

10/22/2007

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DP - 1155

DP 343578 1155

Maria P. Herrero
Valent BioSciences Corporation
870 Technology Way
Libertyville, IL 60048

Re: EPA Reg. Nos. 73049-45 and 73049-58
ReTain® Plant Growth Regulator Soluble Powder
Aviglycine HCl (AVG)
Label Amendments to Add a New Crop (Pineapple) and a New Cucumber Use
Correspondence of August 3, 2007 and October 17, 2007 (e-mail)

Dear Ms. Herrero:

On August 3, 2007, you submitted a request to amend the labels of the cited pesticide products by adding a new cucumber use. You also requested that the label of EPA Reg. No. 73049-45 be further revised to add a new crop, pineapple. On October 17, 2007, your office also submitted for review a supplemental label, limited to the pineapple use in the State of Hawaii. To support the proposed new cucumber use (for the production of hybrid seed from gynoecious pollinator lines), you provided information to illustrate its similarity to the existing cucumber use (for the production of gynoecious inbred seed). In support of the request to add the new crop, two data volumes were submitted and were assigned Master Record Identification (MRID) Numbers 471990-02 and 472121-01. I note that in accordance with the Agency's letter of July 19, 2007 (L. A. Hollis to M. P. Herrero), no Pesticide Petition or Notice of Filing were required in association with the request to add the new crop, pineapple, to the label of EPA Reg. No. 73049-45.

The Biopesticides and Pollution Prevention Division has concluded its review of the supporting data and information, and our findings are summarized below. For additional details, please consult the enclosed memorandum (K. R. Carlson to D. Greenway; September 24, 2007).

New Use, Cucumber

The proposed new use for cucumber is acceptable. It is unlikely that this use for the production of hybrid cucumber seed will result in residues of AVG in either food or feed. This new cucumber use of AVG meets the criteria for inclusion under 40 CFR 180.2020 (non-food determinations).

CONCURRENCES

		CONCURRENCES					
SYMBOL	▶ <i>New Crop, Pineapple</i>			7511P	7511P	7511P	
SURNAME	▶ Occupational Exposure and Risk, MRID 471990-02			Greenway	Carlson	Peters	
DATE	▶ Supplementary			10/17/07	10/17/07	10/19/07	

Pineapple Production Methods, MRID 472121-01
Supplementary

Although the two subject data volumes have been designated as supplementary, the addition of the new crop pineapple to the label of EPA Reg. No. 73049-45 is acceptable, based upon a previously conducted assessment (K. R. Carlson to D. Greenway; February 28, 2007). Furthermore, this use of AVG on pineapple has been determined to meet the criteria for inclusion under 40 CFR 180.2020 (non-food determinations).

The labels referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, are acceptable provided that you:

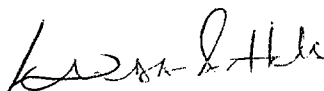
1. Submit and/or cite all data required for registration/reregistration of your products under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. Submit three (3) copies of your final printed labeling before you release the products for shipment. Final printed labeling means the label or labeling of the products when distributed or sold. Refer to the A-79 enclosure for a further description of final printed labeling. Clearly legible reproductions or photo reductions will be accepted for unusual labels, such as those silk-screened directly onto containers or large bags, or drum labels.

If these conditions are not complied with, the registrations will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the products bearing the amended labeling constitutes acceptance of these conditions.

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

If you have additional questions regarding your application or this review, please contact me or Denise Greenway (greenway.denise@epa.gov or (703) 308-8263).

Sincerely,



Linda A. Hollis, Chief
Biochemical Pesticides Branch
Biopesticides and Pollution
Prevention Division (7511P)

Enclosures (5)

DGreenway/308-8263/10-17-07/73049AVGaddnewcukepineapple/AVG

Master Label

ReTain®

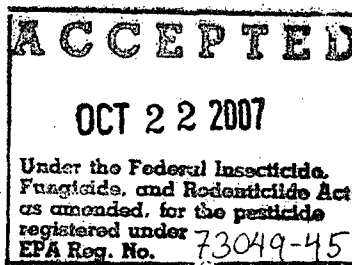
**PLANT GROWTH REGULATOR
SOLUBLE POWDER
FOR USE ON APPLE, PEAR, STONE FRUIT (EXCEPT CHERRY),
WALNUT, PECAN, CUCUMBER (SEED PRODUCTION ONLY)
AND PINEAPPLE.**

