

Flea & Tick Management

Stop the Itching Before it Starts!

Flea and tick populations have been rebounding in recent years, after the market drop that occurred when spot-on products were first introduced. They once again present a revenue opportunity for PMPs, particularly in some areas of the country. However, these pests have become increasingly resistant to conventional insecticides and repellents making control efforts more difficult in urban and rural areas.

Fleas can live directly on household pets indoors, as well as survive on vegetation and groundcover found around a structure. Ticks typically do not infest homes unless there are pets within the home or wildlife traveling nearby. However, fleas and ticks can be especially problematic outdoors in areas that are not mowed or maintained.

Controlling both flea and tick infestations can present significant challenges, as both pests are covert, mobile, evasive, and adapt to different environments indoors and out. Eggs and pupae can often survive treatments directed towards adults, which only perpetuates infestations. Because of this, a well thought out IPM treatment is essential to gaining lasting control, preventing re-infestation, and avoiding callbacks.

PMPs will need to educate their accounts to help them with preventative efforts.

Fleas

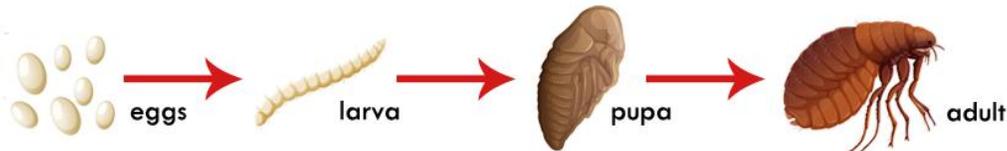
Fleas can cause problems for humans and pets within a structure or in nearby foliage/vegetation. At times they can be a problem indoors and outdoors at the same time, especially when wildlife encroachment is an issue.

Fleas are wingless ectoparasites (skin-surface parasites), with hard, laterally-compressed bodies which make it easy for them to burrow through coarse animal hair. They also have relatively long hind legs for jumping, and range between 1-4 mm long.

Fleas go through a full metamorphosis, and their life cycles vary between 14 to 75 days, depending on temperature and humidity. Fleas are able to go varying periods of time without a blood meal, but females must feed on blood before being able to produce eggs. Though fleas typically feed on the blood of pets and other animals, they are also known to bite humans.

The main types of fleas that are problematic to animals and humans are:

- **Cat Fleas (*Ctenocephalides felis*):** are typically between 1-2 mm and reddish-brown. This species is the most prevalent flea and primarily lives on and feeds on domestic cats, though they are non-specific and will also feed on dogs, humans, and many other animals.
- **Dog Fleas (*Ctenocephalides canis*):** closely resemble cat fleas, and though less numerous, they are found in more places worldwide. The dog flea is distinguishable in appearance from the cat flea primarily by the shape of its head, which is rounded rather than elongated. Its hind legs also have eight notches rather than six.
- **Human Fleas (*Pulex irritans*):** the species least often encountered, can inhabit a wide range of hosts (not just humans) and are a darker shade of brown.



Ticks

Though ticks are often found on pets and humans, they prefer to infest wild animals that live in wooded, overgrown areas. Such areas are ideal for tick infestations, even in the absence of animals. Juvenile ticks often transition from wooded areas into tall grass or brush during certain periods of activity (such as host-seeking).

Adult ticks are recognizable because of their eight legs and oval/pear-shaped bodies that become engorged with blood when they feed. They are usually between 2.5 and 5 mm. Different species range in color from brown to black to reddish-brown, but may turn a light greyish-blue color after feeding. Most tick species feed on the blood of mammals and thrive particularly in warm, humid climates.

Ticks belong to one of two major families, the Ixodidae (hard-bodied ticks), and the Argasidae (soft-bodied), and undergo a full metamorphosis. Their full life cycles range between months and years. Many tick species do not attack humans, but the most prevalent of those that do, include:

- **The American Dog Tick or Wood Tick (*Dermacentor variabilis*):** a well-recognized hard-bodied tick. American dog ticks are more colorful than other species, and they are found throughout a wide geographic range.
- **The Deer Tick, or Black-Legged Tick (*Ixodes scapularis* and *Ixodes pacificus*):** is a small, slow-feeding, hard-bodied tick.
- **Brown Dog Tick (*Rhipicephalus sanguineus*):** prefers dogs as host animals, and its entire life cycle can be completed indoors.
- **Lone Star Tick (*Amblyomma americanum*):** Lone star ticks get their name for a silvery-white, star-shaped spot near the center of the adult female's shield; adult males have varied white streaks or spots around the margins of their shields.
- Other species, such as the **Rocky Mountain Wood Tick (*Dermacentor andersoni*)**, attack humans but are not as widespread.



Effective Solutions for Fleas and Ticks

Prevention and Treatment

Flea and Tick infestations can take several weeks and even months to control. The best thing you can do is prevent them from establishing a habitat near the home.

Educate clients to eliminate conditions conducive to supporting fleas and ticks. First, pest numbers can be reduced by mowing the lawn and trimming foliage, which helps create an environment of low humidity that fleas and ticks will avoid. Also, clean up brush and wood piles to reduce tick populations.

To help keep ticks away after trimming down the lawn and other foliage, a woodchip or gravel border at least 3-feet wide can be installed between wooded areas/heavy vegetation and the yard. This makes it more difficult for ticks to get across.

Once a flea infestation has been identified and a proper inspection has been performed, instruct clients to immediately wash, steam-treat, or throw away infested pet bedding, toys, and blankets. Vacuum and/or steam-treat any infested furniture. Thoroughly vacuum all areas with a high powered vacuum prior to treatment to remove as many adults, eggs, pupae, and larvae as possible. If pets are severely infested, veterinary intervention may be necessary.

