

PM 91

58866-12

6/12/99

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Rev. 6/14/1999
Amendment to EPA

CINNACURE™ A3005

CINNACURE™, a broad spectrum fungicide/insecticide/algaeicide/miticide for use in row crops, horticultural crops and turf. Controls Powdery Mildew, Rhizoctonia, Pythium, Dollar Spot, and Pitch Canker Disease.

Controls/repels a variety of pests including Aphids, Sharpshooter Aphids, Mites, Spider Mites (including Two-Spotted Mites, Pacific Mites and Williamette Mites), Leafhoppers, Whiteflies (including silverleaf and greenhouse), Thrips (including western flower), Algae, Moss, and Liverworts/Hornworts/Pearlworts.

A Curative and Preventative Fungus Control

Active Ingredient:	
Cinnamaldehyde.....	30%
Inert Ingredients.....	70%
Total:	100%

KEEP OUT OF REACH OF CHILDREN

CAUTION

[See back panel for additional precautionary statements] *or*
[See additional precautionary statements on label enclosed in pouch.]

(STATEMENT OF PRACTICAL TREATMENT) *or* (FIRST AID)

If On Skin: Wash with plenty of soap and warm water. If irritation persists, consult a physician. **If in Eyes:** In case of contact, immediately flush eyes with plenty of water. Get medical attention if irritation persists. **If Swallowed:** Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. If person is unconscious, do not give anything by mouth and do not induce vomiting.

EPA Reg. No. 58866-12

EPA Est. No. 58866-CA-1

International and United States Patents Pending

PROGUARD, INC.
SUISUN, CA 94585

ACCEPTED
JUN 12 1999

Under the Federal Insecticide, Fungicide, and Rodenticide Act or amendments for the pesticide registered under EPA Reg. No. 58866-12.

NET CONTENTS:

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

Harmful if swallowed or absorbed through the skin. Causes eye irritation. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Personal Protective Equipment (PPE):

Applicators and other handlers must wear:

- Long sleeved shirts and long pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

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

ENVIRONMENTAL HAZARDS

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 by cleaning of equipment or disposal of wastes.

PHYSICAL OR CHEMICAL HAZARDS

Do not use, pour, spill or store near heat or open flame.

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 through any type of irrigation system. 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.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 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 also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE). 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 restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, water, is: Coveralls, waterproof gloves, shoes plus socks.

USER SAFETY RECOMMENDATIONS:

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

SHAKE WELL BEFORE USE. USE DILUTION IMMEDIATELY. DO NOT STORE DILUTED SOLUTION.

Pre-harvest Interval: CINNACURE™ may be applied to the crops listed in the APPLICATION RATE TABLE at any time, up to and including the day of harvest.

Mode of Action: CINNACURE™ is a contact insecticide/fungicide/algaeicide/miticide.

APPLICATION INSTRUCTIONS

CINNACURE™ is a pesticide for use against the mite, insect and fungal pests listed in the APPLICATION RATE TABLE. The pest must come in contact with CINNACURE™ in order to be affected. Always follow these directions:

- Testing to date indicates CINNACURE can cause injury to some species of plants at sensitive stages of growth. Open blooms of certain plants can also be damaged. We recommend this product not be used on Arbor, Begonia, Orchids or on poinsettia plants once bracts are set. Do not apply to stressed or wilted plants.
- CINNACURE has not been tested on all plant varieties or in all tank mixes. Before applying to a larger number of plants, test CINNACURE on a small number of plants for potential damage.
- We recommended making no more than two consecutive applications of CINNACURE. After two applications, rotate to an alternative chemistry for at least two applications.
- Apply in early morning or late afternoon.
- Spray directly onto pest(s) or pathogen(s).
- Make applications before noticeable foliar damage occurs.
- Thorough spray coverage is essential for good pest control.
- Applications should be repeated at an interval sufficient to maintain control, depending upon plant growth, insect or fungal pressure and weather conditions after spraying.
- For crops such as Fruits, Nuts and Vines, applications are often timed to stage of development and recommendations from local Extension personnel should always be followed.
- Local conditions may affect the use of CINNACURE™. Consult your State Agricultural Extension Specialist for specific recommendations-related to local crop protection problems.
- Spray water/spray tank solutions should not be below pH of 3.0 or exceed a pH of 8.0. CINNACURE™ works best in a pH range of 3.5 to 7.5. Use outside this range may cause product degradation. If necessary, buffer water to near neutral pH.
- Do NOT apply to wilted or obviously stressed plants, or to newly transplanted material prior to root establishment.
- Do NOT mix CINNACURE™ with oxidizing agents such as bleach or strong acids or bases as they will destabilize the product.
- CINNACURE™ has not been tested on all plant varieties or in all tank mixes. Test CINNACURE™ on a small number of plants for potential damage before applying to a larger number of plants.

