Department of Agriculture STATE OF HAWAII LICENSED PERIOD 2006-2008 LIC. NO.

Department of Agriculture STATE OF HAWAII LICENSED PERIOD 2009-2011 LIC. NO.

Bayer Environmental Science

Merit® Tree Injection

Insecticide

Department of Agriculture STATE OF HAWAII LICENSED PERIOD 2012-2014 LIC. NO.

Department of Agriculture STATE OF HAWAII LICENSED PERIOD 2015-2017 LIC. NO. 9346.320

For injection into trees in nurseries, greenhouses, and interior and exterior plantscapes, and in private, municipal, state, and national forested areas.

ACTIVE INGREDIENT:

*Imidacloprid, 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine 17.1%

OTHER INGREDIENTS: 82.9%

100.0%

EPA Reg. No. 432-1447 **EPA Est. No.432-TX-1**

STOP - Read the label before use.
Keep out of reach of children.
CAUTION

FIRST AID	
IF ON SKIN OR CLOTHING	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
IF SWALLOWED	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF IN EYES	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
In case of emergency call toll free the Bayer Environmental Science Emergency Response Telephone No. 1-800-334-7577. Have a product container or label with you when calling a poison control center or doctor, or going for treatment.	
Note To Physician: No specific antidote is available. Treat the patient symptomatically.	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION:

Harmful if absorbed through skin. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wear long-sleeved shirt and long pants, socks, shoes, and chemical-resistant gloves.

Personal Protective Equipment (PPE):

Applicators and Other Handlers who handle this product must wear:

- Shirt and pants
- Chemical resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber or natural rubber
- Shoes plus socks

Follow manufacturer's instructions for cleaning/ maintaining personal protective equipment, PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

User should:

- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.
- Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-334-7577 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS

This product is highly toxic to aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming trees and shrubs.

Do not formulate this product into other end-use products.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Pesticide Storage: Store in a cool, dry place and in such a manner as to prevent contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Handle and open container in a manner as to prevent spillage. If the container is leaking, invert to prevent leakage. If container is leaking or material spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. In spill or leak incidents, keep unauthorized people away. You may contact the Bayer Environmental Science Emergency Response Team for decontamination procedures or any other assistance that may be necessary. The Bayer Environmental Science Emergency Response Telephone No. is 1-800-334-7577 or contact Chemtrec at 800-424-9300.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

APPLICATION TO TREES

Merit Tree Injection can be used to control a variety of insect pests of ornamental or forest trees. Pests controlled include aphids, whiteflies, soft scales, adelgids, leafhoppers, lace bugs, mealybugs, psyllids, leaf-feeding beetles, sawflies, borers, and leafmining flies, beetles, and wasps. Merit Tree Injection also can be used for suppression of thrips and armored scales. Merit Tree Injection can be used as directed on ornamental trees in residential areas, business and office complexes, shopping complexes, multi-family residential complexes, golf courses, airports, cemeteries, parks, playgrounds, and athletic fields. Merit Tree Injection also can be used in commercial forestry production, nurseries, greenhouses, and in state, federal, county and local recreational forests.

The active ingredient in Merit Tree Injection has sufficient residual activity so that applications can be made preceding the attack of the trees by target pests. Merit Tree Injection also controls existing infestations of most labeled pests; control of existing infestations of borers and other difficult-to-control pests can be achieved if the level of infestation is not excessively severe at the time of application. If the level of infestation is severe, the high label rate for the targeted pest is recommended.

Systemic activity occurs only after the active ingredient is translocated upwards in the tree. In some cases, translocation can take 10 days or longer, depending on the transpiration rate of the treated plant.

The need for an application can be based on historical monitoring of the site, previous records or experiences, current season adult trapping or other methods. For best results (i.e., to ensure uptake), application should be made when the tree is actively transpiring.

NOTE: Not for use on trees where the fruits and/or nuts are consumed. Do not apply more than once per year per tree.

Application Equipment

Merit Tree Injection can be applied with a variety of trunk injection devices. Devices should be chemically-resistant. For all injector systems, read carefully and follow all manufacturer's directions for use.

Drilling the hole

With most injector systems, it is necessary to predrill holes prior to insertion of the applicator device. Holes should be drilled deep enough to permit transport of Merit Tree Injection upwards in the vascular tissue.

