

# ANNUAL REPORT

SEPTEMBER 1, 2022 - AUGUST 31, 2023



THE UNIVERSITY OF VERMONT

## EXTENSION

PESTICIDE SAFETY EDUCATION PROGRAM

### PRESENTATIONS (attendees)

- 2023 Vermont Pesticide Applicator Meeting, live online 3/20/23 (63)  
Updates on agricultural crops, pest management, and pesticide safety  
[https://www.uvm.edu/sites/default/files/UVM-Extension-Cultivating-Healthy-Communities/PSEP/PSEP\\_VTPA23.pdf](https://www.uvm.edu/sites/default/files/UVM-Extension-Cultivating-Healthy-Communities/PSEP/PSEP_VTPA23.pdf)  
**IMPACTS:**
  - 96% (+13%, 14% increase) have moderate/considerable knowledge of Pesticide Compatibility
  - 98% (+2%, 2% increase) have moderate/considerable knowledge of Worker Protection Standards
  - 96% (+0%, 0% increase) have moderate/considerable knowledge of Reducing Pesticide Drift Risk to Pollinators
  - 92% (+9%, 10% increase) have moderate/considerable knowledge of Respirator Safety & Fit Testing
  - 90% moderately/very likely to apply and use pesticides more safely
  - 79% moderately/very likely to adopt at least one new IPM practice
  - 84% moderately/very likely to adopt at least one new IPM practice to protect pollinators**Attendee Poll Data:**  
Certification
  - 21 Commercial
  - 9 Government
  - 20 PrivateCategories
  - 29 1A-Agriculture-Plants
  - 2 Private 1-Animal and Livestock
  - 6 Private 2-Tree Fruit
  - 6 Private 3-Small Fruit and Vegetable
  - 2 Private 4-Plant Propagation
  - 1 Private 5-Aquaculture
  - 10 Private 6-Field Crops
  - 9 Other category not listed
- 2023 Initial Pesticide Certification Meetings, West Lebanon NH 4/18/23 (36), Burlington VT 4/20/23 (44)  
Review of the Northeast CORE Manual followed by the Vermont Pesticide Applicator CORE Exam  
[https://www.uvm.edu/sites/default/files/UVM-Extension-Cultivating-Healthy-Communities/PSEP/PSEP\\_CORE23.pdf](https://www.uvm.edu/sites/default/files/UVM-Extension-Cultivating-Healthy-Communities/PSEP/PSEP_CORE23.pdf)  
**IMPACTS:**
  - 97% moderately/well prepared (+50%, 107% increase) to take the exam following the review session
  - 97% moderately/very likely to apply and use pesticides more safely
  - 84% moderately/very likely to adopt at least one new IPM practice

- 89% moderately/very likely to adopt at least one new IPM practice to protect pollinators
- “Well spoken and informative with good references and examples.”
- “This meeting helped to solidify the core concepts introduced by the manual.”
- “This is hard material to digest and verbal discussions help in retaining the information necessary to take the exam.”
- “It was super helpful to have a review before the test, highly recommend.”

**Test results:**

- 53 tests graded (18% of CORE pass+fail from 1/1/2023 To 9/8/2023 )
- 5 failed
- 91% pass rate
- 28 VT certificates @4 credits each
- EPIC Lightning Talk, Killington VT 5/3/23 (96)  
Pesticides: Key Points for Extension Professionals
- AAPSE 2023 National Conference, Savannah GA 7/27/23 (30)  
Pesticides: Key Points for Extension Professionals & Session Proctor
- Pest Management Operator Meeting, Montpelier VT 11/1/22 (90)  
UVM PSEP program and online course introduction

**SUCCESS STORY: 2023 Initial Pesticide Certification Meetings**

All prospective pesticide applicators in the state of Vermont must understand the Northeast CORE Manual and inserts to pass the Vermont Pesticide Applicator CORE Exam required to become certified. Certification ensures proper and legal use of pesticides that reduces potential risk to human health and the environment. Certification and exams are administered exclusively by the Vermont Agency of Agriculture, Food & Markets. Pesticide applicators are expected to study on their own prior to taking the exam and schedule their exam separately. The length and breadth of the information, much of which is new to the applicant, is a challenge to effective learning and does not provide relatable context. The reading-based self-study is not inclusive of alternate learning styles.