HAND HELD EQUIPMENT

When using hand held equipment, mix 0.5 oz. - 1.1 oz. of CINNACURE™ per gallon of water. Spray to wet, but not to runoff.



TANK MIX

CINNACURE™ has not been tested for use in a tank mix with many commonly used insecticides, fungicides, or spray tank adjuvants. We recommend testing all tank mix combinations for physical compatibility and plant safety. Consult your dealer or manufacturer for specific recommendations. This product cannot be mixed with any product containing a label prohibition against such mixing. No label dosage rate should be exceeded. Application must be made in accordance with the more restrictive of label limitations and precautions. Read and follow label instructions.

- For improved durability of spray deposits, a spreader/sticker approved for use on growing crops may be used for hard-to-wet crops such as cole crops.

MIXING INSTRUCTIONS

CINNACURE™ may be applied using conventional ground or hand held application equipment. Use quantities of water sufficient to provide thorough coverage of infested plants. Add enough water to spray tank to allow maximum agitation. With agitator running, slowly add the appropriate amount of CINNACURE™. Continue agitation. Add remainder of water and agitate until thoroughly mixed. Maintain suspension while loading and spraying. Do not mix more CINNACURE™ than can be used in a 12 hour period. Rinse and flush spray equipment thoroughly following each use. Do not contaminate water when disposing of equipment washwaters.

In order to make proper decisions on application rates to be used, follow the recommendations in the APPLICATION RATE TABLE.

NOTE: All applications should be preceded by a phytotoxicity check to ensure that the material is safe for that particular plant variety. We recommend that prior to treating large numbers of plants or new species or varieties, user treat a few plants with CINNACURE and observe for 7-10 days to lessen the possibility of crop injury. It is best to treat plants after they've adjusted to environmental changes, i.e. temperature, water, light intensity, new containers, new area, transplanting, or wind, etc.

APPLICATION RATE TABLE

VEGETABLE AND COLE CROPS

Insect Pests: Aphids, Sharpshooter Aphids, Thrips, Whitefly, Mites, Spider Mites, (including Two-Spotted Mites, Pacific Mites and Williamette Mites), Lygus Bug, Squash Bug, Heliopsis, Box Elder Bugs, Tomato Pin Worm, Cabbage Looper, Stink Bugs, Lepidoptera and Fruit Worms.

Fungal Pests: Powdery mildew, Botrytis and Downey mildew.

Crops such as: Artichokes, Arugala, Asparagus, Beans, Beets, Bok Choy, Broccoli, Brussels Sprouts, Cabbage, Cardoni, Carrots, Cauliflower, Celeriac, Celery, Chick Peas, Chickory, Chinese Cabbage, Collards, Cucumber, Cucurbits, Dry bulb onions, Eggplants, Escarole, Endive, Garlic, Green onions, Greens (Beets, China, Dandelion, Mustard, Turnip), Horseradish, Kale, Kohlrabi, Leeks, Lentils, Lettuce (Head, Romaine, Leaf), Malanga, Melons, (Cantaloupe, Crenshaw, Honeydew, Muskmelon, Watermelon, etc.), Napa, Okra, Onions, Parsley, Parsnips, Peas, Peppers, Potatoes, Pumpkins, Radishes, Rutabaga, Salsify, Shallots, Soybean foliage, Spinach, Squash, Sugar beets, Sweet potatoes, Swiss chard, Tomatoes, and Turnips.

Recommended Rate:

Mix 18-38 ounces of CINNACURE™ in 10-30 gallons of water. Apply 10-30 gallons of diluted CINNACURE™ solution per acre. Apply CINNACURE™ every 7-10 days when disease pressure is high. Begin applications before disease onset. All applications should be preceded by a phytotoxicity check to ensure that the material is safe for that particular plant variety.

FRUIT, CITRUS AND NUT CROPS

Insect Pests: Aphids, Sharpshooter Aphids, Thrips, Mites, Spider Mites, (including Two-Spotted Mites, Pacific Mites and Willamette Mites), Codling Moth, Apple Scab, Peach Twig Borer, Leaf Hopper, Scale Insects, Apple Maggot adults, Leaf Roller, Tent Caterpillars, Walnut Husk Fly adults, Ants, Whitefly and Mealy bug.

Fungal Pests: Brown rot and Botrytis.

