

Roles PMPs can play in mosquito and tick control

PMP role in tick and mosquito control

Customer education

Advising on reducing or eliminating pest-conducive conditions

Applying control materials

Customer Education

Be a reliable source of information

- Provide accurate information about pest biology and habits
- Provide accurate information on what customers can do to reduce risks
- Refer customers to sources of reliable information



Information on ticks



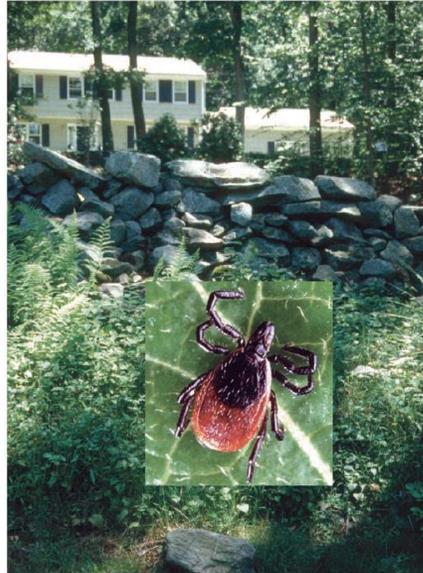
Tick Management Handbook

An integrated guide for homeowners, pest control operators, and public health officials for the prevention of tick-associated disease

Revised Edition

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VT-TIC: Vermont Tick Information Center

HOME TICK SURVEY FOR VT FARMERS TICK RESOURCES FOR FARMERS GENERAL TICK RESOURCES

OUR TICK RESEARCH PROGRAM AT UVM

Tick-borne diseases are on the rise in Vermont!



Many Vermonters have active, outdoors lifestyles and live and work in rural areas. Ticks thrive among Vermont's pastoral landscape. Those that work (i.e., farmers/agricultural producers and foresters), live and recreate near prime tick habitat are at particular risk for bites and contracting a tick-borne disease. Tick-borne diseases are organisms (zoonoses) that spread between animals and people. "One Health" is a concept that recognizes human health is closely connected to animal health and our shared environment, and manages ticks holistically as part of the broader ecosystem. By recognizing this interconnectedness, risks of tick-borne illnesses in domestic animals and humans can be reduced while improving food security and protecting biodiversity. This site is a hub to disseminate tick-related information to Vermonters. Please check back as we continue to update content related to agricultural production, outdoors recreation and more.

Search this site:

Ticks on VT Farms Survey



We want to know about ticks on your farm, how they affect you, your workers, pets and livestock. Please take this brief [SURVEY](#).

Recent News

Be prepared for the upcoming tick season! Check out the "Tick Protection Plan" checklist to help you avoid tick bites.

[Tick-Borne Diseases On the Rise in New England, How Will It Affect Farms?](#)
 Lancaster Farming (7-27-24)



Information on mosquitoes




EPA United States Environmental Protection Agency

Environmental Topics ▾ Laws & Regulations ▾ Report a Violation ▾ About EPA ▾

CONTACT US

Repellents: Protection against Mosquitoes, Ticks and Other Arthropods

Do You Need Help Finding an Insect Repellent?
Find the repellent that is right for you

About Insect Repellents

- What Is an Insect Repellent?
- Disease Risk From Mosquito and Tick Bites

Choosing and Use Repellents

- Find the Repellent That Is Right for You
- Using Repellents Safely and

News and Blogs

- Using Repellent Products To Protect Against Mosquito-Borne Illnesses
- Federal Trade Commission Action on Deceptive Marketing of Mosquito Repellent Wrist Band
- Joint Statement on Repellents



CDC Mosquitoes

EXPLORE TOPICS ▾

SEARCH

APRIL 16, 2024 [ESPAÑOL](#)

Mosquito Control at Home

WHAT TO KNOW

- Everyone can help control mosquitoes.
- You, your neighbors, and the community can take steps to reduce mosquitoes in and around homes and in your neighborhood.
- Take the following steps to control mosquitoes that can spread germs that make people sick.



Control mosquitoes outside your home

Remove standing water where mosquitoes lay eggs

- Once a week**, empty and scrub, turn over, cover, or throw out any items that hold water like tires, buckets, planters, toys, pools, birdbaths, flowerpot saucers, or trash containers. Mosquitoes lay eggs near water.
- Tightly cover water storage containers (buckets, cisterns, rain barrels) so mosquitoes cannot get inside to lay eggs.
- For containers without lids, use wire mesh with holes smaller than an adult mosquito.
- Fill tree holes to prevent them from filling with water.

