

Pollinator Protection Efforts in Vermont: VT Pollinator Protection Committee

Terence Bradshaw, Ph.D.

University of Vermont
Assistant Professor, Plant & Soil Science
Tree Fruit & Viticulture Specialist
Director, Catamount Educational Farm
Chair, Vt Pollinator Protection Committee (2016-2017)

My involvement in Pollinator Work in VT



- Apple grower, researcher, educator, 1995-present
- Support staff for Fruit IPM Specialist Dr. Lorraine Berkett, 2000-2013
- UVM Fruit IPM Specialist, 2013-present
- President of VT Tree Fruit Growers Association, 2009-2014
- Occasional testimony on behalf of orchard industry regarding various pesticide regulation bills
- Director,
 - UVM Hort Center, 2005-present
 - Catamount Educational Farm 2014-present

H.539 / Act 83 (2016)

An Act relating to the establishment of a Pollinator Protection Committee

1. Evaluate the status in Vermont of the U.S. Department of Agriculture's five pillars of pollinator health. The five pillars of pollinator health are: pollinator biology; nutrition and habitat; pathogens and pests; pesticide use; and genetics and breeding.
2. Evaluate the effectiveness of pesticide applicator licensing and other pesticide requirements in the State in protecting pollinator health.
3. Evaluate other state or international pesticide regulations that are more protective of pollinator health than the pesticide regulations of Vermont or the U.S. Environmental Protection Agency.
4. Study available education and outreach plans from other states that have been successful in increasing public awareness of pollinator health issues

H.539 / Act 83
(2016)
*An Act relating to
the establishment
of a Pollinator
Protection
Committee*

5. Evaluate best management practices for application of neonicotinoid pesticides in a manner that avoids harm to pollinators.
6. Identify possible sources of funds for use in the protection of pollinator health.
7. Consider the requirements in 2015 Vt. Acts and Resolves No. 64 (State Clean Water Act) regarding buffers along State waters and whether and how areas in buffers or other areas that require perennial vegetation should be encouraged for use as pollinator forage zones or pollinator growing areas.
8. Develop a State pollinator protection plan using the framework and critical elements from the Association of American Pesticide Control Officials Pollinator Protection Plan guidance

The Pollinator Protection Committee shall be composed of the following ten members:

1. the **Secretary of Agriculture, Food and Markets** or designee;
2. a person who is a **beekeeper**, appointed by the Governor;
3. a **dairy farmer**, appointed by the Governor;
4. a person representing a **not-for-profit organization** advocating the protection of pollinators, appointed by the Governor;
5. a person who is a **beekeeper**, appointed by the Speaker of the House;
6. a person who is a **university employee with expertise in the protection of pollinators**, appointed by the Speaker of the House;
7. a **tree fruit farmer**, appointed by the Speaker of the House;
8. a **vegetable farmer**, appointed by the Committee on Committees;
9. a **person licensed or certified to sell or apply pesticides, herbicides, or other economic poisons** in the State, appointed by the Committee on Committees; and
10. a person who owns or operates a **greenhouse or plant nursery**, appointed by the Committee on Committees.

Members

Katie Ballard - Ballard Acres Farm, Georgia, VT and Director of Research at W.H. Miner Institute

Eric Boire - Crop Production Services, Addison, Vermont and President of Vermont Tree Fruit Growers Association

Terence Bradshaw - Tree Fruit and Viticulture Specialist, University of Vermont, Chair of the Pollinator Protection Committee

Chris Conant - Claussen's Greenhouses, Colchester, Vermont

Ross Conrad - Dancing Bee Gardens, Middlebury, VT. Member of Vermont & Addison County Beekeepers Associations and a regular contributor to Bee Culture

Cary Giguere - Agrichemical Program Manager and Chair of State FIFRA Issues Research and Evaluation Group (SFIREG)

John Hayden - The Farm Between, Jeffersonville VT

Mike Palmer - French Hill Apiaries, St. Albans, VT. Member of the Vermont Beekeepers Association.

Leif Richardson - Research fellow, Gund Institute, University of Vermont and research associate with the Vermont Center for Ecostudies

Jane Sorensen - River Berry Farm, Fairfax, Vermont. Also owns Northeast Pollinator Plants

VPPC Activities

- Five public meetings 2016-2017
- Review of literature between meetings
- Public testimony & expert witnesses
- Collectively wrote VPPC Report to the Legislature
- <https://agriculture.vermont.gov/food-safety/apiary-program/pollinator-protection-committee>



Key points in the committee's deliberations

- Evidence-based decision making
- Focus on managed and non-managed (wild) pollinators
- Committee focus was on overall state of pollinators
 - Not just a 'neonicotinoid committee'
 - Landscape management, education, policy, and funding streams were all areas of interest

Central themes

- Healthy managed pollinators protects native pollinators
 - Beekeeper education
 - Maintain disease-free honeybees to reduce disease transmission into the environment
 - Limit pesticide exposure to bees
- State, conserved lands can be important pollinator habitats
- Broad-based education to farmers, pesticide applicators & seller, land managers, homeowners, public needed
- Address gaps in data collection
- Earmark funding for pollinator programs

In drafting our report to the legislature and VAAFM, we developed and voted on several recommendations which ultimately fell into the following categories:

- **Consensus:** recommendations received strong support from all
- **General agreement:** recommendations received support from at least five members and no significant opposition.
- **Split opinion (favorable):** recommendations were supported by 5 or more members and opposed by at least two members.
- **Split opinion (not favorable):** recommendation supported by at least 2 to 4 members, but does not reach 5 votes of support.