Crops such as: Pome and Stone Fruit Trees

Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, Quince, and Persimmons.

Crops Such as: Citrus

Lemon, Orange, Grapefruit, Lime, and Kumquat.

Crops such as: Nut Trees

Almonds, Chestnuts, Filberts, Pecans, Pistachios, and Walnuts.

Recommended Rate:

Mix 1-3 gallons of CINNACURE™ in 100-300 gallons of water. Apply 100-300 gallons of diluted CINNACURE™ solution per acre. All applications should be preceded by a phytotoxicity check to ensure that the material is safe for that particular plant variety.

HERBS AND SPICES

Insect Pests: Aphids, Sharpshooter Aphids, Thrips, Whitefly, Mites, Spider Mites, (including Two-Spotted Mites, Pacific Mites and Willamette Mites), and Mealy Bug.

Fungal Pests: Powdery Mildew, Botrytis, and Downey mildew.

Crops such as: Basil, Chives, Cilantro, Dill, Oregano, Peppermint, Rosemary, Sage, Spearmint, and Thyme.

Recommended Rate:

Mix 18-116 ounces of CINNACURE™ in 10-100 gallons of water. Apply 10-30 gallons of diluted CINNACURE™ solution per acre. All applications should be preceded by a phytotoxicity check to ensure that the material is safe for that particular plant variety.

VOLUME OF CINNACURE FOR HERBS & SPICES	
Mixing Volume	Fluid Ounces Cinnacure
10 Gal.	18
20 Gal.	28
30 Gal.	38
40 Gal.	48
50 Gal.	58
100 Gal.	116

SMALL FRUIT AND BERRIES

Insect Pests: Aphids, Sharpshooter Aphids, Thrips, Whitefly, Mites, Spider Mites, (including Two-Spotted Mites, Pacific Mites and Willamette Mites), Leafhoppers, Lygus Bug, Long Horned Stem Borer, and Blueberry Maggot.

Fungal Pests: Powdery Mildew, Botrytis, and Downey Mildew.

Crops such as: Blackberries, Blueberries, Boysenberries, Cranberries, Currants, Loganberries, Raspberries, and Strawberries.

Recommended Rate:

Mix 1-2 gallons of CINNACURE™ in 100-200 gallons of water. Apply 100-200 gallons of diluted CINNACURE™ solution per acre. Use at 10 day intervals. All applications should be preceded by a phytotoxicity check to ensure that the material is safe for that particular plant variety.

GRAPES (wine, table, or raisin) & KIWI

Pests: Aphids, Sharpshooter Aphids, Thrips, Whitefly, Mites, Spider Mites, (such as Two-Spotted Mites, Pacific Mites and Williamette Mites), Leafhopper, Lygus Bug, Leaf Roller, Grape Berry Moth, Mealy Bugs, Powdery Mildew, Downey Mildew and Botrytis.

Recommended Rate:

Mix 1-3 gallons of CINNACURE™ with 100-150 gallons of water. Apply 100-150 gallons of diluted CINNACURE™ solution per acre. All applications should be preceded by a phytotoxicity check to ensure that the material is safe for that particular plant variety.

For Insect control:

The recommended rate is 1-3 gallons of CINNACURE™ mixed in 100 - 150 gallons of water. Apply 100 - 150 gallons of diluted CINNACURE™ solution per acre. Apply as frequently as necessary to obtain insect control.

For Powdery mildew control: Apply at 7-14 day intervals. Use 7 day interval when disease pressure is high, greater than 60 index points on the UC Davis Risk Assessment Index (UCDRAI), and use 14 day intervals when UCDRAI is 0 to 30 index points. The recommended application rate is 1-3 gallons of CINNACURE™ mixed in 100 - 150 gallons of water. Apply diluted CINNACURE™ solution at 100 - 150 gallons per acre. Increase concentrations when disease pressure is high, and reduce concentrations when disease pressure is low.

PASTURE AND HAY

Insect Pests: Aphids, Sharpshooter Aphids, Thrips, Mites, Spider Mites, (including Two-Spotted Mites, Pacific Mites and Williamette Mites), Alfalfa Weevil larvae, Alfalfa Caterpillar, Armyworm, Leaf Hoppers and Lygus Bug.

Fungal Pests: Downey mildew.

Crops such as: Alfalfa (hay and seed), Pasture (grasses and hay), and Silage.

Recommended Rate:

Mix 18-38 ounces of CINNACURE™ with 10-30 gallons of water. Apply 10-30 gallons of diluted CINNACURE™ solution per acre. All applications should be preceded by a phytotoxicity check to ensure that the material is safe for that particular plant variety.