Active Ingredient:

[S]- <i>trans</i> -2-Amino-4-(2-aminoethoxy)-3-butenic acid hydrochloride	15%
Other Ingredients	85%
Total	100%

EPA Reg. No. 73049-45
EPA Est. No. 33967-NJ-1

Registrant:
Valent BioSciences Corporation
870 Technology Way
Libertyville, IL 60048
1-800-6-VALENT



Net Weight: 11.7 oz (333 grams)

One pouch will treat up to one half acre of listed nut crops at the maximum use rate.
For pineapple please see Table 1 to determine the number of ReTain pouches needed per acre based on rate and water volume.

**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

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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. Refer to Supplemental Labeling under "AGRICULTURAL USE REQUIREMENTS" in the DIRECTIONS FOR USE section for information about this standard

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APPLICATION GUIDE

ReTain®

**PLANT GROWTH REGULATOR
SOLUBLE POWDER
FOR USE ON APPLE, PEAR, STONE FRUIT (EXCEPT CHERRY),
WALNUT, PECAN, CUCUMBER (SEED PRODUCTION ONLY)
AND PINEAPPLE**

Active Ingredient:

[S]- <i>trans</i> -2-Amino-4-(2-aminoethoxy)-3-butenoic acid hydrochloride	15%
Other Ingredients	85%
Total	100%

EPA Reg. No. 73049-45
EPA Est. No. 33967-NJ-1

Registrant:
Valent BioSciences Corporation
870 Technology Way
Libertyville, IL 60048
1-800-6-VALENT

Net Weight: 11.7 oz. (333 grams)

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

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

CAUTION

Harmful if inhaled or absorbed through skin. Avoid breathing spray mist. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

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

Hand-wand applicators must wear dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with N,R, P or HE filter when applying this product.

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.

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 disposing of equipment washwater or rinsate.

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 State/Tribal 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 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

GENERAL INFORMATION FOR USE

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, commonly known as aminoethoxyvinylglycine, aviglycine HCl, or AVG. AVG is a potent plant growth regulator produced by fermentation. AVG inhibits the production of ethylene in plant tissues. Ethylene affects plant processes such as flower development, fruit set, fruit maturation, fruit ripening, and fruit abscission.

GENERAL APPLICATION INSTRUCTIONS

- Do not apply this product through any type of irrigation system.
- ReTain[®] is packaged in a water-soluble bag sealed inside a metallized polyester pouch. Each water-soluble bag contains 11.7 oz (333 grams) of ReTain[®]. Once the outer pouch is opened, the entire water-soluble bag must be used.
- Because the proper timing of ReTain[®] application is particularly important to product performance, serious consideration is to 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, drought or flood conditions, nutrient levels) or production practices (e.g., crop load, pruning severity) that could impact flowering, fruit set, or fruit maturation during the course of the season.
- Apply ReTain[®] in a sufficient amount of water to ensure good coverage of the tree or crop canopy. Product efficacy requires that flowers, fruits, and foliage receive thorough spray coverage. Use calibrated spray equipment to ensure uniform coverage of flowers, fruit, and foliage. Adjust water volumes based on plant size and spacing. Excessive spray application volumes that result in spray runoff will reduce product performance.
- Prepare spray solution by mixing the required amount of product with water in a clean, empty spray tank. Dispose of any unused spray material at the end of each day
- Avoid applications during the heat of the day. For best results, apply ReTain[®] under slow drying conditions, e.g. early in the morning or at night, in order to maximize absorption.
- Maintain solution pH between 6 and 8.
- Do not apply ReTain[®] to plants or fruit under stress (e.g. heat, water, disease, insect). Injured or stressed plants or fruits may not respond to ReTain[®].
- 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.

COMPATIBILITY WITH OTHER AGRICULTURAL PRODUCTS

ReTain[®] can be tank-mixed with DiPel[®], Biobit[®], and Xentari[®] biological insecticides. Compatibility and performance data for ReTain[®] with other agricultural products are not available.

