

FREQUENTLY ASKED QUESTIONS FOR PESTICIDE APPLICATORS ABOUT SECTION 5.04 PROTECTION OF BEES

Updated January 16, 2024

The Vermont Agency of Agriculture, Food & Markets' amended "Vermont Rule for Control of Pesticides" went into effect on February 24, 2023. [The Rule](#) includes Section 5.04 Protection of Bees. Enforcement of the rule is by the Vermont Agency of Agriculture, Food and Markets (the Agency) and applies to any pesticide applicator, individual using a pesticide, or person hiring an applicator. An applicator may be certified as a commercial, non-commercial, or private applicator or may be a noncertified applicator.

This document provides information about each portion of the rule and provides guidance by addressing questions on topics where the rule is clear and also where the rule is more difficult to interpret.

The information in this document reflects our best effort to interpret Vermont state law in Section 5.04 Protection of Bees and translate this into practical management options. This document is not a substitute for pesticide label directions. Growers are responsible for their own management decisions and for compliance with all applicable laws, regulations, and labels. Any reference to commercial products, trade names, or brand names is for information only, and no endorsement or approval is intended. The Agency wishes to emphasize that "the label is the law", and that all growers should make sure to follow the pesticide label.

I. Section 5.04(a) AND (b):

(a) No person shall apply a pesticide to a flowering crop, including alfalfa, apple, blueberry, clover, pumpkin, raspberry, squash, or trefoil without prior notification of at least 48 hours to an apiculturist who has an established apiary on the premises.

(b) A person hiring a commercial applicator for an application under Section 5.04(a) shall notify, or cause to be notified, the apiculturist at least 48 hours prior to the application.

WHERE THE LAW IS CLEAR IN SECTIONS 5.04 (a) AND (b)

My crop is flowering. I hired a commercial pesticide applicator to apply pesticide to that crop. Conditions are favorable for an application, and I provided notification of application at least 48 hours prior to the beekeeper who has an established apiary on the premises. Can a pesticide be applied?
Yes.

I need to apply pesticide to my blooming crop tomorrow morning, but I haven't notified the beekeeper with an established apiary on the premises. Can I notify them today and apply the pesticide in the next 24 hours?

No. The Rule is clear that a notification to a beekeeper with an established apiary on the premises must be at least 48 hours in advance of the pesticide application.

I hired a commercial applicator to make a pesticide application on my blooming crop four days from today. The commercial applicator called today to tell me their schedule has changed and they need to make the application tomorrow. I have not yet notified the beekeeper with an established apiary on the premises because I thought I had more time. Can I notify the beekeeper now so that I don't lose my opportunity and the commercial applicator can spray in the next 24 hours?

No. The Rule is clear that a notification to a beekeeper with an established apiary on the premises must be notified at least 48 hours in advance of the pesticide application.

WHERE THE RULE DOES NOT GIVE CLEAR GUIDANCE IN SECTION 5.04(a) AND (b)

Do I need to notify a beekeeper with an established apiary that is nearby, but not on the premises, that a pesticide application is planned on a blooming crop?

Premises is defined by the Merriam-Webster dictionary as a tract of land with a building and its attached property. The Agency interprets the word premises to mean the same. Therefore, this Section refers to a pesticide application made on the same parcel of land on which an apiary is located. Although it is best practice to notify beekeepers with apiaries near the premises, the law does not state a requirement that beekeepers with apiaries not actually on the premises be notified. Honey bees can fly great distances and will commonly forage within a two-mile radius of the hive. It is advisable to notify beekeepers of any pesticide application within that range of an established apiary.

I plan to apply a pesticide on my crops when they are in bloom in the next week or two, but it depends on the weather and my Integrated Pest Management program. Can I inform the beekeeper with an established apiary on the premises now, or do I need to wait until precisely 48 hours in advance of application to notify them?

The Rule states “at least 48 hours” so any additional time is allowed. Reasonable notification would be decided by the Agency in the event of any complaint by a beekeeper. One year in advance would not pass a “reasonable” test because it is unknown when an application will occur. Both the Agency and UVM Extension encourage open communication between apiculturists and pesticide applicators.

I hired a commercial applicator to make a pesticide application on my blooming crop in 2 days (48 hours) and I have given the beekeeper with an established apiary on the premises a notification. The commercial applicator called today to tell me their equipment is broken and needs to be repaired, delaying the pesticide application by one or two days, thus extending the planned application up to 72 hours. Do I need to notify the beekeeper again?