TROPICAL AND OTHER FRUIT

Insect Pests: Aphids, Sharpshooter Aphids, Leafhoppers, Thrips, Whitefly, Mites, Spider Mites, (including Two-Spotted Mites, Pacific Mites and Williamette Mites), and Mealy Bugs.

Fungal Pests: Downey mildew, Powdery mildew and Botrytis.

Crops such as: Avocados, Bananas, Dates, Figs, Mangoes, Papaya, Pomegranate, and Pineapple.

Recommended Rate:

Mix 1-3 gallons of CINNACURE™ in 100-150 gallons of water. Apply 100-150 gallons of diluted CINNACURE™ solution per acre. All applications should be preceded by a phytotoxicity check to ensure that the material is safe for that particular plant variety.

FIELD CROPS

Insect Pests: Aphids, Sharpshooter Aphids, Caterpillars, Thrips, Whitefly, Mites, Spider Mites, (including Two-Spotted Mites, Pacific Mites and Willamette Mites), Tobacco Horn Worm, and Leaf Hopper.

Fungal Pests: Rust and Powdery mildew.

Crops such as: Canola/Rape Seed, Evening Primrose, Meadow Foam, Corn (Field, Sweet and Popcorn), Cotton, Hops, Jojoba, Rice, Safflower, Small Grains (Barley, Oats, Rye, Wheat, etc.), Sorghum, Soybeans, Sunflowers, and Tobacco.

Recommended Rate:

Mix 18-38 ounces of CINNACURE™ with 10-30 gallons of water. Apply 10-30 gallons of diluted CINNACURE™ solution per acre. All applications should be preceded by a phytotoxicity check to ensure that the material is safe for that particular plant variety.

COMMERCIAL FLOWERS AND ORNAMENTAL PLANTS

Insect Pests: Aphids, Sharpshooter Aphids, Thrips, Whitefly, Mites, Spider Mites, (including Two-Spotted Mites, Pacific Mites and Willamette Mites), Mealy Bug, and Caterpillar larvae.

Fungal Pests: Powdery mildew, Botrytis, and Downey Mildew.

Crops such as: Bedding Plants, Flowers (Greenhouse and field), Greenhouse ornamentals, Greenhouse vegetables, Bare Root Stock, Container stock, Fresh Cut Flowers, Ornamental Starts, Roses, Vegetable and Fruit Starts.

Recommended Rate:

Mix 42-100 ounces of CINNACURE™ in 100 gallons of water. 100 gallons of diluted CINNACURE™ solution treats 10,000-20,000 square feet. All applications should be preceded by a phytotoxicity check to ensure that the material is safe for that particular plant variety.

For Control of mites and aphids: Mix 85 ounces of CINNACURE™ in 100 gallons of water. 100 gallons of diluted CINNACURE™ solution treats 10,000-20,000 square feet.

For Powdery mildew control: Apply when disease first appears.. Mix 64-100 ounces of CINNACURE™ in 100 gallons of water. 100 gallons of diluted CINNACURE™ solution treats 10,000-20,000 square feet. Apply as a thorough foliar spray including the underside of the leaves. Repeat as necessary. As a preventative measure, apply at three week intervals.

FOREST, SHADE TREE AND NURSERY STOCK

Insect Pests: Aphids, Sharpshooter Aphids, Thrips, Whitefly, Mites, Spider Mites, (including Two-Spotted Mites, Pacific Mites and Willamette Mites), Stem Borer, and Tent Caterpillar.

Fungal Pests: Powdery Mildew, Pitch Canker (*Fusarium subglutinans f. sp. pini*)

Crops such as: Forest, Shade trees, Nursery trees, Pine trees, Christmas Trees, Ornamental Trees, and Landscape Trees.

Recommended Rate:

Mix 1-3 gallons of CINNACURE™ in 100-300 gallons of water. Spray to thoroughly wet trees. 100-300 gallons of diluted CINNACURE™ solution typically treats 10,000-20,000 square feet.

For Pitch Canker disease use 852 oz. (6.65) gallons of CINNACURE™ per 200 gallons of water.

For Powdery Mildew use 64-100 oz. gallons of CINNACURE™ per 100 gallons of water.

All applications should be preceded by a phytotoxicity check to ensure that the material is safe for that particular plant variety.

