The Commonwealth of Massachusetts

Executive Office of Energy and Environmental Affairs

Department of Agricultural Resources

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Governor	***Lieutenant Governor***	***Secretary***	***Commissioner***

PESTICIDE BOARD SUBCOMMITTEE MEETING MINUTES

July 15, 2025

BOARD MEMBERS IN ATTTENDANCE

Michael Moore, DPH, Food Protection Program, (Chair)	Present
Hotz Wijnja, PhD., MDAR, Designee for Commissioner Randle	Present
Meg Blanchet, DPH, Designee for Commissioner Goldstein	Present
Eric Seaborn, 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. <u>REVIEW OF MINUTES FOR APRIL 15, 2025</u>

Motion: R. Berman
Second: M. Blanchet
Discussion: None
In Favor: R. Berman, M. Moore, M. Blanchet, E. Seaborn
Opposed: None
Abstained: None

B. <u>PRODUCT REGISTRATIONS</u>

Motion: That the Pesticide Board Subcommittee registers the pesticide products listed on the EIPAS PR July 15, 2025, Subcommittee cover sheet with the exception of the following products:

1. Hyvar X-L IVM, EPA Reg. No. 81927-77,
2. Neatland Guard SC, EPA Reg. No. 103087,
3. Orador, EPA Reg. No. 91234-324,
4. Priority-S 8E, EPA Reg. No. 83100-86,
5. WeedMaster XHL, EPA Reg. No. 71368-139,
6. Weedar XHL, EPA Reg. No. 71368-140,
7. Sumari Triton Ant Gel Bait, EPA Reg. No. 1021-2885,
8. Award Turf Fertilizer with 0.2% Merit (Various N-P-K), EPA Reg. No. 101563-76-57131,
9. TSC GrowStar Mallet 0.20% + Turf Fertilizer, EPA Reg. No. 228-500-82757,
10. Temper More, EPA Reg. No. 66222-306,

11. Narvos 50 WDG Fungicide, EPA Reg. No. 92808-2-84237,
12. TKO Non-Selective Weed Killer Granular, EPA Reg. No. 10088-76-70799, and
13. Liberty ULTRA Herbicide – Powered by Glu-L Technology, EPA Reg. No. 7969-500.

Moved: R. Berman
Second: H. Wijnja
Discussion: None
In Favor: M. Blanchet, R. Berman, M. Moore, H. Wijnja, Eric Seaborn
Opposed: None
Abstained: None

Motion: That the Pesticide Board Subcommittee has determined that the use of the following products:
1. WeedMaster XHL, EPA Reg. No. 71368-139, containing mono- and dimethylamine salts of 2,4-D dichlorophenoxyacetic acid at 43.87%, and
2. Weedar XHL, EPA Reg. No. 71368-140, containing mono- and dimethylamine salts of 2,4-D dichlorophenoxyacetic acid at 68.87%,

be categorized as restricted use pursuant to the Subcommittee's decision on April 14, 1989, to register products containing 20% or more of **2,4-dichlorophenoxyacetic acid (2,4-D)** and/or its derivatives as state restricted use.

Moved: R. Berman
Second: H. Wijnja
Discussion: None
In Favor: M. Blanchet, R. Berman, M. Moore, H. Wijnja, Eric Seaborn
Opposed: None
Abstained: None

Motion: the Pesticide Board Subcommittee has determined that use of the following product:
1. Sumari Triton Ant Gel Bait, EPA Reg. No. 1021-2885, containing clothianidin,
2. Award Turf Fertilizer with 0.2% Merit (Various N-P-K), EPA Reg. No. 101563-76-57131, containing imidacloprid, and
3. TSC GrowStar Mallet 0.20% + Turf Fertilizer, EPA Reg. No. 228-500-82757, containing imidacloprid,

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 **clothianidin** and **imidacloprid**, that have outdoor non-structural uses or outdoor non-agricultural uses on the label from general to state restricted use.

