

5481-429

5/29/2013

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

Kelly K. Rahn  
Amvac Chemical Corporation  
4695 MacArthur Court, Ste. 1250  
Newport Beach, CA 92660

MAY 29 2013

SUBJECT: Label Amendment  
Tre-Hold Sprout Inhibitor A-112  
EPA Reg. No. 5481-429; Decision # 461435  
Petition 2E7992: Decision # 461439  
Your Submission Dated February 17, 2012

Dear Ms. Rahn:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), as amended which adds avocado; mamey sapote; crops in fruit, pome, group 11-10; and mango and is acceptable provided you make the following label changes:

You must add the missing "Pesticide Storage" section on page 6, along with the appropriate instructions.

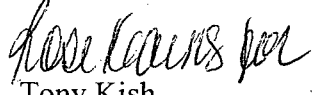
As a condition of registration the following study by June 1, 2014:

-Immunotoxicity study is required as part of the new 40 CFR Part 158 requirements for registration of a pesticide.

Submit one copy of your final printed labeling before you release the product for shipment.

If you have any questions regarding this correspondence, contact Rose Kearns of my staff by phone at 703-305-5611 or via email at [kearns.rosemary@epa.gov](mailto:kearns.rosemary@epa.gov) or myself at 703-308-9443 or via email at [kish.tony@epa.gov](mailto:kish.tony@epa.gov).

Sincerely,



Tony Kish  
Product Manager (22)  
Fungicide Branch  
Registration Division (7504P)

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# TRE-HOLD®

## SPROUT INHIBITOR A-112

Controls Sprouting or Sucker Growth on Apples, Avocados, Mamey sapote, Mangoes, Olives, Pears, Woody Ornamental Plants and Other Listed Crops

For Commercial/Agricultural Use Only: Not Intended For Residential Use

**ACTIVE INGREDIENT:**

1-Naphthaleneacetic acid, ethyl ester - - 15.1%

**INERT INGREDIENTS:** - - - - 84.9%

Total 100.0%

\*This product contains petroleum distillate  
1-Naphthaleneacetic Acid (NAA) equivalent is 1 lb/gal. or 13.2% by weight.

ACCEPTED  
with COMMENTS  
In EPA Letter Dated  
MAY 29 2013  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
5481-429

EPA Reg. No. 5481-429

EPA Est. No. 5481-CA-1

### KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail.)

FIRST AID	
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>Immediately call a poison control center or doctor.</li> <li>Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>Do not give any liquid to the person.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>
EMERGENCY INFORMATION	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:	
Transportation: CHEMTREC.....	1-800-424-9300
Other: AMVAC.....	1-323-264-3910
NOTE TO PHYSICIAN	
If ingested: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.	
Contains petroleum distillate - vomiting may cause aspiration pneumonia.	



4100 E. Washington Blvd.  
Los Angeles, CA 90023 U.S.A  
1-323-264-3910 • www.amvac-chemical.com

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION:** Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are made of barrier laminate, butyl rubber, nitrile rubber or viton. If you want more options, follow the instructions for category F on an EPA chemical-resistance category selection chart.

All mixers, loaders, applicators, flaggers, and other handlers must wear:  
Long-sleeved shirt and long pants,  
Shoes plus socks, and  
Chemical-resistant gloves.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**User Safety Recommendations**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not contaminate irrigation ditches or water used for irrigation or domestic purposes. Do not apply when conditions favor drift from treated areas. Do not use in a greenhouse.

Do not store near extreme heat, open flame, or sources of ignition.

**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.

Periodic pruning to maintain line clearance is one of the major expenses of public utilities. Tre-Hold® Sprout Inhibitor A-112 in combination with proper pruning techniques reduces the number of new sprouts on many tree species and provides a longer period between prunings.

Do not use the same spraying equipment for other purposes unless thoroughly cleaned. Do not apply Tre-Hold® Sprout Inhibitor A-112 through any type of irrigation system.

Many trees sprout vigorously from the rootstock, base of the trunks, scaffold limbs, and around pruning cuts on limbs. Tre-Hold® Sprout Inhibitor A-112 prevents or inhibits vegetative bud development in woody plants after pruning. Tre-Hold® Sprout Inhibitor A-112 reduces resprouting on bearing and non-bearing apple, olive, pear, avocado, mamey sapote and mango trees and on ornamental olives, crabapples and woody ornamental plants.