APPLICATION RATE TABLE

CROPS	PEST	RATE/100 Gal.
Bedding Plants, flowers, (Greenhouse and field), Greenhouse ornamentals, Greenhouse vegetables, Bare Root Stock, Container Stock, Fresh Cut Flowers, Ornamental Starts, Roses, Vegetable and Fruit Starts.	Mites, Aphids &	85 FL OZ
	Powdery Mildew	64-100 FL OZ
Shade trees and Nursery trees.	Powdery Mildew	64-100 FL OZ

We recommend making no more than two consecutive applications of CINNACURE. After two applications, rotate to an alternative chemistry for at least two applications

VOLUME OF CINNACURE FOR 85 FL OZ / 100 GALLONS

MIX VOLUME	FL OZ CINNACURE
200	170
100	85
50	42.5
25	21.25
10	8.5
3	2.6
1	0.85

TURF

Fungal Pest: Rhizoctonia, Pythium, and Dollar Spot.

Crops such as: Turf, Turfgrass.

Recommended Rate: Dilute 18-38 ounces of CINNACURE™ per 100-300 gallons of water. Apply at 50 gallons of dilute solution per acre (1.25 gallons of solution per 1,000 sq. ft.). As a preventative treatment, apply when conditions are favorable for disease development or apply when disease first appears. Avoid overlapping of sprays. Repeat as necessary.

Since there are several bentgrasses on golf course greens that may differ in phytotoxicity response, it is recommended that application be preceded by a phytotoxicity check to ensure that the material is safe for that particular variety. All applications should be preceded by a phytotoxicity check to ensure that the material is safe for that particular plant variety.

PLANT PARASITE CONTROL (Algae, Algae Scum and Moss)

Turf

For prevention or eradication of algae, algae scum or moss, dilute 1-2 gallons CINNACURE™ per 100-300 gallons of water. Apply 50 gallons per acre (1.25 gallons per 1,000 sq. ft.), apply on a 28 day schedule. When algae, algae scum or moss is well established, every attempt should be made to dry out the afflicted areas. Once dry, spiking or verticutting should be done to enhance turfgrass recovery in conjunction with treatment. Under severe algae, algae scum or moss conditions, use a higher rate and apply on a 14 day schedule. Only a preventative program of treatment will prevent a recurrence of the algae, algae scum or moss when environmental conditions are favorable for growth.

Greenhouse (glasshouse)

For prevention or eradication of algae, algae scum, moss, liverworts, hornworts or pearlworts on glass, other glasshouse surfaces or in containers, pots or storage bins; apply at a rate of 1.25 fluid oz./1gal of water as needed. When algae, moss or liverworts are well established, every attempt should be made to dry out the afflicted areas. Do not spray directly on glasshouse plants. Spray in a manner that minimizes contact with desired plants. Only a preventative program of treatment will prevent a recurrence of the algae, moss, liverwort, hornwort or pearlwort when environmental conditions are favorable for growth.

Structural or Decorative Surfaces

For prevention or eradication of algae and moss on residential structures (e.g., wood and/or concrete walls, steps, stairs, foundation, seats, walkways, etc.), apply at the rate of 2 fluid oz./1 gallon of water as needed. When algae or moss is well established, every attempt should be made to dry out the afflicted areas. Do not spray on plants, animals or plastic surfaces. Only a preventative program of treatment will prevent a recurrence of moss, liverwort, hornwort or pearlwort when environmental conditions are favorable for algae or moss growth.

Moss and liverworts/hornworts/pearlworts in Containers, Pots or Storage Bins

For prevention or eradication of moss, liverworts, hornworts and pearlworts in containers, pots or storage bins, apply at the rate of 1.25 fluid oz./1 gallon of water as needed. When moss, liverworts, hornworts and pearlworts are well established, every attempt should be made to dry out the afflicted areas. Do not spray on plants, animals, or plastic surfaces. Only a preventative program of treatment will prevent a recurrence of moss, liverwort, hornwort or pearlwort when environmental conditions are favorable for growth.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Store in original container. Store in a cool dry place. Use within 10 days of opening container. Do not store near food or feedstuffs.

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.

NOTICE ON CONDITIONS OF SALE

Our recommendations for use of CINNACURE are based upon tests conducted and believed to be reliable. CINNACURE is reasonably fit for the purposes described herein when used according to these label directions. Since the use of this product is beyond the control of the producer, no guarantee, expressed or implied, is made relative to intended results if product is not used according to this label. Buyers and users assume all risk and responsibility for potential loss or damage if this product is used, stored, handled or applied in any manner inconsistent with its labeling.

As labels are subject to revision, always carefully read and follow the directions per the label on or attached to the container.

To the extent permitted by law, manufacturer shall not be liable for more than the purchase price for the quantity involved, including incidental, consequential or special damages.