After environmental controls are in place and pets have been treated with a labeled flea and tick control treatment, pesticide products can then be applied as needed. Spot-treat inside where you have seen flea/tick activity, as well as in pet resting areas, areas where pets may roam, and areas where pests may find harborage. When applying a treatment outdoors, spray over the entire outdoor treatment area, paying particular attention to shaded areas, over and under shrubs and ornamentals, underneath porches and decks, and around edges of the yard.

Products for Fleas



(for indoor applications) – **FenvaStar Plus** is an EC formula of 8.4% esfenvalerate which features outstanding efficacy against fleas. The petroleum-free “green” formula has virtually no odor and an extremely low percentage of Volatile Organic Compounds (VOCs) compared to other ECs (3% versus more than 50%). FenvaStar Plus should be mixed at 0.42 oz per gallon of water, along with an appropriately labeled Insect Growth Regulator (IGR) to help prevent later emergence of flea life cycles. Use as a carpet/rug and a spot treatment indoors.



(for outdoor applications) – **EcoVia WD** is a highly effective FIFRA 25 (b) exempt botanical pesticide that offers quick control of fleas as well as residual protection, with no pyrethroid or neonicotinoid use restrictions. As a liquid formulation, 1 to 4 oz of EcoVia WD per gallon of water can treat 1,000 sq ft. Apply as a course, low-pressure residual liquid treatment to shrubs, brush, rock walls, cracks, crevices, branches, vegetation, tall grass areas, and other areas where fleas may harbor.

Products for Ticks



(for outdoor applications) – Highly powerful against ticks outdoors, **EcoVia MT** is a specially formulated FIFRA 25 (b) exempt botanical concentrate designed for tick control and repellency. A heavy wet spray delivered from a backpack sprayer, power spray rig, or other coarse spray pattern is the preferred application method for ticks. Mix and apply at a rate of 0.33 to 1.0 fl oz per gallon per 1,000 sq ft. The lowest rate is effective for deer ticks. For larger ticks, use the higher rate.



(for outdoor applications) – **EcoVia G** is a versatile, FIFRA 25 (b) exempt broad spectrum granular pesticide. EcoVia G contains a higher level of botanical active ingredients for lower use rates and is specially formulated to treat turf, landscaped areas, ground cover vegetation, wooded areas, and to significantly manage tick populations near a structure. Apply uniformly to target areas at a rate of one to two pounds per 1,000 sq ft.

Products for Both Fleas and Ticks



(for indoor & outdoor applications) – **FenvaStar EcoCap** is a unique micro-encapsulated formula that provides excellent efficacy against fleas and ticks. Focus on the resting areas and walking paths of pets indoors and outdoors. For indoor treatment, mix 1 oz of FenvaStar EcoCap per gallon of water and thoroughly apply as a fine particle broadcast spray on infested rugs, carpets, and pet resting areas. For ticks, also apply to nearby cracks and crevices, along and behind baseboards, and window/door frames. Outdoors, mix at 1-2 oz per gallon or in sufficient water to cover 1,000 sq ft and apply thoroughly to target areas.



(for outdoor applications) – is a potent, long-residual, innovative capsule suspension formulation. Mix at a rate of 0.4 fl oz (fleas) or 0.8 fl oz (ticks) per gallon or in sufficient water to treat 1,000 sq ft. For best coverage to control ticks, apply using a coarse fan spray to vegetation brush, branches, rock walls, and other areas near habitat where ticks may harbor or frequent. For fleas, generously treat soil and vegetation around structures, lawns, and mulch.

EcoVia™ EC
emulsifiable concentrate

(for outdoor applications) – **EcoVia EC** is a FIFRA 25 (b) exempt insecticide made with a potent blend of botanical oils. It has no pyrethroid or neonicotinoid restrictions, may be used up to the water's edge and may be applied to impervious surfaces (if necessary). For fleas and ticks, mix at a rate of 2.0-4.0 oz per gallon or in sufficient water to cover 1,000 sq ft and apply using the same techniques as noted above for LambdaStar.

CimeXa™
insecticide dust

(for outdoor & limited indoor applications) – **CimeXa** has earned a reputation for being an industry standard solution for bed bugs, but it is equally effective against many other pests, including fleas and ticks. CimeXa is odorless, non-staining, and very low in toxicity, lasting up to 10 years when undisturbed. To treat fleas and ticks indoors, CimeXa should be applied under pet beds and upholstery cushions in cracks, crevices, and voids. Outdoors, focus on kennels and crawl spaces. CimeXa may also be applied indoors and out in any other potential flea/tick habitat areas where the dust can remain dry and undisturbed.

Where are Fleas and Ticks Typically Found?

Indoor flea habitats are most often found on animals, animal beds, and cracks and crevices near pet bedding areas. Fleas are initially found anywhere pets may rest or travel throughout the home including sofas, beds and other furniture, rugs, carpets, and other soft surfaces. However, fleas are highly mobile and can travel great distances in a short period of time. Fleas and ticks can become a problem in outdoor areas whether or not animals are present because both organisms can survive extended periods without a host. As noted, ticks tend to live in overgrown outdoor areas that are not mowed or maintained regularly. Homes in wooded areas with wild animals are particularly susceptible.

Keep pets and children out of any treated areas until after liquid pesticide formulations have dried. Do not spray directly on animals. Even if fleas or ticks don't seem to be a problem, dogs and cats should be regularly treated with a labeled flea control product in conjunction with premises pesticide applications.

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