ON THIS PAGE

- Control mosquitoes outside your ho...
- Control mosquitoes inside your home
- Fact sheets

**To explore the Vermont Agency of Agriculture, Food and Markets, please visit: www.agriculture.vermont.gov

Advise customers on eliminating conducive conditions

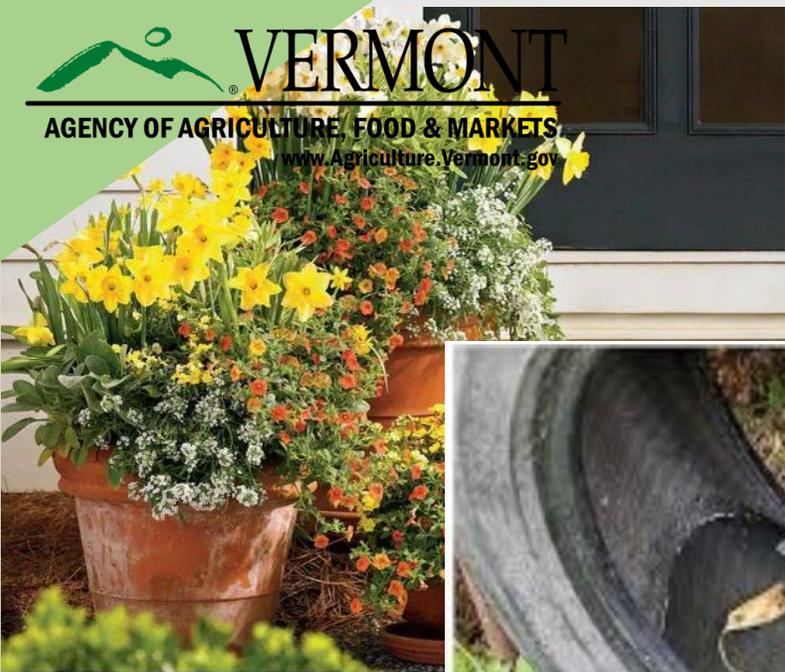
**Customers need to play a large role in
reducing or eliminating pest-conducive conditions**

For ticks:

Overgrown vegetation

Maintaining weed-free walking and playing areas

Maintaining tick and flea control for pets



Advise customers on eliminating conducive conditions for mosquitoes

Eliminate standing water wherever possible

Manage vegetation around home and gathering areas

Maintain swimming pools

Remove old tires and debris that can retain water

Applying control materials

Application of registered products labeled for use as tick or mosquito control products is a valuable service

Consumers do not have access to many of these materials

Consumers can not effectively apply these materials in most cases

IMPORTANT:

Always read and follow label





Applying Control Products Following the label during use:

- PPE
- Mixing solutions
- Handling containers and rinse water

Hazards to Humans and Domestic Animals

CAUTION. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. **Wear long-sleeved shirt and long pants, socks, and shoes.**

Personal Protective Equipment (PPE)

All mixers, loaders, applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes and socks
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber ≥ 14 mils, polyethylene, PVC ≥ 14 mils, viton ≥ 14 mils

Follow manufacturer's instructions for cleaning/ maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.



