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Statement of Beyond Pesticides on Best Management Practices for the Use of Neonicotinoid Treated Article Seeds and Neonicotinoid Pesticides, Rule 25P031
Vermont Agency of Agriculture, Food and Markets
Public Health & Agricultural Resource Management Division
116 State Street, Montpelier, VT 05620-2901
September 11, 2025

Mr. Steve Dwinell and Mr. Zach Szczukowski,

We appreciate the opportunity to submit comments on proposed Rule 25P031, Best Management Practices for the Use of Neonicotinoid Treated Article Seeds and Neonicotinoid Pesticides, being considered by the Agency of Agriculture, Food and Markets (VAAFM). Beyond Pesticides is a national, grassroots, membership organization that represents community-based organizations and a range of people seeking to improve protections from pesticides and promote alternative pest management strategies that eliminate a reliance on pesticides. Our membership spans the 50 states, the District of Columbia, and groups around the world. We are providing these comments on behalf of our members and supporters in the state of Vermont.

We urge the VAAFM, specifically the Public Health & Agricultural Resource Management Division, to adopt the implementation of an Ecological Pest Management (EPM) or strongly defined Integrated Pest Management (IPM) program for indoor environments, and Organic Land Care (OLC) practices in the outdoor environment. While the proposed rule recognizes a problem, we urge the Agency to strengthen the criteria of best management practices to consider a broader approach in response to the biodiversity and public health threats referenced in the rule and ensure a more robust response to regulatory failures at the federal level that exacerbate risks to nontarget organisms from neonicotinoid insecticides and neonicotinoid-treated seeds, as defined in a large body of peer-reviewed scientific findings.[1]

There are several provisions of the rule that undermine the protections needed and additional issues that must be addressed to affect a meaningful response to pollinator decline and adverse ecosystem effects associated with the use of neonicotinoid-based or coated products.

The following amendments should be made, as all pesticides in commerce, including neonicotinoids, are regulated by the U.S. Environmental Protection Agency (EPA) and are said to

not cause "unreasonable adverse effects" under federal and state of Vermont law. Therefore, under this language in the proposed rule (particularly Section 3.05 and 4.02 pertaining specifically to defining Integrated Pest Management), all neonicotinoids have already met this standard. The purpose and intent of this authorizing legislation, which as we understand it,[2] however, is to create a higher standard of environmental protection and transition us away from their continued use with clear timelines and benchmarks for success and accountability. The need for improved protection is supported by this testimony, the scientific literature, and findings of EPA deficiencies cited herein.

1. Add the definition of EPM (or Strong IPM) to include:
    a. "*Eliminates or mitigates economic and health damage caused by pests;*
    b. *Minimizes, or eliminates to the extent possible, the use of pesticides and the risk to human health and the environment associated with pesticide applications; and*
    c. *uses integrated methods, site or pest inspections, cultural practices, pest population monitoring, an evaluation of the need for pest control, and one or more pest management methods, including sanitation, structural repairs, cultural practices, habitat manipulation, mechanical and living biological controls, other nonchemical methods, and, if nontoxic options are unreasonable and have been exhausted, a defined set of least-toxic pesticides."*
2. Add the six EPM Program essentials, including Prevention, Identification, Monitoring, Record-Keeping, Action Levels, Tactics Criteria, and Evaluation (more details in next section).
3. Add definition for what is considered a "least-toxic pesticide" to include:
    a. *EPA-classified minimum risk pesticides*; (7 CFR 205.601) and
    b. *USDA organic certified pesticides*. (40 CFR § 152.25)
4. Add definition for what is not considered a "least-toxic pesticide" to include:
    a. An EPA registered pesticide that is **not organic certified.**

It is important that the proposed rule prioritize ecological pest management practices, best defined in federal law as "organic," as the alternative that must be assessed relative to the use of neonicotinoids and related compounds because of the numerous deficiencies in the EPA pesticide registration process on which the State of Vermont relies for determinations of safety. With a proper assessment of the need for these highly toxic chemicals to be dispersed in an already vulnerable environment, the state can find that management strategies are available that utilize mechanical, biological, and cultural (operational) practices that prevent the need for toxic pesticides that escalate the destruction of biodiversity and ecosystem services. Regulations that protect ecosystem services support the key role that soil organisms, bats, birds, goats, and other animals/forms of wildlife play in preventing pest populations that exceed damage thresholds.