The 2023 Initial Pesticide Certification Meetings sponsored by the University of Vermont Extension Pesticide Safety Education Program and Vermont Agency of Agriculture, Food & Markets provided an in-person review of the Northeast CORE Manual followed by the Vermont Pesticide Applicator CORE Exam. While this review was not intended as a substitute for self-study, it did cover the majority of information necessary to understand and pass the exam. The material was presented in lecture format with modules of similar content areas, plentiful references and examples, and opportunity for questions and answers. The meetings were held at two sites on opposite sides of the state, each on a different day, to allow greater participant access.

A record number of participants attended the annual Initial Pesticide Certification Meetings in 2023, accounting for 18% of Vermont Pesticide Applicator CORE Exams administered in the first three quarters of 2023. The review session presentation module arrangement and examples provided relatable context to reinforce and supplement manual information. 97% of participants are likely to apply and use pesticides more safely as a result, with 89% likely to adopt at least one new Integrated Pest Management practice to protect pollinators. The in-person lecture format accommodated audio/visual and social learning styles to improve information retention. Participants were 50% more prepared to take the exam following the review session. The pairing of the review with immediate exam administration directly applied the learned information and reduced exam anxiety, ensuring exam completion with a 91% pass rate.

## PESTICIDE APPLICATOR REPORT

Biannual newsletter for Vermont's Pesticide Applicators from the Vermont Agency of Agriculture, Food & Markets and University of Vermont Extension Pesticide Safety Education Program

- Fall 2022 [https://www.uvm.edu/sites/default/files/UVM-Extension-Cultivating-Healthy-Communities/PSEP/PAR\\_2022Fall.pdf](https://www.uvm.edu/sites/default/files/UVM-Extension-Cultivating-Healthy-Communities/PSEP/PAR_2022Fall.pdf)
- Spring 2023 [https://www.uvm.edu/sites/default/files/UVM-Extension-Cultivating-Healthy-Communities/PSEP/PAR\\_2023Spring.pdf](https://www.uvm.edu/sites/default/files/UVM-Extension-Cultivating-Healthy-Communities/PSEP/PAR_2023Spring.pdf)

### IMPACTS:

- 1591 active pesticide applicators
- Fall 2022: 159 (10%) quizzes @1 credit each
- Spring 2023: 137 (9%) quizzes @ 1 credit each

### Biennial evaluation (Spring 2023) results:

- 93% apply and use pesticides more safely
- 55% adopt at least one new IPM practice
- "As a new farmer it reminds me to stay vigilant."
- "Keeps me updated on all of the changes needed to continue to use pesticides appropriately."
- "Helps me better protect myself as an applicator of pesticides, better protect the public, and the environment."
- "I now perform a PPE inspection before each use."
- "Improved understanding of safe distance from potable water sources."
- "It has helped me to be more aware of exclusion zones and approach distances to sensitive areas."

## SUCCESS STORY: The Pesticide Applicator Report

All certified applicators in the state of Vermont must earn recertification (i.e. continuing education) credits to maintain certification. Certification ensures proper and legal use of pesticides that reduces potential risk to human health and the environment. Recertification credits are earned by attending approved meetings or courses that often have registration and/or travel costs, reducing accessibility. Additionally many of these events are for specific trades (e.g. tree fruit, structural, etc.), further reducing options for outlying specialties (e.g. cooling towers, right of way, etc.).

