Controlling Mosquitoes with Cy-Kick® CS Controlled Release Insecticide

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Health Risks Posed by Mosquitoes

Mosquitoes have been implicated in vectoring many diseases to humans. Malaria, Zika virus, encephalitis, West Nile virus, chikungunya, and dengue fever are among the more serious. Aside from the serious health risks, the presence of mosquitoes is an annoyance to anyone who enjoys spending time outdoors.

Common Mosquitoes in the U.S.

Over 150 species of mosquitoes have been identified in the U.S. The four most significant genera are *Aedes* (yellow fever mosquito, Asian tiger mosquito), *Culex* (northern house mosquito, southern house mosquito), *Anopheles* (common malaria mosquito), and *Ochlerotatus* (eastern salt-marsh mosquito). These genera represent most of the commonly encountered blood feeding and disease vectoring mosquitoes in the U.S.

Life Cycle & Behavior

There is some variation from species to species in terms of their life cycle, but in general, mosquitoes lay eggs on the surface of water or on/in areas prone to flooding. This can even include inside tree holes, on/in debris, and other sites where water may collect. After a period of time, larvae hatch from the eggs and develop. The larvae are aquatic and will molt multiple (often four) times, pupate, and emerge as adults. The adult female stage is the only stage associated with biting humans and other animals.

Some mosquitoes are strong fliers, such as salt marsh mosquitoes, capable of traveling miles from their breeding area for a meal. Others, such as the southern house mosquito, stay close to their breeding area to feed. Also, some mosquitoes feed actively during the day and night (Asian tiger mosquito), while others are most active at night (common malaria mosquito).

When not feeding, adult mosquitoes rest in protected places, usually dark and damp areas with little air movement, which provides them with cover from the elements.

Unlike male mosquitoes, which feed exclusively on plant nectar, female mosquitoes are obligate blood feeders. They are able to quickly locate humans and other warm-blooded animals as a result of their ability to perceive movement, sense heat, and detect chemicals such as the CO_2 given off by humans and other animals.

Use the SmartCap Advantage Against Mosquitoes

SmartCap Technology from BASF offers the best in microencapsulation formulation science to provide enhanced residual control and durability on porous surfaces, virtually eliminating costly callbacks.

Long residual for better protection. This is the reason leading professionals choose **Cy-Kick CS** insecticide. Studies have shown that **Cy-Kick CS** insecticide provides 90-day residual control of mosquitoes - on live plants!

Low phytotoxicity for safety to plants and shrubs. A thorough mosquito application involves treatment to a variety of heavily foliated areas on the property. **Cy-Kick CS** insecticide is well suited for these applications due to its low phytotoxicity, killing mosquitoes, not plants.

CDC/James Gathany

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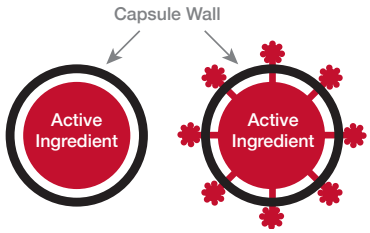
Culex (top), Aedes (middle), and Ochlerotatus (bottom) are among the most significant genera of mosquitoes.

SmartCap Technology



The capsule wall protects the a.i. from surface conditions and the environment. The a.i. diffuses quickly out of the capsule when in contact with an insect's exoskeleton.

Cy-Kick® CS Insecticide Control Tips

Where should I spray for best results?

On Structure: This product can be used as a residual treatment on outdoor surfaces of buildings, porches, window frames, eaves, patios, garages, garbage sheds, and other areas where pests congregate or enter premises. Treat entry points such as doors, windows, under siding and eaves of a structure including gaps beneath siding, overhanging ledges, underside of decks, and other protected areas.

Off Structure: Treat shrubbery, vegetation, and other areas where mosquitoes may rest. Treatment should be made to foundation plantings, dense garden beds, bushes and other heavily foliated areas on the property.

Near Water: Shrubbery and vegetation around stagnant pools, marshy areas, ponds, and shorelines may be treated if applied as a wet spray. Direct application of this product to any body of water is prohibited.

Decks, awnings, eaves offer protected roosting areas for mosquitoes

Foundation plantings where sunlight and wind are blocked

Heavily foliated areas

How should Cy-Kick CS insecticide be applied?

Apply with compressed air, backpack or power spray equipment.

> ***Tip: When treating foliage, remember that leaves have two sides and mosquitoes generally rest on the underside of leaves. Using a cone spray nozzle, with high pressure/low volume, helps to distribute microcapsules onto both sides of the leaves and helps deliver product deep into the more protected areas beneath the canopy where many mosquitoes rest, such as bark and branches.***

Many PMPs are now using power misting blowers to optimize the coverage in heavy foliage situations. When using the blowers, it is recommended to use a 60 to 80 micron nozzle. Power misting blowers are capable of producing small droplets which cling well to vertical or inverted surfaces, and the blower turns leaves over for excellent coverage.

What rate should be used for best results?

An application rate of 1.0 fl oz/1,000 ft^2 is desirable. Apply fine mist to adequately cover the area being treated. Application should be made in such a manner to limit dripping and run-off on structural surfaces and plants.

> ***Tip: Leaves naturally shed heavy water. Using low volume of water at a higher concentration is a good way to be sure that the active ingredient is not running off of the target site with excess water.***

> ***Tip: Less water is better than more water.***

How often should I treat for mosquitoes?

Cy-Kick CS Insecticide has shown 90-day control in some studies. However, experience has shown that service programs with scheduled treatments every three to four weeks improve client satisfaction. The label allows repeated treatment as necessary to maintain effectiveness, but not more than twice per week, and treatments must be at least three days apart.

> ***Tip: The foliage on shrubs and trees continues growing all season long. Even though there may still be good residual protection on intact surfaces, there will always be lots of new surfaces emerging.***

Other Recommendations For Satisfying Customers

- Educate customer about the nature of mosquito control
- Establish realistic expectations for control
- Inspect for larval development sites and resting sites on property
- Make clear recommendations or assist customer to eliminate larval development sites as appropriate with birdbaths, old tires, planters, clogged gutters, etc.

Always read and follow label directions.