Almost all recommendations received consensus or general agreement



Consensus: Education

- Increase pollinator content in state pesticide exams and training materials
- UVM Extension increase information delivery on synergistic effects of tank mixes
- Ensure pollinator protection information on all labels
- Expand information on pesticide impacts to non-target insects
- Increase outreach to beekeepers on pollinator health topics

Pesticide Safety Education Program



The UVM Pesticide Safety Education Program (PSEP) works closely with the Vermont Agency of Agriculture, Food & Markets to provide training and education resources for current and prospective pesticide applicators, ensuring proper and legal use of pesticides that reduces potential risk to human health and the environment.

Consensus: Regulation

- Specify appropriate application conditions and buffers to native pollinator habitat in pesticide regulations
 - Wind, timing
 - Suggested buffers
 - “Pesticides that are highly toxic to bees”
 - Avoid use of soil fumigants
- Recommended moratorium on neonic applications to ornamental plants accessible to pollinators
- The VAAFM should look into Best Management Practices (BMPs) for planters of treated articles.

Vermont Pesticide Safety Education: Managing Pests While Protecting Pollinators (1 credit)

Managing Pests While Protecting Pollinators



This approximately 2 hour course is presented in six

modules and additional readings that provide a review for commercial growers of pollination, pollinator species, threats to pollinators, pest management overview & terminology, pesticide products overview, application practices to protect pollinators, and communication with the public. The modules are followed by a quiz that must be completed to receive credit. The modules may be viewed at your own pace. Upon completion, a certificate will be granted that must be printed and mailed to the Vermont Agency of Agriculture for one (1) recertification credit. Once enrolled, you will have one year to complete the review.

Consensus: Data gaps

- VAAFM should improve pesticide use tracking
- VAAFM should develop a statewide goal of reducing use of pesticides harmful to pollinators
- Institute a statewide program of Integrated Pest and Pollinator Management (IPPM) through UVM Extension to gather and disseminate information on ways for producers across all agricultural sectors to limit pesticide use that may harm pollinators
- VAAFM should work with the UVM Extension to set IPM thresholds before use of pesticides, identify less toxic options for farmers, and reduce overall use of pesticides.

May 23, 2022

Terence Bradshaw

Vermont Apple IPM: Petal fall considerations

Orchards around the state are either in bloom (inland) or at/approaching petal fall (Champlain / Connecticut Valleys). This is always a tricky time for management, and growers may need to be ready to apply different treatments to different parts of the farm. Here's my quick rundown:

Insects: Generally, there are still too many flowers out there- both apple blossoms and dandelions on the orchard floor to be spraying without impacting pollinators. In few cases is a pink insecticide spray needed, in my opinion, especially in retail-oriented orchards. Keep an eye on traps, and if you haven't hung any yet, at least get your codling moth traps up to determine your biofix date. Point being: be ready to treat after bloom (and mow those groundcover flowers first), but don't get knee-jerk. Wait and see, for now.

Consensus: Land management

- Encourage state and federal agencies to support land management practices favorable to pollinator health
- ANR should follow these recommendations in land planning:
 - Land Use Management- Include pollinator habitat management in annual activities on Vermont Fish & Wildlife Department lands;
 - Habitat Improvement-Work toward creating and improving habitat for a wide variety of animals important for pollination of native plants;
 - Long-range wildlife management area (WMA) planning- Include pollinator habitat improvement and maintenance in long-range planning for Wildlife Management Areas around the state;
 - Public relations- Encourage public recognition of the valuable ecological and economic services that pollinating animals provide.



Consensus: Agricultural practices

- Promote buffers required by Act 64 (RAPS)
- Recognize and financially support adoption of practices that support pollinator health
- Assess and promote value of native pollinators to VT agriculture
- Provide financial incentives to improve bee genetics

DON'T FORGET YOUR BUFFERS!



By Nina Gage, VAAFM

General agreement:

- Pesticides used in Vermont should be based on need, not used prophylactically.
- The Agency of Agriculture, Food & Markets should **classify all pesticides with active ingredients that are highly toxic to bees restricted use products (Vermont Class A).**
- Vermont Agency of Agriculture, Food & Markets should **not renew the special registration of coumaphos (Checkmite+)** for the in-hive control of Varroa mites by beekeepers within the state of Vermont.
- The Vermont Agency of Agriculture should explore creation of a **POLLINATOR PROTECTION FUND** and identify funding mechanisms that supports work to protect pollinator health and that do not have a negative impact to farmers in Vermont.

Split Opinion - Favorable

- The Agency of Agriculture, Food & Markets should classify all pesticides that contain neonicotinoid active ingredients as restricted use products (Vermont Class A). Exempt veterinary products, but we recommend research on the effects of these products on pollinators.
- The Agency of Agriculture, Food & Markets will use its regulatory authority of treated articles to develop best management practices (BMPs) on planting neonicotinoid treated corn/soybean seed starting as soon as possible. They will not be permitted unless a quantifiable demonstrated need can be identified by scouting techniques.

Split Opinion - Unfavorable

- The Agency of Agriculture, Food & Markets should prohibit the application of systemic pesticides that are highly toxic to bees to accessible pollinator attractive plants until after flowering. Exemptions for research with demonstrated limited risk and for the management of invasive species when effective alternatives are unavailable.