Moved: R. Berman
Second: H. Wijnja
Discussion: None
In Favor: M. Blanchet, R. Berman, M. Moore, H. Wijnja, Eric Seaborn
Opposed: None
Abstained: None

Motion: That the Pesticide Board Subcommittee has determined the use of the following products
1. Hyvar X-L IVM, EPA Reg. No. 81927-77, containing bromacil,

2. Neatland Guard SC, EPA Reg. No. 103087, containing chlorothalonil,
3. Orador, EPA Reg. No. 91234-324, containing acetochlor,
4. Priority-S 8E, EPA Reg. No. 83100-86, containing s-metolachlor,
5. Temper More, EPA Reg. No. 66222-306, containing s-metolachlor,
6. Narvos 50 WDG Fungicide, EPA Reg. No. 92808-2-84237, containing kresoxim-methyl, and
7. TKO Non-Selective Weed Killer Granular, EPA Reg. No. 10088-76-70799, containing bromacil,

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 substances 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 **acetochlor, bromacil, chlorothalonil, kresoxim-methyl,** and **metolachlor** from general to restricted use for groundwater concerns.

Moved: R. Berman
Second: M. Blanchet
Discussion: None
In Favor: M. Blanchet, R. Berman, M. Moore, Eric Seaborn, H. Wijnja
Opposed: None
Abstained: None

C. <u>NEW ACTIVE INGREDIENT</u>
Miller presented information on the new active ingredient (AI) ***glufosinate-P ammonium***, formulated in the product Liberty ULTRA Herbicide – with Glu-L Technology, EPA Reg. No. 7969-500, for broad spectrum control of broadleaf and grassy weeds in LibertyLink and glufosinate-resistant crops. The new AI is 18.7% of the soluble liquid formulation. Glufosinate-P comes in two forms: as ammonium salt, which is in the product under consideration, and an acid form. EPA considers them functionally equivalent and refers to glufosinate-P as the AI for both in the registration documents.

Glufosinate-P is classified as a Group 10 herbicide, the same as glufosinate, which is already registered in Massachusetts. Group 10 herbicides are nitrogen metabolism inhibitors and here the enzyme glutamine synthetase is inhibited. Disruption in glutamine production leads to damaged cell membranes, ammonia buildup, and cell death in susceptible plants. Liberty ULTRA is a new formulation that concentrates the herbicidally active molecule from the racemic mixture of glufosinate molecules (two enantiomers) found in typical glufonsinate products, so it achieves similar levels of weed control with lower application rates.

Handling Precautions: The Liberty ULTRA label signal word is ‘Danger’. The formulation is corrosive and can cause irreversible eye damage. Eye protection is required in the form of safety glasses, goggles, or eye shield. Baseline PPE is required (long-sleeve shirt, long pants, socks) as well as chemical-resistant footwear and chemical-resistant barrier laminate or butyl rubber gloves. Inhalation of mist spray should be avoided. The restricted entry interval (REI) is 12 hours.

Uses: Liberty ULTRA is a non-selective, post-emergence contact herbicide only labeled for glufosinate-resistant canola, corn, cotton, and soybean or fallow fields and post-harvest in fields associated with these crops. The label contains plant-back intervals for rotational crops/grazing in fields where Liberty ULTRA has been used. Application methods are foliar ground or aerial spray.

The label contains several environmental hazard statements. There are standard provisions against direct surface water applications or contamination by wash or rinsate waters as well as language for minimizing

runoff. The pollinator protection statement focuses on non-target plants as habitat and forage for pollinators rather than direct hazards to pollinating insects.

Drift language prohibits spraying when sustained wind speeds are outside a 3 to 15 mph window. Ground booms cannot be higher than 24 inches above the vegetative canopy and aerial applications are limited to only 10 feet above the canopy except in cases of danger to the applicator. Applications during temperature inversions are prohibited. Mandatory spray drift buffers are 50 feet for aerial and 10 feet for ground applications but these can be reduced if, for example, coarser droplet sizes are used. There are more buffer substitution options for ground applications than aerial.

Applications are restricted to no more than 1.59 lbs ai/acre/year from all glufosinate-bearing products.

Human health: Based on rat toxicity studies, glufosinate-P in the acid form is categorized as Toxicity Category II for acute oral exposures. For the ammonium form, it is Toxicity Category III, a lower level of concern. It is also Category III for acute dermal and inhalation exposures in both forms, and either slightly or non-irritating (Category IV) for primary skin irritation. The acid form is moderately irritating to the eye and has been found to be a dermal sensitizer in guinea pigs, whereas the ammonium form is minimally irritating to the eye and not a dermal sensitizer.

