss of righting reflex were observed in the rat developmental study, but the effects occurred at doses so high a large number of animals died. The effects were therefore considered to be related to the dying process itself rather than specific to the chemical. Pethoxamid did not cause reproductive toxicity in rats.

Pethoxamid is classified as having 'Suggestive Evidence of Carcinogenic Potential', based on the presence of treatment-related thyroid follicular cell adenomas in male rats and hepatocellular adenomas in mice. However, there was no evidence of induced mutant colonies in *in vitro* mammalian cell assays or unscheduled DNA synthesis in mammalian cells. To account for this potential risk, EPA determined that quantification using a nonlinear approach based on the chronic reference dose (cRfD) will be protective against potential carcinogenicity.

The cPAD, or chronic population adjusted dose, is equivalent to the chronic reference dose cRfD of 0.17 mg/kg/day and is considered protective of the general population.

Incidental exposure in outdoor settings for the most potentially vulnerable population – children 1 to 2 years old – was calculated to result in levels of risk that did not exceed a level of concern. The chronic risk estimates were less than 1% of the chronic population-adjusted dose for the general US population and all subgroups. The residential post-application potentials for dermal exposure from turf and golf course uses were not quantitatively assessed since a dermal endpoint was not observed. Due to label language specifying residential areas be treated by professional applicators, EPA considers pethoxamid products not for homeowner use and a quantitative residential handler assessment was not required at this time.

Environmental risk assessment: Pethoxamid has been found to be moderately toxic to estuarine/marine aquatic invertebrates, freshwater fish, and estuarine/marine fish on an acute exposure basis. It is classified as slightly toxic to freshwater invertebrates. A chronic exposure study of rainbow trout in an early life stage toxicity test found a 21% reduction in larval survival at 1400 ug a.i./L.

Pethoxamid is classified as slightly toxic to birds on an acute oral exposure basis, with a bobwhite quail LD50 value of 1445 mg a.i./kg-body weight. Since birds serve as surrogates for reptiles and terrestrial-phase amphibians, pethoxamid is classified as slightly toxic via oral exposure for these taxa as well. A subchronic mallard duck study had no mortalities, resulting in a 'practically non-toxic to birds, reptiles and terrestrial-phase amphibians' classification on a subacute dietary exposure basis.

Based on the rat acute oral toxicity study previously mentioned with respect to human health, pethoxamid is categorized as slightly toxic to mammals for acute oral exposure.

It is practically non-toxic to adult honey bees in the case of acute contact exposure. However, acute oral toxicity data using a different technical end product than StriCore showed the acute and chronic risk levels of concern exceeded for both adult and larval bees.

Bioaccumulation in aquatic food chains is considered unlikely, based on the log of the octanol-water partition coefficient (log Kow) of 2.96 and the low bioconcentration factors found in rainbow trout. After 56 days, 82 to 92% of residues were eliminated from whole fish.

For aquatic organisms, there are no level of concern exceedances for freshwater or estuarine/marine fish, nor for freshwater or estuarine/marine invertebrates. Exceedances were found for aquatic vascular and non-vascular plants, which is typical of an herbicide.

For terrestrial animals, there are no acute risk level of concern exceedances for non-listed birds or mammals. For birds, there are no chronic risk level of concern exceedances. There were some exceedances of the chronic dietary-based level of concern for mammals consuming short grass and broadleaf plants. However, EPA noted that there is uncertainty in mammalian chronic risk estimates due to the large difference in the Lowest Observed Adverse Effect Level (1600 mg a.i./kg-diet) and NOAEL (200 mg a.i./kg-diet), so some risk estimates did not exceed the level of concern for chronic exposure.

For terrestrial plant risk, level of concern exceedances were calculated for monocots exposed via runoff in dry and semi-aquatic areas from both ground and aerial applications. Aerial applications also posed spray drift risks. Dicots only exceeded the level of concern when exposed via runoff in semi-aquatic areas.

Pethoxamid degrades in water via both aerobic and anaerobic metabolism with half-lives ranging from 7 – 13 days. The main route of degradation is aerobic soil metabolism and it is relatively non-persistent in the soils tested. It has high water solubility and some leaching potential but is relatively non-persistent. Therefore, pethoxamid does not meet the criteria for being classified as a potential groundwater contaminant in Massachusetts.

Move: that the Pesticide Board Subcommittee approve the product registration for StriCore, EPA Reg. No. 279-3628-67690, containing the new active ingredient **pethoxamid**, which has never before been registered in Massachusetts

F. NEW BUSINESS

There was no new business brought forward.

G. ADJOURN

Motion: To adjourn the October 15, 2024, Subcommittee Meeting.

Moved: T. LaScola
Second: R. Berman
Discussion: None
In Favor: M. Blanchet, R. Berman, T. LaScola, N. Keleher, M. Moore
Opposed: None
Abstained: None