The continued dependence on pesticides fails to respond to the pesticide treadmill effect that elevates pest populations by depressing ecological balance while increasing pest resistance to pesticide applications and reducing plant resiliency to pest populations.

Ecological Pest Management (EPM) and Organic Land Care (OLC)
The first step in pest management is pest prevention. EPM or OLC are Integrated Pest Management (IPM)[3] approaches that place strong emphasis on addressing pest issues at the source. Because the term "IPM" has been co-opted by the chemical industry to mean virtually anything a practitioner wants it to mean,[4] Beyond Pesticides has embraced the phrase "Ecological Pest Management." Ecological Pest Management better represents the focus practitioners need to have –emphasizing the broader ecology of pest management and avoiding toxic chemicals unless there are no alternatives. Some, but certainly not all, IPM programs will follow this approach. For both indoor and outdoor pest problems, the following criteria are critical:

- **Prevention**. Preventive measures must be incorporated into the existing structures and designs for new structures. Prevention is and should be the primary means of pest management in an EPM program.
- **Identification**. Many pests can look alike but may have different ecologies that necessitate different management methods. It's important to make sure pest managers correctly identify insects and other problem pests.
- **Monitoring**. This includes regular site inspections and trappings to determine the types and infestation levels of pests at each site.
- **Record-Keeping**. A record-keeping system is essential to establish trends and patterns in pest outbreaks. Information recorded at every inspection or treatment should include pest identification, population size, distribution, recommendations for future prevention, and complete information on the treatment action.
- **Action Levels**. Pests are virtually never eradicated. An action level is the population size which requires remedial action for human health, economic, or aesthetic reasons.
- **Tactics Criteria.** Under EPM, chemicals should be used only as a last resort, after mechanical, cultural, and biological approaches have been attempted and shown ineffective. When chemicals are used, the least-toxic materials should be chosen, and applied to minimize exposure to humans and all non-target organisms.
- **Evaluation**. A regular evaluation program is essential to determine the success of the pest management strategies.

In terms of the decision-making process for pest management decisions, there must be "action thresholds" set for the level of pest populations at which remedial action is necessary. For indoor settings such as cafeterias, decision makers should be professionals who know about pest needs and the risks of pesticides for that context, as well as someone who does not have a financial interest in selling a pesticide product. Sites such as playing fields face heavy traffic and may need more intensive land management (i.e., cultural practices) than other fields.

If monitoring and taking preventive actions (as currently detailed in the proposed rule) do not work, it is recommended to use mechanical traps, such as sticky traps, and biological controls, such as pheromones, parasitic insects, or, in outdoor areas, goats. If the pest issue persists after these steps are taken, then consideration of spot treatment of least- toxic pesticides is warranted. Beyond Pesticides has been gathering information on identifying sources for least-

toxic products and materials, which can be found in our toolkit on Products Compatible with Organic Landscape Management,[5] including fertilizers and pesticides. The Organic Materials Review Institute[6] also has helpful information in this regard. In terms of non-coated seeds, Beyond Pesticides also has the Pollinator-Friendly Seeds and Nursery Directory[7] as a reference for your review in terms of examples of sourcing of organic or non-coated seeds. Organic Seed Alliance[8] also has additional resources that may be helpful for the purpose of implementing this rule.

Neonicotinoid Risks

If there are instances in which Vermont is asked to allow the use of neonicotinoid insecticides, as staff officials you may be aware, and should take into account, the grave hazards associated with their use under your discretionary authority.