EPA notes that the mammalian mode of action has not been elucidated for glufosinate, though mammals are known to express glutamine synthetase in a number of tissues including the brain, liver, muscle, adipose tissue, lung, and kidney.

Glufosinate-P is classified as “Not Likely to be Carcinogenic to Humans”. The chronic dietary No Observed Adverse Effect Level (NOAEL) has been set at 1.5 mg/kg/day, based on a dog study that showed clinical signs of neurotoxicity at 5 mg/kg/day. The human acute dietary population adjusted dose has been set at 0.5 mg/kg/day and the chronic dose, or cPAD, is 0.015 mg/kg/day.
Dermal absorption for racemic glufosinate is low – less than 1%, and when in the body, glufosinate elimination is relatively rapid. When ingested, over 96% is excreted within 72 hours, mostly in the form of feces.

Exposure Risks: Humans may be exposed to low levels of L-glufosinate in drinking water and food. There is also potential for both short- and intermediate-term dermal and inhalation exposures for occupational handlers. No residential exposure is anticipated due to the agricultural use pattern of Liberty ULTRA. Glufosinate-P levels in food and drinking water are expected to be half those of racemic glufosinate, based on the use patterns and lower application rates.

There are no acute or chronic dietary estimates of concern for the general U.S. population and all population subgroups. The most highly exposed population subgroup is infants at 12% of cPAD. For L-glufosinate acid, the majority of combined risk estimates for occupational exposures are not of concern. Exceptions involve inhalation risk associated with use of mechanically pressurized handgun applications to rights-of-way/industrial/ commercial areas, orchards and field crops, and in greenhouses if no respirator is used. These risks are effectively mitigated by applicators wearing a PF-10 respirator for the first two and a PF-50 respirator in greenhouses. For the L-glufosinate ammonium form, use of a PF-10 respirator in the greenhouse scenario with the pressurized handspray is sufficient for risk to be below the level of concern. All other occupational exposures are not considered of concern for human health.

Environmental Risk: EPA conducted its ecotoxicity and environmental risk assessment for glufosinate-P by combining datasets from racemic glufosinate and then the acid and ammonium forms of L-glufosinate.

Glufosinate is characterized as slightly toxic to mammals on an acute oral exposure basis. Chronic dietary exposure in mammals at doses in the 5-7 mg/kg range resulted in lower numbers of viable pups. It is practically non-toxic in the case of acute exposures to young adult honey bees and larvae. However, chronic oral exposure to high doses in adult honey bees resulted in increased mortality and all dietary exposure was observed to decrease feeding. Adult bee emergence was the most sensitive endpoint following chronic oral exposure of larvae. A study from the scientific literature suggests that glufosinate is moderately toxic to earthworms with acute contact exposure.

Glufosinate is slightly toxic to birds on an oral acute and subacute dietary exposure basis. No adverse effects were observed up to the highest dietary concentration tested in a 22-week mallard duck study but there was a 7% reduction in the ratio of viable embryos relative to controls at a higher dietary concentration in bobwhite quail.

Glufosinate is practically non-toxic to freshwater fish, estuarine/marine fish, and freshwater invertebrates on an acute exposure basis, but it is moderately toxic to estuarine/marine invertebrates. The most sensitive chronic toxicity endpoint in freshwater fish is survival in the form of a 12% decrease at the LOAEL. For chronic exposure, estuarine/marine invertebrates are three orders of magnitude more sensitive than freshwater organisms and exhibited up to 30% reproduction and growth reductions in studies. Both vascular and non-vascular aquatic plants are more sensitive to glufosinate-P than racemic glufosinate. Risk quotients exceeding the levels of concern were calculated for chronic dietary exposure in mammals, terrestrial invertebrates (including bees), and marine invertebrates in the scenario of a marine area located at the edge of a treated field. End-product labels are required to have buffers to mitigate potential edge of field exposures from drift and runoff.

