

69592-17

09/22/2005

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Biopesticides and Pollution Prevention Division (7511C)
1200 Pennsylvania Avenue NW
Washington, DC 20460

EPA Reg. Number:

69592-17

Date of Issuance:

9/22/05

Term of Issuance:

Conditional

Name of Pesticide Product:

Andante™

NOTICE OF PESTICIDE:

Registration
 Reregistration
(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Mr. Gary N. Clark
Director, Regulatory Affairs
AgraQuest, Inc.
1530 Drew Avenue
Davis, CA 95616

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Biopesticides and Pollution Prevention Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

The registration application referred to above, submitted in connection with registration under § 3(c)(7)(C) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable provided that you do the following terms and conditions.

1. Submit/cite all data required for registration of your product under FIFRA § 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. Submit production information for this product to the Registration Division (7505C) for the fiscal year in which this product is conditionally registered, in accordance with FIFRA § 29. The fiscal year begins October 1 and ends September 30. Production information will be submitted to the Agency no later than November 15, following the end of the preceding fiscal year.
3. This registration is registered under FIFRA § 3(c)(7)(C) because of outstanding data as discussed in the Biopesticide Registration Action Document for the active ingredient *Muscodor albus* QST 20799. Submit the following data within the specified timeframes:
 - a) analysis of 5 production batches to include identification and enumeration of bacterial and fungal contaminants, unintentional ingredients, certification of limits, and viability to confirm

Signature of Approving Official:

(See second page for signature)

Date:

9/22/05

the proposed Quality Assurance and Quality Control techniques maintain regulatory standards. You may submit these analyses as batches are produced.

All batches containing metabolites or unintentional ingredients of toxicological concern, or human pathogens above regulatory levels, must be appropriately destroyed.

- b) data supporting the claim for storage stability in submissions made to the Agency claiming that the End-use Product (EP) is stable for one (1) year. You must submit these data within eighteen (18) months of the date of this registration notice.
 - c) an acute inhalation toxicity test in rats to demonstrate that the volatiles produced on rehydration of the EP do not pose a worker inhalation exposure risk. The rodents are to be exposed through the nose to a mixture of all the volatiles, in the ratios produced on rehydration, at 1000 times the concentration of the expected exposure level. You must submit these data within eighteen (18) months of the date of this registration notice.
5. Submit five (5) copies of the revised final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely,



Janet L. Andersen, Ph.D., Director
Biopesticides and Pollution Prevention Division (7511C)

encl: label

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ANDANTETM

[Alternate Brand Name; PIROUETTETM]

Soil Biofumigant for the Control of Pathogenic Soil Fungi and Bacteria and Soil-Borne Nematodes

[NOP Logo: Can be used for Organic Production]
(NOP Logo) For Organic Production

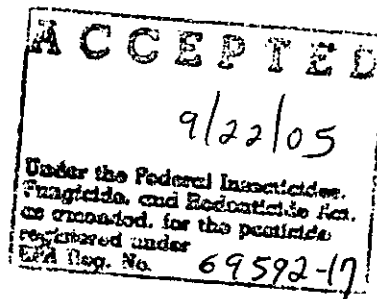
ACTIVE INGREDIENT:

Muscodor albus Strain QST 20799* .. 0.35%

OTHER INGREDIENTS:..... 99.65%

TOTAL:..... 100.00%

*Contains a minimum of 1 x 10⁵ cfu/g



EPA Registration No. (File Symbol 69592-17)
EPA Establishment No. 69592-MEX-1

Net Contents: Contents : [20 lbs, 50 lbs, 100 lbs to 900 lbs. and larger bulk containers 1000 lbs. and larger]

Manufactured by:
AgraQuest, Inc.
1530 Drew Avenue
Davis, CA 95616

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

FIRST AID	
If on skin or clothing	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 – 20 minutes. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
See back panel for additional precautionary statements.	

PRECAUTIONARY STATEMENTS

Hazards to humans and domestic animals:
CAUTION. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling.

Personal Protective Equipment (PPE):
 Applicators and other handlers of the product must wear long-sleeved shirt and long pants, waterproof gloves, and shoes plus socks. Mixer/loaders and applicators must wear a dust/mist-filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization. Follow manufacturer's instructions for cleaning / maintaining PPE. Keep and wash PPE separately from other laundry.

User Safety Requirements: Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. 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, or to areas where surface water is present, or to intertidal areas below the mean highwater mark. Do not contaminate water when cleaning equipment or disposing of equipment washwater. This product has not been evaluated for hazards to nontarget insects, fish, aquatic invertebrates and other aquatic organisms.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. 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.

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 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.

There is a restricted entry of (4) hours after incorporation into growing media when used in enclosed environments.