*The Pesticide Applicator Report* is a biannual publication available to certified applicators in Vermont from the Vermont Agency of Agriculture, Food & Markets and University of Vermont Extension Pesticide Safety Education Program to keep applicators informed of current pesticide-related topics, education opportunities, and regulatory developments. Recertification credits may be earned by completing included content-based quizzes appropriate for any category of certified applicator. The Fall 2022 and Spring 2023 issues were distributed to 1778 active pesticide applicators.

Up to 10% of active pesticide applicators completed quizzes in *The Pesticide Applicator Report* per issue in Fall 2022 and Spring 2023. Quiz completion reinforces current pesticide practices and regulatory requirements to ensure proper and legal use of pesticides. 93% of *The Pesticide Applicator Report* recipients are likely to apply and use pesticides more safely as a result, with 55% likely to adopt at least one new Integrated Pest Management practice. Adoption of equipment inspections, maintaining safe

distance from water sources, and awareness of sensitive areas were cited as the result of *The Pesticide Applicator Report* content, reducing potential risk to human health and the environment.

## **ARTICLES, FACT SHEETS & VIDEOS**

Relevant information for proper and legal use and understanding of pesticides

- Vermont Pesticide Certification Guide  
[https://www.uvm.edu/sites/default/files/UVM-Extension-Cultivating-Healthy-Communities/PSEP/PSEP\\_FactSheet\\_VTPestCertGuide.pdf](https://www.uvm.edu/sites/default/files/UVM-Extension-Cultivating-Healthy-Communities/PSEP/PSEP_FactSheet_VTPestCertGuide.pdf)
- Pesticides: Key Points for Extension Professionals (video)  
<https://www.uvm.edu/extension/psepvideos>
- Basic Turf Integrated Pest Management. The Pesticide Applicator Report, Fall 2022  
[https://www.uvm.edu/sites/default/files/UVM-Extension-Cultivating-Healthy-Communities/PSEP/PAR\\_2022Fall.pdf](https://www.uvm.edu/sites/default/files/UVM-Extension-Cultivating-Healthy-Communities/PSEP/PAR_2022Fall.pdf)
- Biological Plant & Pest Management Products Overview. The Pesticide Applicator Report, Spring 2023  
[https://www.uvm.edu/sites/default/files/UVM-Extension-Cultivating-Healthy-Communities/PSEP/PAR\\_2023Spring.pdf](https://www.uvm.edu/sites/default/files/UVM-Extension-Cultivating-Healthy-Communities/PSEP/PAR_2023Spring.pdf)

## **INTEGRATED PEST MANAGEMENT BROCHURE**

Key pest management definitions, strategies, and resources for homeowners. Contributing author, published by UVM Extension Master Gardener.

- IPM: Integrated Pest Management brochure  
<https://www.uvm.edu/sites/default/files/Extension-Community-Horticulture/Resources/IPMOverview2023.pdf>

## **PESTICIDE CREDIT ADMINISTRATION**

Ensure pesticide credit approval, verify participant attendance requirements for credit, issue credit certificates, notify State Lead Agencies of credits issued

- 2022 Northeast Greenhouse Conference Webinar Series (3 events)
  - 162 VT certificates @1 credit each
  - 47 NY certificates @1 credits each
  - 88 participants certified
- 2023 Vermont Pesticide Applicator Meeting 3/20/23
  - 54 VT certificates @4 credits each
  - 8 NY certificates @3.5 credits each
  - 54 participants certified
- Vermont Pesticide Safety Education: On-demand online training
  - 18 VT certificates @1 credit each

## **ON-DEMAND ONLINE TRAINING (participants)**

Resources to help study for pesticide applicator exams and/or to provide recertification credits for certified pesticide applicators. Annual enrollment numbers.