The Rule states “at least 48 hours” so you are still in compliance, but it is best practice to communicate the change in application date with the beekeeper so they can make management decisions that may be affected by the timing of the application.

Do I need to notify a beekeeper about a pesticide application event in a specific way? Can I speak to the beekeeper by phone or in person, or do I need to provide written documentation as notification?

The Agency recommends that notification be provided in writing to the beekeeper whether electronic (text/email/etc.) or on paper (letter). The Agency will not routinely be checking to see if notification has occurred but will inquire further if a complaint is received. If there is a dispute regarding notification, then documentation in writing will potentially resolve the dispute.

II. Section 5.04(c)(1) AND (2):

(c) A person applying a pesticide that is highly toxic to bees shall:

(1) apply the pesticide during periods and conditions of least exposure, such as early morning or late evening; and when winds are less than nine mph; and

(2) include a 50-foot buffer from pollinator foraging sites, such as natural and semi-natural areas or intentional pollinator plantings or a 20-foot-wide non-pollinator-attractive vegetative barrier higher than the spray release height with an established 60% plant density.

WHERE THE RULE IS CLEAR IN SECTIONS 5.04(c)(1) AND (2):

I will be applying a pesticide that is *not* labeled as “highly toxic”. Can I spray when winds are 9 mph?

Yes, unless otherwise specified by the pesticide label. Note that several resources, including the EPA and the [Pesticide Environmental Stewardship](#) website, advise that pesticide application may occur when wind speeds are between 3 and 10 miles per hour.

I will be applying a pesticide that *is* labeled as “highly toxic”. Can I spray when winds are 9 mph?

No. The Rule states a person shall apply the pesticide when winds are less than nine mph.

WHERE THE RULE DOES NOT GIVE CLEAR GUIDANCE IN SECTIONS 5.04(c)(1) AND (2):

I read the words “bee” and “pollinator” in different parts of the rule. Are their meanings the same or different?

Bees are one of many types of pollinators, and there are many types of wild bees as well as managed bees. There are also many other insects, mammals, reptiles, amphibians, and other animals that are pollinators. As defined by the state of Vermont, in 6 V.S.A. Chapter 172, “bee” refers to honey bee (*Apis mellifera*).

What is meant by “buffer”?

A buffer is a distance between the area treated and a pollinator foraging site, and the Rule establishes a 50-foot buffer from pollinator foraging sites. An alternative protective measure allowed by the Rule is a vegetative barrier. A barrier to reduce pesticide spray drift from reaching non-target areas should be semi-permeable to filter and stop the movement of drifting pesticide particles. A solid barrier (such as a fence) is not recommended, as it can force drift up and over the barrier.

I am applying a pesticide that is “highly toxic” to bees and I have a 50-foot buffer between where I will apply the pesticide and pollinator foraging sites including natural and semi-natural or intentional pollinator plantings. Can I apply the “highly toxic” pesticide?

The Rule does not offer guidance to describe the type of 50-foot buffer required between pesticide application areas and bee foraging sites.

Questions to consider when assessing buffer ability to reduce bee or pollinator risk posed by pesticide applications:

- a. Is the buffer composed of plants in bloom at the time of the pesticide application? Blooms attract pollinators, increasing risk of exposure to pesticides.
- b. Does the buffer include areas with still water, like an irrigation pond, stream, or water pooling in puddles? Water is used by bees to regulate hive temperature, so water sources in buffers increase risk.
- c. Are grass or coniferous trees shedding pollen at the time of pesticide application? Bees may collect this pollen, increasing risk of exposure.

Recommended buffer plants have thin, needle-like leaves, numerous small branches, and rough foliage surfaces. See: Virginia Cooperative Extension publication number ENTO-454NP from 2021,

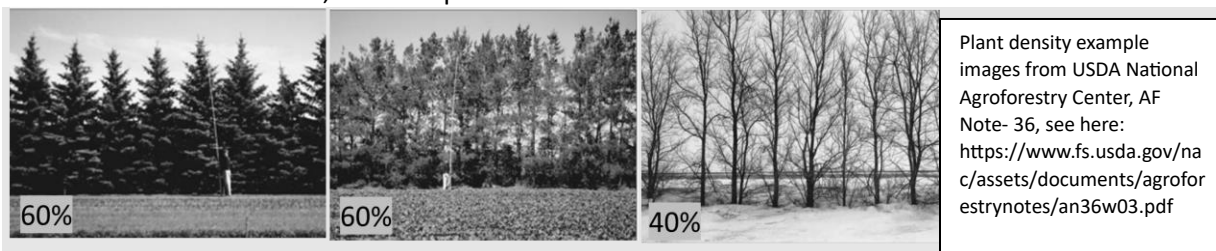
https://vtppesto.vt.edu/content/dam/vtppesto_vt.edu/publications/PesticideDriftSeriesUsingBufferstoReduceTheImpactofSprayDrift.pdf