For early entry into enclosed environments wear PPE: long sleeved shirt, long pants, gloves, shoes plus socks and a dust/mist-filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95.

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are **not** within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Wear long sleeved shirt, long pants, shoes,socks, gloves and a dust mist filtering respirator with the NIOSH prefix N-95, R-95 and R-95.

Keep unprotected persons out of areas of treated commodities.

GENERAL INFORMATION

Andante is a broad-spectrum bio-fumigant that controls economically important soil borne diseases and nematodes. When properly activated and under the appropriate treatment conditions, Andante produces volatile compounds that control and suppress plant pathogenic fungi and bacteria and nematodes.

SOIL DISEASE AND NEMATODE CONTROL

Andante provides control of root rots, damping off and wilt diseases caused by *Aphanomyces* spp., *Fusarium* spp., *Phytophthora* spp., *Pythium* spp., and *Rhizoctonia* spp. and soil-borne nematodes; *Meloidogyne* spp., *Pratylenchus* spp., in the following uses:

**FOR FIELD USE OR PLANT BEDS
PREPARED FOR DIRECT SEEDING OR
TRANSPLANTING OF VEGETABLES,
BULBS AND CORMS, for the following
crops:**

Bulb Vegetables: Onion, Garlic, Shallots and other bulb vegetables

Cole Crops: Broccoli, Cabbage, Cauliflower, Brussels Sprouts, Collards, Kale, Mustard Greens, Kohlrabi and other brassica crops

Cucurbits: Cucumber, Cantaloupe, Melon, Muskmelon, Squash, Watermelon and other cucurbit crops

Fruiting Vegetables: Pepper, Tomato, Eggplant, Ground Cherry, Tomatillo, Okra and other fruiting vegetables

Legumes Vegetables: Beans, Green beans, Snap beans, Shell beans, Soybeans, Dry Beans, Garbanzo beans, Lima beans, Peas, Chick peas, Split peas, Lentils and other legume/ vegetable crops

Leafy Vegetables

Lettuce (Iceburg, Romaine, Bibb, Leaf etc), Celery, Spinach, Parsley, Radicchio and other leafy vegetable crops

Root/Tuber and Corm Vegetables: Carrot, Potato, Sweet Potato, Beets, Ginger, Horseradish, Radish, Gingseng, Turnip and other root/ tuber and corm crops.

**Soil Preparation, Use Rates, Treatment of
Soil, Seeding and Transplanting Instructions
for Vegetables, Bulbs and Corms:**

Soil Preparation and Conditions:

1. Soil should be tilled to seedbed and transplant bed condition free of clods and plant residue as reasonably possible.
2. For best results, soil temperature must be between 40°F and 85°F (5°C and 30°C) during treatment and at least 72 hours after treatment.
3. Soil must have sufficient moisture to maintain and activate the product (approximately 20% to 50% soil capacity). Water the soil to achieve and maintain this level.
4. Excessive rainfall or irrigation within 72 hours after treatment creating saturated soil conditions will negatively impact performance.

Use Rate:

1. Determine use rate based upon depth of incorporation in the soil. This can vary from 4 to 12 inches depending upon the crop, disease/nematode complex and pressure.
2. Use 500 to 7000 lbs of Andante per treatment acre for each 4 inch depth of incorporation. When applying to rows, strips or beds only consider the actual soil area treated. For example, if treating a 6-inch wide band on rows of 30-inch centers at 500 lbs/acre, use a total of 100 lbs product, or one/fifth of 500 lbs.
3. For smaller treatment areas such as seeding or planting beds, uniformly mix 1 to 8 ounces of product per cubic foot of soil.
4. Use higher rates in soils that contain high pathogen or nematode levels.
5. See the chart below regarding rates and incorporation depths.

Application:

1. Accurately calibrate the appropriate equipment (fertilizer spreader, tractor mounted box or similar equipment) to deliver the desired use rate.
2. Apply the product uniformly to the soil surface.
3. For small areas, Andante may be applied by hand utilizing gloves and the appropriate personal protection equipment.

Incorporation:

1. Incorporate product into soil within 4 hours after application. Continued exposure to ultraviolet rays will diminish activity of the product.
2. Incorporate into the soil to a depth of 4 to 12 inches, as required for the crop, disease/nematode complex and pressure. See the chart below regarding rates and incorporation depths.
3. Uniform incorporation is necessary and best achieved utilizing a rotary cultivator or rototiller equipment.
4. Following incorporation into the soil maintain soil moisture at a level of approximately 20% to 50% soil capacity prior to seeding or transplanting. If needed irrigate with 1 inch of water within 24 hours of incorporation to activate the product.