Tre-Hold® Sprout Inhibitor A-112 is formulated for dilution in water or mixed with interior latex paint. After mixing, the solution should be applied to pruning cuts on the scaffold limbs, base of trunks and on rootstock suckers to control resprouting. Thorough coverage of treated areas is essential for most effective sprout control.

**SPRAY DRIFT MANAGEMENT**

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application can influence pesticide drift. The applicator and grower must evaluate all factors and make appropriate adjustments when applying this product. Do not apply by spray when wind speeds are greater than 10 mph at the application site. Use only medium or coarse spray nozzles or droplets.

For broadcast use, the maximum application rate is 0.11 pound active ingredient per acre of NAA equivalent for all uses, except olive trees which may use up to 0.33 pound active ingredient per acre of NAA equivalent. The minimum interval between applications is to be no less than 5 days.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry intervals (REI). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the REI of 12 hours.

Personal Protective Equipment (PPE) required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls,
- Shoes plus socks,
- Chemical-resistant gloves made of any waterproof material

**MIXING DIRECTIONS**

Tre-Hold® Spout Inhibitor A-112 must be diluted before use.

**NEW PLANTINGS**

For use on newly established plantings of apples and pears, dilute Tre-Hold® Sprout Inhibitor A-112 to a 0.5% a.i. solution.

EXAMPLES FOR PREPARATION OF APPROXIMATELY 0.5% A.I. (EXPRESSED AS NAA ACTIVE INGREDIENT)		
AMOUNT OF TRE-HOLD® SPROUT A-112	AMOUNT OF WATER	TOTAL VOLUME
1.25 fl.oz.	30.75 fl. oz..	1 quart

5.0 fl.oz.	123.0 fl.oz.	1 gallon
2.0 gallons	48 gallons	50 gallons

**ESTABLISHED PLANTINGS**

The following dilution volumes are examples for typical small and large scale needs. For most uses on established plantings, Tre-Hold® Sprout Inhibitor A-112 is diluted to a 1% a.i. concentration with water.

EXAMPLES FOR PREPARATION OF APPROXIMATELY 1% A.I. (EXPRESSED AS NAA ACTIVE INGREDIENT)		
AMOUNT OF TRE-HOLD® SPROUT A-112	AMOUNT OF WATER	TOTAL VOLUME
2.5 fl.oz.	29.5 fl.oz.	1 quart
10.0 fl.oz.	118.0 fl.oz.	1 gallon
4.0 gallons	46 gallons	50 gallons

For marking purposes, white latex paint may be substituted for an equal volume of water as indicated below. The white paint also provides protection from sun scald damage in thin barked trees or shrubs.

EXAMPLES FOR PREPARATION OF APPROXIMATELY 1% A.I. (EXPRESSED AS NAA ACTIVE INGREDIENT) WITH LATEX PAINT		
AMOUNT OF TRE-HOLD® SPROUT A-112	AMOUNT OF LATEX PAINT	ADD WATER TO MAKE TOTAL OF
2.5 fl.oz.	4 to 15 fl.oz.	1 quart
10.0 fl.oz.	15 to 60 fl.oz.	1 gallon
4.0 gallons	5 to 20 gallons	50 gallons

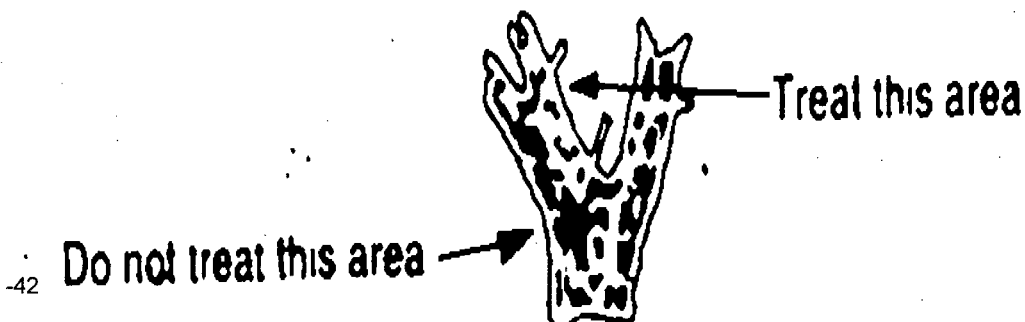
Use the higher rate of white latex paint where bark damage from sun scald is likely to be most severe. Be sure the paint used is not harmful to trees.