I am applying a pesticide that is “highly toxic” to bees and I have a 20-foot-wide non-pollinator attractive vegetative barrier higher than the spray release height with at least 60% plant density. Can I apply the “highly toxic” pesticide?

The Rule does not offer guidance describing a non-pollinator attractive barrier. The Agency will not routinely evaluate vegetative barriers, but will inquire further if a complaint is received. UVM Extension recommends that you document your observations about the barrier and why you feel it is suitable for reducing risk of harm to bees from pesticide applications.

What is considered an established 60% plant density in a vegetative buffer?

The Agency will not routinely measure vegetative barriers to determine compliance, but will inquire further if a complaint is received. To make a finding of non-compliance, the Agency will bear the burden of proof to document that there was less than 60% plant density at the time of the pesticide application. Again, UVM Extension recommends that you document your observation of the buffer and why you feel it provides 60% plant density. This could be by % canopy coverage, or % of bare ground area as viewed from above, for example.



My crop is not in bloom, and I need to apply a “highly toxic” pesticide. There are flowers in the understory and alleyways of the cropped area. Do I first need to terminate these blooms in the understory and alleyways where bees forage prior to pesticide application?

The Rule specifies that a pesticide application that is highly toxic to bees shall have a 50-foot buffer from pollinator foraging sites. Terminating the blooms in the understory and alleyways will negate the buffer requirement. It is best to refer to the specific product label guidance to ensure you are in compliance with the law before application.

Best practice would be to not apply highly toxic pesticides. In the event they are needed, apply the product to non-blooming crops during periods and conditions of least exposure. Blooming flowers in areas where the application is taking place would create conditions of high exposure risk. Removing understory blooms prior to pesticide application is an option for reducing pesticide exposure risk to bees and other pollinators.

III. Section 5.04(d):

(d) *A person shall avoid the application of a fungicide or soil fumigant to pollinator-attractive plants when in bloom.*

WHERE THE RULE IS CLEAR IN 5.04(d):

Can I apply a fungicide directly on blooming plants or apply soil fumigant when I have other options, such as waiting until bloom is over?

No. If you have clear alternatives then you should not make the application.

Do I need to provide a notification of at least 48 hours in advance to a beekeeper with an established apiary on the premises should no alternatives exist, and I need to apply fungicide or soil fumigant to pollinator attractive plants when in bloom?

Yes, it is clearly stated to do so in section 5.04(a) and (b).

WHERE THE RULE DOES NOT GIVE CLEAR GUIDANCE IN 5.04(d):

What does “avoid” mean?

Avoid means to take all practical measures to not do something. In other words, an application should only be made when there is a demonstrable need to make that application.

Is there a scenario in which a grower can apply a fungicide or soil fumigant to blooming pollinator attractive plants?

Again, this should only be done if it is critical to do so, and you should document in writing why that is so. Any complaints that the VAAFM receives will be evaluated on a case-by-case basis. Please follow your Integrated Pest Management program to prevent unnecessary applications. There are also tools and resources available for growers to help determine fungicide necessity. For example, apple growers may find the NEWA (Network for Environment and Weather Applications) website (<https://newa.cornell.edu/>) helpful for assessing apple scab and fire blight infection periods. You may also download data from this site for documentation. Blueberry growers may consider using growing degree days of apothecia emergence and ascospore discharge, such as is described by Pest Profet, <https://blog.pestprophet.com/how-to-use-the-mummy-berry-growing-degree-day-model/>.

If it is critical that I apply a fungicide or soil fumigant to pollinator attractive plants when in bloom, do I need to provide notification of application at least 48 hours prior to the beekeeper who has an established apiary on the premises?

Yes. A notification to a beekeeper with an established apiary on the premises must be at least 48 hours in advance of the pesticide application as is clearly stated in Section 5.04(a) and (b).

It is recommended that pesticide applicators document where you have made good faith efforts to comply with Section 5.04 Protection of Bees to demonstrate best efforts of compliance.