SITE	PEST	AMOUNT [REDACTED] IN WATER TO MAKE		SPECIFIC DIRECTIONS
		5 GALLONS	1 GALLON	
<p>For Outdoor Applications: Use lower rates and greater re-treatment intervals for light to moderate insect pressures. Use higher rates and shorter re-treatment intervals for green peach aphids, unexposed insects and heavy pressures of other insects. Directly spray at the rate of 0.1 fl oz/gallon to kill lone star ticks and deer ticks and bark scorpions. Mite suppression can be obtained using the lower rate; for more residual control of mites, use up to 0.5 fl oz/5 gallons water [0.1 fl oz/1 gallon of water]. Do not apply more than once every 7 days and do not apply more than 0.34 lb ai/A.</p>				
Outdoor Area Treatments including Perimeter Use	<p>Aphids, Thrips, Mites, Clover Mites, Two-Spotted Spider Mites, Whiteflies, Mealybugs, Leaf-Feeding Caterpillars (i.e., Tent, Orlando, Gypsy Moth, Bagworm, Canker Worm, etc.), Ticks, Brown Dog Ticks, American Dog Ticks, Lone Star Ticks, Deer Ticks, Fleas, Ants, Fire Ants, Crickets, Armyworms, Cutworms, Springtails (Collembola), Adelgids, Mosquitoes, Chiggers*, Earwigs, Lygus Plant Bugs, Beetles, (Flea, Cucumber, Elm Leaf), Leafhoppers, Weevils,* (Strawberry Root, Obscure Root, Blackvine Root), Psyllids, Millipedes,* American Cockroaches, Smoky Brown Cockroaches, Oriental Cockroaches, Boxelder Bugs, Spiders, Silverfish, Firebrats, Chinch Bugs, Asian Lady Beetles*, Sowbugs, Glassy-Wing Sharpshooters, Stink Bugs, Bark Scorpions</p> <p>* Except in California</p>	<p>0.2-0.5 fl oz (1¹/₃-3 teaspoons) (6-15 ml)</p>	<p>.04-0.1 fl oz (1¹/₃-2²/₃ teaspoon) (1.2-3 ml)</p>	<p>Apply [REDACTED] to outdoor areas including perimeters and outside surfaces of residential, non-commercial, and commercial buildings: industrial offices, institutional buildings, private homes, carports, garages, storage sheds, patios (spot treatment only).</p> <p>Apply [REDACTED] using a low pressure, coarse fan spray, applied in even bands to surfaces and perimeters where pests are a problem. Apply the spray mixture at a volume equivalent to 5 gallons per 1,000 square feet. Depending on the severity of pest infestations, a re-treatment may be necessary at 7-14 days. Apply no more than 4 times per month or no more than 12 times per year. Typical re-treatment interval is 28 days.</p> <p>For ticks, treat likely harborage areas including along paths, tall grass and other vegetation. For best results, treat the entire area where ticks could be present and begin treating in the spring. Ticks may be re-introduced from surrounding areas by host animals. Continue treating until frost to control adult ticks.</p> <p>For best coverage to control ticks, apply using a coarse fan spray to vegetation brush, branches, walls, and other areas near habitation where ticks may harbor or frequent. Treat entire area rather than making spot treatments and retreat as necessary to maintain control.</p>

Applying control materials

Tick Control products

- **Application to grassy and weedy areas near walking, gathering and playing areas**
- **Can temporarily reduce populations**
- **Application of materials that interrupt tick life cycle**

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Applying control materials

Mosquito Control products

- Larvicide treatments
 - Treat areas where standing water can't be eliminated
 - Sustained release products can be used
 - Customers can apply Class C products – Bti formulations



Guidance when using Mosquito Dunks® (larvicide)



WHAT ARE DUNKS®? (see product packaging)

- Dunks® (larvicide) utilize a naturally-occurring type of bacteria to control mosquitoes before they become flying, biting, potentially disease-carrying adults.
- Dunks® do not use chemicals to control mosquitoes.
- They are effective on mosquito and blackfly larvae, and have been recommended for use in backyard ponds or fountains where fish, frogs, tadpoles, and other aquatic animals live.
- Studies have shown minimal irritation when Dunks® are eaten or contact bare skin. Therefore, you should avoid getting material from Dunks® in your eyes, and wash your hands after handling.

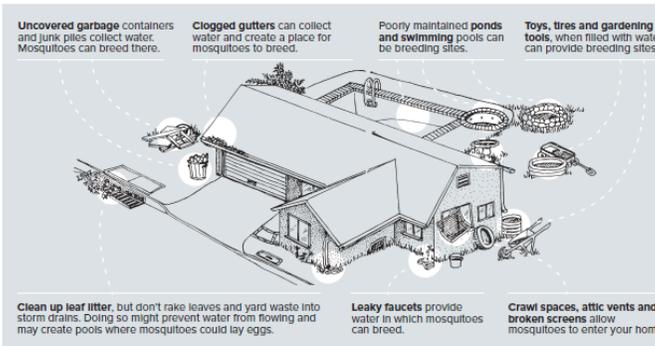


WHEN TO USE

- Dunks® are best used in New York State from April – September, when mosquitoes are active. Mosquitoes hatch more frequently in warmer weather.
- Dunks® are effective for approximately 30 days, so reapplication may be needed.*

WHERE AND HOW TO USE

- Dunks®, as well as other larvicides, should be used **ONLY** on your **OWN** property on small areas of water that is in containers and **CANNOT** be drained.
- Before using Dunks®, look at your property for areas where there is standing water, or where water collects after rain. These are places where mosquitoes, including mosquitoes such as *Aedes albopictus*, may lay their eggs.
- If at all possible, prevent these areas from collecting water: empty and turn over buckets, unused flower pots, canoes and wheelbarrows. Clean clogged gutters so water flows freely through them. Place lids on outdoor trash cans.
- Once these areas have been addressed, Dunks® can be used on areas where water collects and cannot be removed or drained. These include pool covers, ornamental ponds, fountains and rain barrels.