Seeding/Planting/Transplanting Instructions:

1. Wait 5 to 7 days following application and incorporation before direct seeding or transplanting into treated soil.

APPLICATION RATES/DEPTHS**Four(4) INCH INCORPORATION DEPTH**

Lbs per Acre	500	2000	7000
Lbs per 100 sq ft.	1.2	4.6	16
Lbs per 1000 sq ft	12	46	160

Eight (8) INCH INCORPORATION DEPTH

Lbs per Acre	1000	4,000	14000
Lbs per 100 sq ft.	2.3	9.2	32
Lbs per 1000 sq ft	23	92	320

Twelve (12) INCH INCORPORATION DEPTH

Lbs per Acre	1500	6,000	21000
Lbs per 100 sq ft.	3.5	13.8	48
Lbs per 1000 sq ft	35	138	480

CROP TOLERANCE

Andante has been tested for safety on several plant species. However, it is not possible to test this product with all species and cultivars under all treatment conditions. A small-scale preliminary trial should be conducted to check

the cultivar sensitivity before using this product on a large scale.

RESTRICTIONS

- Do not apply Andante Bio-Fumigant to dry soil or soil at field capacity moisture.
- Do not apply Andante Bio-Fumigant when soil temperature is below 40°F (5°C) or above 85°F (30°C).
- Do not mix or apply Andante Bio-Fumigant with pesticides or other additives.
- Do not apply farmyard manure, peat, other organic fertilizers, burnt lime, or lime nitrogen just before or within 72 hours after treatment.

FOR USE IN TRANSPLANTING AND ORCHARD/VINEYARD RESETS FOR THE FOLLOWING FRUIT AND NUT CROPS:

Berry Crops: Blueberries, Blackberry, Raspberry, Loganberry, Huckleberry, Cranberry, Gooseberry, Elderberry, Currant, Caneberry, and other berry crops

Grape:

Pome Fruit: Apple, Crabapple, Pear, Quince, Mayhaw and other pome fruit

Stone Fruit: Apricot, Cherry, Nectarine, Peach, Plum, Prune and other stone fruit crops

Strawberry

Avocado **Kiwi** **Mango** **Papaya**

Pineapple

Citrus: Orange, Grapefruit, Lemon, Tangerine, Tangelo, Pummelo and other citrus crops

Tree Nut Crops: almonds, beechnut, Brazil nut, cashew, chestnut, filbert, hickory nut, macadamia nut, pecan, pistachios, walnut

Soil Preparation, Use Rates, Treatment of Soil and Instructions for Use in Transplanting and Orchard/Vineyard Resets of Fruit and Nut Crops:

Soil Preparation and Conditions:

1. Soil to be treated should be in **planting condition** free of clods and plant residue as **reasonably possible**.
2. **For best results**, soil temperature must be between 40°F and 85°F (5°C and 30°C) during treatment and at least 72 hours after treatment.
3. Soil must have sufficient moisture to maintain and activate the product (approximately 20% to 50% soil capacity). Water the soil to achieve and maintain this level.
4. Excessive rainfall or irrigation within 72 hours after treatment creating saturated soil conditions will negatively impact performance.

Use Rate:

1. For treatment areas such as transplants and orchard and vineyard resets, uniformly mix 1 to 8 ounces of product per cubic foot of transplant soil.
2. Use higher rates in soils that contain high pathogen or nematode levels.

Application/Incorporation/Planting:

1. For transplanting and orchard and vineyard resets, Andante may be applied by hand to the soil, utilizing gloves and the appropriate personal protection equipment.
2. Make sure treated soil will extend beyond the roots of the transplant or reset to provide a disease/nematode free zone.
3. Thoroughly and uniformly mix and blend the product and soil prior to planting.
4. Following incorporation into the soil maintain soil moisture at a level of approximately 20% to 50% soil capacity prior to seeding or transplanting. Irrigate with 1 inch of water within 24 hours of incorporation to activate the product.
5. A period of 2 to 5 days after treatment is recommended before transplanting.

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RESTRICTIONS

- Do not apply Andante Bio-Fumigant to dry soil or soil at field capacity moisture.
- Do not apply Andante Bio-Fumigant when soil temperature is below 40°F (5°C) or above 85°F (30°C).
- Do not mix or apply Andante Bio-Fumigant with pesticides or other additives.
- Do not apply farmyard manure, peat, other organic fertilizers, burnt lime, or lime nitrogen just before or within 72 hours after treatment.