Neonicotinoids, intended for targeting insects with this mechanism, have been found to affect mammalian nicotinic acetylcholine receptors (nAChRs). These receptors are of critical importance to human brain function, especially during development and for memory, cognition, and behavior.[9] A review of the scientific evidence finds that there are reported associations between chronic neonicotinoid exposures and adverse developmental outcomes, including neurological effects.[10] Additional studies report that neonicotinoid pesticides impair mammalian reproduction and have developmental effects in mammals including reduced sperm production and function; reduced pregnancy rates; higher rates of embryo death, stillbirth, and premature birth; and reduced weight of offspring.[11,12,13,14]

In addition, “the first comprehensive assessment of unpublished rodent developmental neurotoxicity (DNT) studies on five neonicotinoids that were submitted to EPA by neonicotinoid manufacturers” highlights evidence of developmental neurotoxicity.[15] The study finds that exposure to five neonicotinoids causes statistically significant shrinkage of brain tissue. The authors report that even with this data, “EPA dismissed statistically significant adverse effects, accepted substandard DNT studies despite lack of valid positive control data, and allowed neonicotinoid registrants to unduly influence agency decision-making.”[15]

Under the *Federal Insecticide, Fungicide, and Rodenticide Act* (FIFRA),[16] a pesticide is presumed to pose an unreasonable risk until reliable data demonstrate otherwise. Moreover, if the agency lacks the data and/or resources to fully evaluate endocrine system risks to human health and wildlife, then the agency is obliged to suspend or deny any pesticide registration until it has sufficient data to demonstrate that the pesticide's registration is in compliance with the statutory standard—no “unreasonable adverse risk” of endocrine disruption. EPA does not consider neonicotinoids to be endocrine disruptors, despite the wide body of science that finds neonicotinoid pesticides suppress natural hormone function, interfere with thyroid functions, disrupt hormone synthesis and metabolism, and adversely affect reproduction and the nervous system.[17,18,19,20]

Research shows that neonics can lead to a decrease in crop yields by killing insects such as pollinators and natural predators of pests.[21] The questionable effectiveness of neonicotinoids, while they also present a threat to nontarget organisms, highlights the need for safer practices that protect all organisms and the environment. EPA's own non-pollinator assessments confirm that harm to nontarget organisms and systems from neonicotinoid exposures is ubiquitous. The agency identifies risks to aquatic insects, birds, and small mammals, coupled with significant harm to honeybees and other native bees.

The risks from continued use of neonicotinoids far outweigh their perceived benefits. Reports of declines in bird populations,[22] studies of the pervasiveness of these chemicals in the Great Lakes,[23,24] and the loss of natural pollination services for all pollinator reliant crops underscore the imminent danger faced by the natural world.[25] Additional studies show the effects of neonicotinoids in amphibians, algae, and farmland birds that threaten biodiversity.[26,27,28] Continued use of neonicotinoids presents more risk than benefit. There is no place for neonicotinoids in the environment based on the prevailing scientific literature.[29]

Conclusion

While we support the elimination of toxic insecticides such as neonicotinoids, it must be noted that these chemicals are merely the "poster children" for broader problems associated with EPA's evaluation and registration of pesticides. At a time of cascading and intersecting public health, biodiversity, and climate crises, we must stop the use of chemical classes causing immense harm; yet, we must also move toward an approach that incentivizes sustainable practices that do not necessitate these chemicals in the first place.

In addition, no human health or environmental safety findings associated with the Endocrine Disruptor Screening Program (EDSP) were made in the registration process for various pesticide products. EPA must examine all ingredients in these products, including so-called "inert" or "other" ingredients for endocrine disrupting properties. An Endocrine Disruptor Screening Program FFDCA § 408(p) determination is required for registration. It is simply unacceptable to continue to register new pesticides without EDSP findings, thus creating an even greater backlog, while evaluating chemicals presented good affinities *in silico* for proteins associated with breast cancer, oxidative stress, and metabolism of xenobiotic compounds.[30]

In summation, we urge the adoption of our suggested additions to Rule 25P031 with the language proposed in our statement. With the adoption of these changes, we urge the state of Vermont to act in the context of eliminating damaging pesticides that can be replaced by practices and materials compatible with the environment and public safety.

We would be happy to work with VAAFM to achieve these broader health and sustainability goals going forward. Vermont has the opportunity to reverse adverse ecosystem impacts exacerbated by neonicotinoids, while concurrently increasing eco-sensitive protections for public health and the wider environment.

Thank you for your consideration of our comments.

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Sara Grantham, Science, Regulatory, and Advocacy Manager
Max Sano, Senior Policy & Coalitions Associate
Beyond Pesticides

Endnotes

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