

73049-58

07/02/2001

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ReTain®

PLANT GROWTH REGULATOR FOR CALIFORNIA
SOLUBLE POWDER
FOR USE ON APPLES AND PEARS IN THE STATE OF CALIFORNIA ONLY

Active Ingredient:

[S]-trans-2-Amino-4-(2-aminoethoxy)-3-butenoic acid hydrochloride15%
Other Ingredients85%
Total100%

EPA No. 73049-58

EPA Est. No. 33967-NJ-1

Valent BioSciences Corporation
870 Technology Way
Libertyville, IL 60048

Net Weight: 0.73 pounds (333 grams)

ACCEPTED
JUL 02 2001
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 73049-58

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

FIRST AID	
If inhaled	--Move person to fresh air. --If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. --Call a poison control center or doctor for further treatment advice.
If on skin or clothing	--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.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-892-0099 (24 hours) for emergency medical treatment and/or transport emergency information. For all other information, call 1-800-6-Valent.	

PLEASE SEE ATTACHED APPLICATION GUIDE FOR COMPLETE PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to Supplemental Labeling entitled AGRICULTURAL USE REQUIREMENTS in the DIRECTIONS FOR USE section of the labeling for information about this standard

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APPLICATION GUIDE

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KEEP OUT OF REACH OF CHILDREN CAUTION

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if inhaled. Avoid breathing spray mist. Remove contaminated clothing and wash clothing before reuse. 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 must wear:

- Long sleeved shirt and long pants
- Shoes plus socks
- Waterproof gloves

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.

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User Safety Recommendations

Users 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.
- 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 when cleaning equipment or disposing of equipment washwaters.

This product is moderately toxic to avian species and exposure to birds should be avoided.

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.

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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 in this labeling about Personal Protective Equipment (PPE), and restricted-entry interval. 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 12 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, or water, is:

- Coveralls
- Waterproof gloves
- Shoes plus socks

STORAGE AND DISPOSAL

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

Pesticide Storage: Store product in a cool and dry place. Avoid extended storage conditions at temperatures above 25°C (77°F).

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: Dispose of empty outer foil bag in trash.

GENERAL INFORMATION

IMPORTANT: Before application, read all use directions thoroughly. Use ReTain® only as

directed.

ReTain® contains 15% (wt/wt) [S]-trans-2-amino-4-(2-aminoethoxy)-3-butenoic acid hydrochloride, also known as aminoethoxyvinylglycine (AVG). AVG is an extremely potent plant growth regulator that is produced by fermentation. AVG inhibits the endogenous production of ethylene in plant tissues. Ethylene affects plant processes such as fruit maturation, ripening, and abscission.

For apple growers, ReTain® may delay fruit maturity, which can allow for a delayed harvest period of 7 to 10 days. Depending on orchard conditions and grower objectives, one or more of the following benefits may be associated with this harvest delay: improved harvest management, reduction of preharvest fruit drop, natural enhancement in color and size, maintenance of fruit firmness, improved fruit quality (e.g., reduced incidence and/or severity of watercore), and enhanced storage potential.

For pear growers, ReTain® may help maintain fruit firmness for 7- 10 days.

Product efficacy requires that fruits and foliage receive uniform spray coverage or else the desired result may not occur. Consult your local Valent Agricultural Specialist (1-800-6-Valent) for specific information on the best use recommendations for your particular orchard(s).

APPLICATION INSTRUCTIONS

Do not apply this product through any type of irrigation system.

Crops

ReTain® is for use on apples and pears.

Use Rate

Use one pouch (0.73 lb=333 grams) of ReTain® per acre. Each pouch contains 50 grams of AVG.

NOTE: ReTain® comes in a water soluble bag packaged inside a metallized polyester pouch. Once the pouch is opened, the entire contents of the bag must be used.

NOTE: Use of the full label rate is highly recommended in order to obtain the maximum benefit(s) of ReTain®. Use of lower rates may result in inconsistent and /or less than desired product performance.