DOSING: For microinjection, set and dispense into the injector the required dosage, and pressurize the injector as directed.

For high-volume injection, FIRST add the required amount of water to the reservoir of the injector, and then dispense the prescribed amount of Merit Tree Injection into the reservoir.

For high-volume injection, add no more than 7 ml of Merit Tree Injection per liter of water. While injecting, ensure that the active ingredient remains in solution. The solubility of the product in the water can depend upon the temperature, pH, and the mineral content of the water. A small amount of Merit Tree Injection should be diluted in water, and the mixture carefully observed. If the mixture appears cloudy or if solid particles form within 5-10 minutes, a more dilute injection solution should be prepared.

RECOMMENDED APPLICATIONS

Trees and shrubs (greater than 2" diameter and chest height)

For bee-pollinated dicotyledenous trees, applications should be made post-bloom.

Pest	Dosage
Adelgids Aphids Japanese beetles Lace bugs Leaf beetles (including elm and viburnum leaf beetles) Leafhoppers (including glassy-winged sharpshooter) Leafmining flies and wasps Mealybugs Psyllids Soft scales Whiteflies	0.75 – 1.5 mL (0.025-0.05 fl. oz.) Merit Tree Injection per inch of cumulative trunk diameter at chest height (54" from ground). Space injection holes approx. 6" apart, around the circumference of the tree.
Armored scales (suppression) Roundheaded borers (incl. Eucalyptus longhorned borer) Flatheaded borers (including bronze birch borer, alder borer, and emerald ash borer) Leafmining beetles and moths Pine tip moth larvae Royal palm bug Sawfly larvae Thrips (suppression)	1.5 – 3 mL (0.05-0.1 fl. oz.) Merit Tree Injection per inch of cumulative trunk diameter at chest height (54" from ground). Space injection holes approx. 6" apart, around the circumference of the tree.

For trees greater than 12" diameter, or if trees are already infested, the highest label rate specified for control of targeted pests is recommended. For trees larger than 24" diameter, always use the highest label rate for the targeted pest.

U.S.D.A. RATE SPECIFICATIONS FOR ASIAN and CITRUS LONGHORNED BEETLE PROGRAMS. FOR USE ONLY UNDER U.S.D.A. SUPERVISION. FOR USE WITH U.S.D.A. APPROVED INJECTION DEVICES.

Read and follow the manufacturers' written documentation on the proper use and maintenance of the injector you are using. The following rates are generally recommended as a function of tree diameter at breast height (DBH).

2 to 11 inches DBH 1.2 mL (0.04 fl oz) per diameter inch.
12 to 23 inches DBH 2.3 mL (0.08 fl oz) per diameter inch.
24 to 35 inches DBH 4.7 mL (0.16 fl oz) per diameter inch.
36 inches DBH and above use 7.0 mL (0.24 fl oz) per diameter inch.

GENERAL DIRECTIONS: To determine the initial number of needed injection holes, measure the tree at breast height using a standard forestry tape measure. a) If measuring the circumference, divide this number by six (6) to determine the number of holes needed. b) If measuring the diameter, divide this number by two (2) to determine the number of injection holes needed. c) Initial injector sites should be in the active sapwood, evenly spaced around the tree at the root buttress region and avoiding the root valleys. d) If a single hole cannot accept its full dose, that dose may be divided among the other initial injection holes. e) If additional injection holes are needed they may be spaced horizontally or vertically from the initial holes.

The minimum horizontal spacing for injection sites is 3 inches. The minimum vertical spacing for injection sites is 6 inches. Preferably vertical spacing should be staggered and not aligned. Do not apply more than once per calendar year.

RESTRICTIONS

Do not use on fruit or nut trees intended for food uses.

IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of liability before using this product.

If terms are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following conditions, disclaimer of warranties and limitations of liability.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, because of manner of use and other factors beyond Bayer CropScience LP's control it is impossible for Bayer CropScience LP to eliminate all risks associated with the use of this product. As a result, crop injury or ineffectiveness is always possible. All such risks shall be assumed by the user or buyer.

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PRODUCED FOR

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Merit Tree Injection (MASTER) Approved 08/28/06