Endangered Species Act*:* EPA completed a detailed Endangered Species impact assessment that is included in its Ecological Risk Assessment. Both potential direct and PPHD (Prey, Pollination, Habitat, and Dispersal) effects are considered. Mammals, invertebrates, and plants all have some direct effect potential, whereas direct effects to birds, reptiles, fish, and amphibians are not a concern based on the screening-level assessment. PPHD effects were also analyzed for species from these taxa that rely on mammals, invertebrates, and/or plants. Some impacts are anticipated but not deemed to constitute current jeopardy or adverse modification.

Section 12 of the product label requires checking EPA's interactive 'Bulletins Live! Two' website to verify that the intended application zone does not overlap with protected areas for listed species. The label also contains various application restrictions to prevent off-field drift; modeling indicates that ground applications are not expected to impact listed species off the field, but aerial applications require larger buffers.

Fate/Transport: L-glufosinate is comparably persistent to racemic glufosinate in terms of hydrolysis, photolysis, and aerobic soil metabolism. Its two most common degradates are both less toxic than glufosinate, so the environmental assessments only considered the parent molecule to be the residue of concern. It is categorized as non-persistent to slightly persistent in soils, with estimated half-lives of 1.7 to 22.9 days in aerobic soils and 1.5 to 36 days in aerobic aquatic environments. It is both highly soluble and mobile but is classified as non-volatile from water. It has a log Kow <0.1 and therefore not considered to be bioaccumulative.

Groundwater Protection: Glufosinate-P ammonium does not meet the criteria for being classified as a potential groundwater contaminant in Massachusetts.

Move: that the Pesticide Board Subcommittee approve the product registrations for Liberty ULTRA Herbicide – Powered by Glu-L Technology, EPA Reg. No. 7969-500, containing the new active ingredient *glufosinate-P ammonium*, which has never before been registered in Massachusetts

Moved: R. Berman
Second: H. Wijnja
Discussion: None
In Favor: M. Blanchet, R. Berman, Eric Seaborn, M. Moore, H. Wijnja
Opposed: None
Abstained: None

D. PESTICIDE PROGRAM UPDATES:

Update on Rodenticide Scientific Review

Wijnja provided an update related to the rodenticide scientific review. Following the petition the Subcommittee related to the anticoagulant rodenticides that the Subcommittee received last year, the Subcommittee decided that additional information was needed to make an evaluation of the registration of these types of rodenticides.

MDAR contracted with Eastern Research Group, Inc. (ERG) to conduct a scientific review, which is currently ongoing. The final scientific review report will be forwarded to the Subcommittee, along with other information that MDAR will compile, and conduct an individual review of the anticoagulant rodenticides.

Currently, ERG's scientific review is in phase 2; the final phase 1 report was posted on the Subcommittee webpage along with the draft phase 1 report that was put out for public comment earlier this year. Once the draft phase 2 report is available, it will be shared with the Subcommittee, and it will also be made available for public comment.

Berman shared a few observations and comments from reviewing the Phase 1 Final report. The first comment was related to whether ERG will be investigating EPA results from FIFRA Section 6(a)(2) mandatory reports of unreasonable adverse effects from the use of pesticide products that registrants are required to report to EPA. Berman stated that he hopes that ERG will investigate and report this information. The second comment was related to the effort by MDAR on outreach to various organizations to collect information and reports on evidence of negative consequences of the use of rodenticides, especially the SGARs. Berman did not see statements in the Final Phase 1 report that indicate that ERG would be considering and investigating these reports. Berman stated that this information could be helpful. Berman asked staff to pass along these comments to ERG. Wijnja replied in the affirmative.

Consideration of meeting dates for the upcoming months.

Wijnja stated that the routine scheduled date for the Subcommittee in September provides a conflict for MDAR staff to attend the meeting. He proposed that the September meeting would be held on Tuesday the 23rd instead of the 16th. Subcommittee members indicated that the proposed date would work for them.

E. NEW BUSINESS

There was no new business.

F. ADJOURN

Motion: To adjourn the July 15, 2025, Subcommittee Meeting.
Moved: M. Moore
Second: H. Wijnja
Discussion: None
In Favor: M. Blanchet, R. Berman, M. Moore, E. Seaborn, H. Wijnja

Opposed: None
Abstained: None

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