<https://www.uvm.edu/extension/pseonline>

- Vermont Pesticide Safety Education: CORE Manual Review (no credit) (18)  
*Revised to meet 2023 Vermont Rule for Control of Pesticides and new inserts*  
**IMPACTS:**
  - 80% moderately/very prepared to take the exam (220% increase)
  - 100% moderately/very likely to apply and use pesticides more safely
  - 100% moderately/very likely to adopt at least one new IPM practice
  - “Great review, made what is expected clear and concise in addition to reading the full manual.”
- Vermont Pesticide Safety Education: CORE Manual Review, Unit #1 (1 credit) (4)  
*Revised to meet 2023 Vermont Rule for Control of Pesticides and new inserts*  
**IMPACTS:**
  - 100% moderately/very comfortable with the manual information (25% increase)
  - 100% moderately/very likely to apply and use pesticides more safely
  - 100% moderately/very likely to adopt at least one new IPM practice
- Vermont Pesticide Safety Education: CORE Manual Review, Unit #2 (1 credit) (2)  
**IMPACTS:**
  - 100% moderately/very comfortable with the manual information (0% increase)
  - 100% moderately/very likely to apply and use pesticides more safely
  - 100% moderately/very likely to adopt at least one new IPM practice
- Vermont Pesticide Safety Education: CORE Manual Review, Unit #3 (1 credit) (2)  
**IMPACTS:**
  - 100% moderately/very comfortable with the manual information (0% increase)
  - 100% moderately/very likely to apply and use pesticides more safely
  - 100% moderately/very likely to adopt at least one new IPM practice
- Vermont Pesticide Safety Education: CORE Manual Review, Unit #4 (1 credit) (2)  
*Revised to meet 2023 Vermont Rule for Control of Pesticides*  
**IMPACTS:**
  - 100% moderately/very comfortable with the manual information (0% increase)
  - 100% moderately/very likely to apply and use pesticides more safely
  - 100% moderately/very likely to adopt at least one new IPM practice
- Vermont Pesticide Education: Managing Pests While Protecting Pollinators (1 credit) (2)  
**IMPACTS:**
  - 100% moderately/very comfortable with managing pests while protecting pollinators (0% increase)
  - 100% moderately/very likely to apply and use pesticides more safely
  - 100% moderately/very likely to adopt at least one new IPM practice
- Vermont Pesticide Education: Category 7A Manual Review (no credit) (4)  
**IMPACTS:**
  - 100% moderately/very comfortable to take the exam (0% increase)
  - 100% moderately/very likely to apply and use pesticides more safely
  - 100% moderately/very likely to adopt at least one new IPM practice

- Vermont Pesticide Education: Category 7A Manual Review, Unit #1 (1 credit) (2)
  - IMPACTS:**
    - 100% moderately/very comfortable with the manual information (50% increase)
    - 100% moderately/very likely to apply and use pesticides more safely
    - 100% moderately/very likely to adopt at least one new IPM practice
    - “course was very informative”
- Vermont Pesticide Education: Category 7A Manual Review, Unit #2 (1 credit) (3)
  - IMPACTS:**
    - 100% moderately/very comfortable with the manual information (50% increase)
    - 67% moderately/very likely to apply and use pesticides more safely
    - 100% moderately/very likely to adopt at least one new IPM practice
    - “very informative and practical”
- Vermont Pesticide Education: Category 7A Manual Review, Unit #3 (1 credit) (2)
  - IMPACTS:**
    - 100% moderately/very comfortable with the manual information (0% increase)
    - 100% moderately/very likely to apply and use pesticides more safely
    - 100% moderately/very likely to adopt at least one new IPM practice
    - “very informative”
- Vermont Pesticide Education: Category 7A Manual Review, Unit #4 (1 credit) (1)
  - IMPACTS:**
    - 100% moderately/very comfortable with the manual information (0% increase)
    - 100% moderately/very likely to apply and use pesticides more safely
    - 100% moderately/very likely to adopt at least one new IPM practice
- Vermont Pesticide Education: Category 7F Manual Review (no credit) (1)
- Vermont Pesticide Education: Category 7F Manual Review (2 credit) (0) \*new\*