- One Dunk® can treat 100 square feet of surface water (10' x 10' area). This is equal to about 8 bathtubs, or the size of a car parking space.
- Dunks® can and should be broken up if the area that needs treatment is less than 100 square feet. Please read and follow label directions.
- Dunks® float, and that is normal. The floating action slowly dissolves the dunk, releasing the bacteria.
- Dunks® begin killing mosquito larva within hours; you should start to notice a difference in about 48 hours.
- Dunks® last for 30 days. Reapplication may be needed throughout the mosquito season.*



OTHER ACTIONS YOU CAN TAKE

Mosquitoes can breed in small pockets of water—as small as a bottle cap! To minimize mosquito breeding:

- Remove, flip or empty standing water in all containers
- Change water frequently in items like birdbaths.
- Fill in tree rot holes or stumps that can hold water.
- Store boats covered or upside down.
- Pull plastic sheeting or tarps covering yard items tightly so water won't pool.
- Seal & repair cracks in broken or unsealed septic tanks

FOR FURTHER INFORMATION

NYSDOH Zika Information Line: 1-888-364-4723
www.health.ny.gov/zika
www.cdc.gov/zika/

* Dunks or similar larvicidal products using the bacteria *Bacillus thuringiensis israelensis* (Bti) are available in most home center, hardware stores, garden centers, nurseries, and outdoor pond stores.



Adulticides – Barrier Treatments

- Applied to vegetation
- Targets mosquito harborage
- Applied at higher rates than ULV
- Places insecticide on foliage where mosquitoes rest
- Temporarily reduces numbers of mosquitoes in area treated
- As plants grow untreated foliage is created
- Materials degrade with exposure to sun and rain
- Reapplications may be needed

Barrier Treatments

Mosquitoes

Not for use in wide area local, state, or federal mosquito control programs. To control adult mosquitoes, use handheld, back-pack, or truck-mounted sprayers only. Not for use with truck-mounted cold aerosol ULV sprayers, handheld cold aerosol ULV sprayers, or thermal fogging devices. **DO NOT** apply by aircraft. **DO NOT** apply through any kind of irrigation and/or lawn sprinkler systems. Use up to 100 gallons of diluted spray per acre. Treat shrubbery, vegetation, and other areas where mosquitoes may rest. Shrubby and vegetation around stagnant pools, marshy areas, ponds, and shorelines may be treated if applied as a wet spray. Apply only to the point of runoff. Direct application of this product to any body of water is prohibited.

Mixing Instructions

Thoroughly clean spray equipment before using. Shake concentrate well before diluting. When diluting, first add approximately 1/2 of the water to the spray tank and then add the proper amount of concentrate. When emptying the bottles, triple rinse with water, shake well, and add the rinsate to the spray tank. Add the rest of the water and agitate the sprayer thoroughly. Agitate sprayer occasionally during use to ensure even mixture. Shake or reagituate sprayer if spraying is interrupted or if dilution is left in sprayer overnight. If spray screens are used, they should be 50 mesh or larger.

Spray Dilution Chart		
Amount of Finished Spray (gallons)	0.025% Spray Concentrate (fluid ounces)	0.050% Spray Concentrate (fluid ounces)
1	1.0	2.0
3	3.0	6.0
5	5.0	10.0
10	10.0	20.0

Use the higher rate for clean-outs, longer residual control, or for high insect infestations.

ENVIRONMENTAL HAZARDS

This product is extremely toxic to fish. To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters, or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run - off to water bodies or drainage systems. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Apply this product only as specified on this label.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are foraging the treatment area.

ests	Dilution Rate (Concentration of AI)	SPECIFIC USE DIRECTIONS
		Yards or other frequented areas enclosed by landscaping can benefit from the creation of a mosquito barrier to reduce invading mosquitoes by the treatment of perimeter vegetation. Apply [REDACTED] at specified rates in 2-5 gals. Of water per 1,000 sq. f t. Carpenter Bees: Apply coarse spray to thoroughly wet wood surfaces where bees have been previously active or to provide protection against further damage. Apply early in the spring to prevent bees from invading wood. When bees have infested wood, surface applications can help control embedded larvae and bees that emerge from the wood.

Treatment for adult mosquitoes –

Ground ULV – Ultra-Low Volume

- Very fine droplets
- Spreads over about 300 foot swath
- Applied at low rates –
0.0012– 0.005 lb a.i. per acre
- Application based on surveillance results
- In VT requires state permit



Thanks

Questions?

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