

LEAF-CHEWING CATERPILLARS

(Moths-Order *Lepidoptera*)

DESCRIPTION

Caterpillars belong to the insect order *Lepidoptera*. Caterpillars are the larval stage of moths and are among the most serious defoliators of trees. One example is the Eastern Tent Caterpillar, *Malacosoma americanum*, responsible for defoliating forest trees, as well as cherry, apple and other ornamental shade trees. Other *Lepidoptera* pests include the Gypsy Moth, Winter Moth, Spring and Fall Cankerworm, Bagworm, Clearwing Borers, Pine Tip Moth and Tussock Moth. Some moth larvae, such as Tip Moths and Clearwing Borers, feed inside the twigs, shoots or trunk of the tree and are virtually unseen.

SYMPTOMS

For leaf-chewing caterpillars, the obvious symptom is skeletonized or mostly consumed leaves. The caterpillar itself can often be visibly observed feeding on the leaf tissue. For moth larvae which bore into the shoot, twig or trunk, symptoms will include brown stunted tips, branch dieback and exit holes in the trunk.

TREATMENT

Arborjet recommends a well-timed trunk injection of TREE-äge® Insecticide or ACE-jet. It may be applied either as a micro-infusion with the TREE I.V. or a micro-injection with the QUIK-jet.

TREE-äge provides 2 years of protection from leaf-chewing caterpillars including Bagworms, Fall Webworms, Gypsy Moths, Mimosa Webworms, Oak Worms, Tussock Moths, Leaf Miners, Sawflies, Tent Caterpillars, Western Spruce Budworms and Winter Moths. TREE-äge may be injected in the spring or fall.

ACE-jet is highly water soluble and moves easily through the tree's vascular system. It is a fast-acting "quick knock down" product for eliminating the pest population in a tree. It breaks down quickly in the tree to nitrogen, phosphorus and sulfur, resulting in the subsequent greening of foliage. ACE-jet comes in a soluble granular form to maintain maximum potency until it is ready to be used. ACE-jet provides up to 60 days of control.

PHOTOS

A: Gypsy Moth Caterpillar (*Lymantria dispar*).

B: Eastern Tent Caterpillars (*Malacosoma americanum*).

Photo A taken by: USDA Forest Service - Region 8 - Southern Archive, USDA Forest Service, Bugwood.org

Photo B taken by: Gerald J. Lenhard, Louisiana State Univ, Bugwood.org



LEAF-CHEWING CATERPILLARS

WHEN TO TREAT

Monitor trees for injury by caterpillars, often seen as pin holes or notching in the leaf. Apply ACE-jet as soon as symptoms of injury, or as the caterpillars themselves, become visible. Depending on species, infestations occur from March to October. Timing is important as the ACE-jet will only remain active in the tree for three to five weeks. Caterpillars feeding on foliage and tips of twigs are susceptible to ACE-jet treatments.

Use TREE-äge® Insecticide or ACE-jet in early spring, before buds break, when leaf chewing caterpillar outbreaks are expected. TREE-äge can provide protection for 2 years. Alternatively, treat with ACE-jet when leaf injury first appears, or when caterpillars are first observed. One application is sufficient to control leaf chewing caterpillars. ACE-jet remains active to protect the tree canopy for approximately 3 - 5 weeks.

Generally, the best seasons for injection are spring and fall, since uptake occurs when trees are transpiring. The environmental conditions that favor uptake are adequate soil moisture and relatively high humidity. Soil temperature should be above 40°F for trunk injection. Hot weather or dry soil conditions will result in a reduced rate of uptake so trees should be watered thoroughly if applications are made when soil is extremely dry. If treating trees in the summer, inject in the morning for the quickest uptake. Tree health will also affect treatment efficacy, so assess tree health prior to treating. For example, a declining tree (>50% canopy dieback) is a poor candidate for treatment.

WHAT TO EXPECT AFTER TREATMENT

Upon ingestion of TREE-äge Insecticide or ACE-jet, leaf feeding stops and caterpillars die. TREE-äge is more viscous and will take a little longer to move throughout the vascular system. Trunk-injected ACE-jet moves rapidly to the growing points in the canopy, where caterpillars feed.

©2014 Arborjet, Inc. **Important: Always read and follow label instructions. Some crop protection products may not be registered for sale or use in all states or counties. Please check with your state or local extension service to ensure registration status.** TREE-äge® Insecticide is a Restricted Use Pesticide and must only be sold to and used by a state certified applicator or by persons under their direct supervision. TREE-äge® is a registered trademark of Arborjet, Inc.

WORLD CLASS FORMULATIONS

For treatment of leaf-chewing caterpillars use TREE-äge® or ACE-jet.

TREE-äge contains emamectin benzoate and provides control of caterpillars and other insects with longer control than ACE-jet.

ACE-jet is a fast acting, broad spectrum pesticide effective against caterpillars, aphids, leafminers, scale, adelgids, thrips, boring beetles and spider mites.

ACE-jet will also produce a beneficial health response in the tree as it metabolizes into utilizable elements phosphorous and sulfur.

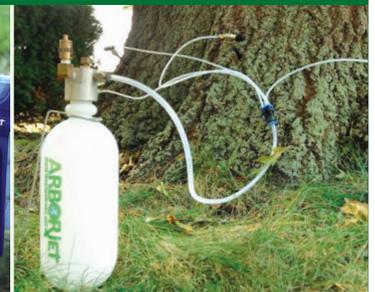
Our products can be purchased at your local Arborjet distributor.

For a distributor near you visit arborjet.com/distributor



QUIK-JET INJECTION

TREE I.V. INJECTION



ARBORJET DELIVERY SYSTEMS

Arborjet's delivery systems are designed to be fast, affordable and effective. Contact us today to determine the right system for your needs. To find a distributor near you, go to www.arborjet.com.



QUIK-jet Kit



TREE I.V. 2-Pack Kit



QUIK-jet Pro Kit



Arborjet Deluxe Kit

781-935-9070 • Visit us on the web at www.arborjet.com

99 Blueberry Hill Road, Woburn, MA 01801 Arborjet, Inc. All Rights Reserved 2014

ARBORJET
Revolutionary Plant Health Solutions