FOR USE IN SEEDLING AND PROPAGATION BEDS USED FOR SEEDS, BULBS, CORMS AND PLANTS FOR THE FOLLOWING:

- Annual flowering plants
- Perennial flowering plants
- Tropical foliage plants
- Ornamentals
- Shrubs
- Conifers
- Deciduous Trees
- Forest Nurseries
- Ginseng

Soil Preparation, Use Rates, Treatment of Soil and Planting Instructions for Seedling and Propagation Beds:**Soil Preparation and Conditions:**

1. Soil to be treated should be in **planting condition** free of clods and plant residue as **reasonably possible**.
2. **For best results**, soil temperature must be between 40°F and 85°F (5°C and 30°C) during treatment and at least 72 hours after treatment.
3. Soil must have sufficient moisture to maintain and activate the product (approximately 20% to 50% soil capacity). Water the soil to achieve and maintain this level.
4. Excessive rainfall or irrigation within 72 hours after treatment creating saturated soil conditions will negatively impact performance.

Use Rate:

1. Determine use rate based upon depth of incorporation in the soil. This can vary from 4 to 12 inches depending upon the crop, disease/nematode complex and pressure.
2. Use 500 to 7000 lbs of Andante per treatment acre on a broadcast basis for each 4 inch depth of incorporation. When applying to rows, strips or beds only consider the actual soil area treated. For example, if treating a 6-inch wide band on rows of 30-inch centers at 500lbs/acre(broadcast), use a total of 100 lbs product, or one/fifth of 500 lbs.
3. For smaller seedling or planting beds, uniformly mix 1 to 8 ounces of product per cubic foot of soil.
4. Use higher rates in soils that contain high pathogen or nematode levels.
5. See the chart below regarding rates and incorporation depths.

Application:

1. For larger seedling and planting bed areas apply Andante Bio-Fumigant uniformly to the soil surface using a fertilizer spreader or similar equipment.
2. Accurately calibrate the equipment to deliver the desired use rate.
3. For smaller seedling or planting beds, Andante may be applied by hand utilizing gloves and the appropriate personal protection equipment.

Incorporation:

1. For large seedling or planting bed areas incorporate product into soil within 4 hours after application. Continued exposure to ultraviolet rays will diminish activity of the product.
2. Incorporate into the soil to a depth of 4 to 12 inches, as required for the crop, disease/nematode complex and pressure. See the chart below regarding rates and incorporation depths.
3. Uniform incorporation is necessary and best achieved utilizing a rotary cultivator or rototiller equipment.
4. For smaller seedling or planting beds, Andante may be mixed and blended with the soil by hand, utilizing gloves and the

appropriate personal protection equipment. Thoroughly and uniformly mix and blend the product and soil.

4. Following incorporation into the soil maintain soil moisture at a level of approximately 20% to 50% soil capacity prior to seeding or transplanting. Irrigate with 1 inch of water within 24 hours of incorporation to activate the product.

Seeding/Planting/Transplanting**Instructions:**

1. Wait 5 to 7 days following application and incorporation before direct seeding or transplanting into treated soil.

APPLICATION RATES/DEPTHS**Four(4) INCH INCORPORATION DEPTH**

Lbs per Acre	500	2000	7000
Lbs per 100 sq ft.	1.2	4.6	16
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RESTRICTIONS

- Do not apply Andante Bio-Fumigant to dry soil or soil at field capacity moisture.
- Do not apply Andante Bio-Fumigant when soil temperature is below 40°F (5°C) or above 85°F (30°C).

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- Do not mix or apply Andante Bio-Fumigant with pesticides or other additives.
- Do not apply farmyard manure, peat, other organic fertilizers, burnt lime, or lime nitrogen just before or within 72 hours after treatment.

To the extent permitted by state law, Buyers and users of this product are responsible for all loss or damage from use or handling of this product which results from conditions beyond the control of Seller, or without the fault or negligence of the Seller, or from failure to follow the label.



STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a secure, dry location, between 40°F - 85°F (5°C - 30°C), out of direct sunlight and away from heat sources. Keep from overheating or freezing. Keep container tightly closed to minimize exposure to moisture. Store in original container only.

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: Do not reuse empty container. Completely empty bag. Then dispose of empty bag in a sanitary land fill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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Made in Mexico

CONDITIONS FOR SALE AND WARRANTY

AgraQuest warrants to those persons lawfully purchasing this product that at the time of the first sale of this product by Seller that this product conformed to its description and was reasonably fit for the purposes stated on the label when used in accordance with Seller's directions. Buyers and users of this product assume the risk of any use contrary to such directions. EXCEPT AS PROVIDED ELSEWHERE IN WRITING CONTAINING AN EXPRESS REFERENCE TO THIS WARRANTY AND LIMITATION OF DAMAGES, SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OR GUARANTY, INCLUDING ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY AND NO AGENT OF SELLER IS AUTHORIZED TO DO SO. To the extent permitted by state law, the Seller's liability for any breach of warranty shall not exceed the purchase price of the material as to which a claim is made.

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