Timing of Application

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ReTain® is to be applied only after fruit set has occurred.

Apply ReTain® four weeks prior to the anticipated *beginning of the normal harvest period* for the current season. The normal harvest period for a particular orchard block refers to that time when fruits not treated with ReTain® would be harvested for long term storage. To help determine the *beginning of the normal harvest period*, refer to historical trends for harvest dates and the "days from full bloom to harvest" interval for each cultivar in your area. Consult your local tree fruit specialist or Valent Agricultural Specialist for more information.

Application of ReTain® four weeks prior to the anticipated *beginning of the normal harvest period* (i.e., first pick) provides optimum response. Applications made either too early or too late can significantly reduce efficacy of the product (e.g., less preharvest drop control).

NOTE: Because the proper timing of ReTain® application is particularly important to product performance, serious consideration should be given, on a block-by-block basis, to any site conditions (e.g., elevation, sun exposure, soil texture), growing condition(s) (e.g., prevailing or anticipated weather patterns, such as high temperature or drought conditions, nutrient levels) or production practice(s) (e.g., crop load, pruning severity) that could accelerate or delay fruit maturation during the course of the season.

Spray Volume

Apply ReTain® in a sufficient amount of water to ensure thorough, but not excessive, coverage. Use calibrated spray equipment to ensure uniform coverage of leaves and fruit. Adjust water volumes based on tree size and spacing. In many cases, 100 gallons per acre or 2x Tree Row Volume-dilute have been shown to be effective. Excessive spray application volumes that result in spray runoff will reduce product performance.

Discard any unused spray material at the end of each day. Prepare spray solution by mixing the required amount of product with water in a clean, empty spray tank.

Use of Adjuvants

ReTain® must be used with Break-Thru®, RNA Si 100, Silwet L-77®, or Sylgard® 309, organosilicone surfactant in order to obtain the optimum response. Use a final surfactant concentration of 0.05 to 0.1% (v/v) in the spray tank. When high temperature (in excess of 90°F) weather conditions prevail or are anticipated, the 0.05% (v/v) concentration is recommended. Do not use a surfactant concentration greater than 0.1% (v/v). To reduce foaming, add the surfactant last. Avoid vigorous agitation which may lead to excessive foaming. Compatibility and performance data for ReTain® with defoam and antifoam products are not available.

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Special Considerations

For best results, apply ReTain® under slow drying conditions, e.g. early in the morning, late in the afternoon, or at night, in order to ensure adequate absorption. Also, maintain solution pH between 6 and 8.

Important

Do not apply ReTain® to trees under stress (e.g. heat, water, disease, insect).

Injured or stressed fruits (due to heat stress, sunburn, disease or insect damage, poor nutrient content, etc.) may not respond to ReTain®. Product benefits may not be observed with these fruits.

Do not use overhead cooling or irrigation equipment for at least 8 hours following ReTain® application.

Do not apply ReTain® if rain is expected within 8 hours of application.

Combination effects and potential interactions between ReTain® and naphthaleneacetic acid (NAA) or ethephon products have not been thoroughly evaluated. Use of these products on ReTain®-treated blocks may significantly negate or reduce the benefit profile of ReTain® at harvest or in storage.

ReTain® has a 21 day preharvest interval (PHI).

Compatibility With Other Agricultural Products

Do not tank-mix ReTain® with agricultural products other than Biobit®, DiPel®, or XenTari® biological insecticides, or Break-Thru®, RNA Si 100, Silwet L-77®, or Sylgard® 309 organosilicone surfactants. Compatibility and performance data for ReTain® with other agricultural products are not available.

NOTICE TO USER

Seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning

the use of this product other than as indicated on the label. User assumes all risks of use, storage or handling not in strict accordance with accompanying directions.

Break-Thru® is a registered trademark of Goldschmidt Chemical Corporation.

RNA Si 100 is a product of RNA Corporation.

Silwet L-77® is a registered trademark of Crompton Corporation

Sylgard® 309 is a registered trademark of Dow Corning Corporation.

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