**APPLICATION INSTRUCTIONS – APPLES and PEARS - NEW PLANTINGS**

Young apple and pear trees which are healthy and vigorous may be treated after planting in the grove when the trees have established normal growth. Remove sprouts and follow the application procedures described below. Use only 0.5% dilution of Tre-Hold® Sprout Inhibitor A-112. Do not apply to very young or stressed trees as injury and stand loss may result. Do not apply more than 3 gallons of spray mix per acre per application or 9 gallons of spray mix per acre per year.

**ESTABLISHED PLANTINGS  
SCAFFOLD LIMBS**

Prune existing sprouts and treat during the dormant season. Thoroughly cover area where existing sprouts were removed but restrict treatment to the cut surfaces and 2 to 3 inches of the surrounding area below the cut. Apply a 1% solution of Tre-Hold® Sprout Inhibitor A-112 with a brush or small hand held pump-up type sprayer. Use low pressure (not to exceed 25 psi) to avoid fine spray particles from drifting or splashing on surrounding fruiting wood or buds. The addition of interior white latex paint is optional and will help reflect sunlight and reduce high bark ten



Do not treat scaffold limbs after bud activity starts in the Spring. Some fruit size reduction on Golden Delicious and Anjou pears has been observed from excessive treatments to scaffold limbs on older, weaker trees. To minimize the chance of injury, limit treated areas to 10 percent of the total bark area of the tree. Do not treat weak trees, and do not repeat applications on the same tree for at least one year.

#### TRUNK AND BASAL SPROUTS AND ROOT SUCKERS

Prune existing sprouts and apply a 1% solution of Tre-Hold® Sprout Inhibitor A-112 during the dormant season prior to green tip stage or during the summer pruning season when the new shoots are 6 to 12 inches in height. The later applications have been the most effective. On bearing trees do not treat suckers during bud swell, bloom or fruit set. This period is from the start of growth to 4 weeks after petal fall. Application during this time can result in excessive thinning.

Apply Tre-Hold® Sprout Inhibitor A-112 with a brush, small hand-held sprayer or back pack sprayer. For large projects, a power operated herbicide type spray equipment with attached handgun or trunk directed nozzle can be used. Maintain low spray pressure (not to exceed 25 psi) to avoid spray drift of fine spray particles. Do not apply more than 1.5 gallons of spray mix per acre per application or 4.5 gallons of spray mix per acre per year.

#### PRUNING CUTS ON LARGE LATERAL OR UPRIGHT LIMBS

To control sprouts in the vicinity of pruning cuts, paint the 1% dilute mixture of Tre-Hold® Sprout Inhibitor A-112 on the bark in the immediate vicinity of the cut. Treat several inches of bark around the cut. Apply with a brush, small hand-held sprayer or back pack sprayer. Do not allow the mixture to splash or drip onto other parts of the tree. Treat only in the dormant season prior to bud activity. Spray application is not recommended, due to the possibility of spray contacting fruit buds. Do not apply more than 1.5 gallons of spray mix per acre per application or 4.5 gallons of spray mix per acre per year.

#### OLIVES - TRUNK BASAL SPROUTS AND ROOT SUCKERS

(Do not treat scaffold branches or pruning cuts on olive trees). Prune off existing sprouts or suckers and allow new sprout to regrow. Treat with a 1% solution of Tre-Hold® Sprout Inhibitor A-112 when sprouts are not more than 10 inches tall. Apply with a brush, small hand-held sprayer or back pack sprayer. Tre-Hold® Sprout Inhibitor A-112 will control new sprout growth of olives, but will not control old woody sprouts. Do not treat during olive bloom or fruit set. Limit treated areas to 10% of the plants total bark surface. Do not apply more than 4.25 gallons of spray mix per acre per year.

### Tre-Hold A-112 Use Directions for Avocado, Mamey Sapote and Mango trees

Use Tre-Hold A-112 on pruned branches or limbs to maintain overall tree architecture or on trees which have been severely cut back (stumped).

**Dosage:** Tre-Hold Sprout Inhibitor A-112 should be diluted in water or a mixture of water and white latex paint to make an approximate 1.1% (w/w) final concentration of active ingredient. NAA should first be added to water and then the solution added to the latex paint. Mix well.

DIRECTIONS TO PREPARATION A 1.15% A.I. (NAA) WHITE LATEX PAINT MIXTURE		
Amount of Tre-Hold A-112	Amount of White Latex Paint	Add water to make total volume of:
2.8 fl. oz.	4-15 fl. oz.	1 quart
11 fl. oz.	15-60 fl. oz.	1 gallon
4.5 gallons	5-20 gallons	50 gallons

**Method of Application:** Prune branches and remove excessive sprouts or dead and diseased limbs. When a tree is being stumped or severely pruned ensure proper cuts are made at the right angles. Apply TreHold A-112 mixture with a small hand-held sprayer equipped with a directed nozzle, brush, sponge or paint roller or other suitable equipment within a few days after pruning operations have been completed. Do not allow the mixture to splash or drip on to other parts of the tree at the time of application.

**Frequency/Timing of Applications:** Two applications may be made per year with a minimum of 45 days or more between treatments. The Preharvest Interval (PHI) is 10 days.

**Use Directions To Control Excessive Sprouting on Mature, Healthy Azarole, Crabapple, Loquat, Mayhaw, Medlar, Asian Pear, Quince, Chinese Quince, Japanese Quince, Tejocote and Cultivars, Varieties and/or Hybrids of These Trees:**

**ESTABLISHED PLANTINGS - SCAFFOLD LIMBS**

Prune existing sprouts and treat during the dormant season. Thoroughly cover area where existing sprouts were removed but restrict treatment to the cut surfaces and 2 to 3 inches of the surrounding area below the cut. Apply a 1% solution of Tre-Hold® Sprout Inhibitor A-112 with a brush or small hand held pump-up type sprayer. Use low pressure (not to exceed 25 psi) to avoid fine spray particles from drifting or splashing on surrounding fruiting wood or buds.

EXAMPLES FOR PREPARATION OF APPROXIMATELY 1% A.I. (EXPRESSED AS NAA ACTIVE INGREDIENT)		
AMOUNT OF TRE-HOLD® SPROUT A-112	AMOUNT OF WATER	TOTAL VOLUME
2.5 fl.oz.	29.5 fl.oz.	1 quart
10.0 fl.oz.	118.0 fl.oz.	1 gallon
4.0 gallons	46 gallons	50 gallons

**WOODY ORNAMENTAL PLANTS**

**CONTROLS REGROWTH OF TREE SPROUTS FOLLOWING PRUNING OPERATIONS**

Tre-Hold A-112 prevents and inhibits vegetative growth in woody plants. After proper pruning, prepare 1% dilute mixture with/ or without white latex paint according to the mixing directions. Apply with a brush, small hand held sprayer or back pack sprayer. Tre-Hold A-112 is effective on many ornamental flowering and shade trees such as:

- |               |              |                           |
|---------------|--------------|---------------------------|
| American Elm  | Crepe Myrtle | Sugar Maple               |
| Chinese Elm   | Pyracantha   | Sycamore                  |
| Coast Redwood | Red Maple    | Water Oak                 |
| Crabapples    | Silver Maple | Willow spp. (Black Marsh) |

For most effective control of re-sprouts, prune to a lateral branch (drop crotch pruning), and apply Tre-Hold A-112 after growth has begun. Do not leave stubs and avoid severe trimming. Treatment of all cuts is important to obtain consistent results. Do not apply more than 1.5 gallons of spray mix per acre per application or 4.5 gallons of spray mix per acre per year.

**STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage or disposal. Do not use or store near heat or open flame.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental



Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows; Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

**LIMITED WARRANTY AND DISCLAIMER**

The manufacturer warrants (a) that this product conform to the chemical description on the label; (b) that this product is reasonably fit for the purposes set forth in the directions for use, subject to the inherent risks referred to herein, when it is used in accordance with such directions; and (c) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions.

**THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN. THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE, TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF QUALITY OR PERFORMANCE. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.**

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF, OR THE REPAYMENT OF THE PURCHASE PRICE FOR, THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NEITHER MANUFACTURER OR SELLER SHALL BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.**

AMVAC offers this product, and Buyer accepts it, subject to the foregoing Limited Warranty which may be varied only by agreement in writing signed by an authorized representative of AMVAC.

Tre-Hold® is a registered trademark of AMVAC Chemical Corporation.

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