APPLE AND PEAR

CROP	OBJECTIVE / BENEFIT:	APPLICATION TIMING/ USE INSTRUCTIONS
<p>Apple</p>	<p>Depending on cultivar, orchard conditions, application timing, and grower objectives, one or more of the following benefits will be associated with ReTain®</p> <ul style="list-style-type: none"> • delayed fruit maturity • improved harvest management • reduced preharvest fruit drop • additional time for increase in fruit size • additional time for color development • maintenance of fruit firmness • improved fruit quality (e.g., reduced incidence and/or severity of watercore and stem bowl cracking) • enhanced storage potential <p>Consult your local Valent USA Agricultural Specialist (1-800-6-Valent) for specific information on the best use practices for your particular orchard(s).</p>	<p>Single Pick Harvest: Apply one pouch of ReTain® per acre four weeks prior to the anticipated <i>beginning of the normal harvest period of untreated fruit</i> for the current season. ReTain® applied four weeks before harvest will delay the harvest period up to 7 to 10 days. Applications made either too early or too late will significantly reduce the efficacy of the product for one or more of the possible benefits.</p> <p>Multiple Pick Harvest: To improve the fruit quality and storage potential of later picked apples (2nd, 3rd, 4th picks) apply one pouch of ReTain® per acre, one to two weeks prior to the anticipated <i>beginning of the normal harvest period of untreated fruit</i> for the current season. ReTain® applied one to two weeks before harvest typically will not delay the start of the harvest (1st pick), but will help control the maturation rate of the later picks.</p>
<p>Pear</p>	<p>ReTain® will offer one or more of the same benefits as listed for apples, depending on the cultivar, growing conditions, and grower objectives. Consult your local Valent USA Agricultural Specialist (1-800-6-Valent) for specific information on the best use practices for your particular orchard(s).</p>	<p>Apply one pouch of ReTain® per acre one to two weeks prior to the anticipated <i>beginning of the normal harvest period of untreated fruit</i> for the current season.</p>
<p>Water Volume: ReTain® efficacy requires that fruit and foliage receive thorough spray coverage. To ensure thorough coverage adjust water volumes based on tree size and spacing and use calibrated spray equipment (i.e. orchard air blast sprayer). Excessive spray application volumes that result in spray runoff will reduce product performance. In most cases, 100 gallons per acre has been shown to be effective.</p>		
<p>Adjuvants: For optimal response, use ReTain® with Break-Thru®, RNA Si 100, Silwet L-77®, or Sylgard® 309 organosilicone surfactant. Use a final surfactant concentration of 0.05 to 0.1% (v/v) in the spray tank. To prevent possible spotting, use the 0.05% (v/v) concentration when high temperature (in excess of 86°F) weather conditions prevail or are anticipated. Do not use a surfactant concentration greater than 0.1% (v/v). To reduce foaming, add the adjuvant last and minimize agitation.</p>		

Harvest: 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.

Additional Notes:

- ReTain[®] is to be applied only after fruit set has occurred.
- 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 apple and pear trees can partially negate the benefits of ReTain[®].
- If using reflective films or foil mulch, apply ReTain[®] first and then lay down the reflective film or foil mulch under the ReTain[®]-treated apple trees.
- ReTain[®] has a 7 day preharvest interval (PHI) for Apple and Pear.

• **STONE FRUIT (EXCEPT CHERRY)**

CROP	OBJECTIVE / BENEFIT	APPLICATION TIMING/ USE INSTRUCTIONS
<p>Peach Nectarine</p>	<p>Depending on cultivar, orchard conditions, and grower objectives, one or more of the following benefits will be associated with ReTain[®]:</p> <ul style="list-style-type: none"> • improved harvest management • additional time for increase in fruit size • maintenance of fruit firmness • reduced preharvest fruit drop • improved fruit quality • enhanced storage potential. <p>Consult your local Valent USA Agricultural Specialist (1-800-6-Valent) for additional specific information.</p>	<p>Apply one pouch of ReTain[®] per acre one to two weeks prior to the anticipated <i>beginning of the normal harvest period of untreated fruit</i> for the current season.</p>
<p>Plum Prune Apricot</p>	<p>ReTain[®] will offer one or more of the same benefits as listed for peach and nectarine, depending on the cultivar, growing conditions, and grower objectives. For these crops and interspecific variations of these crops, such as Plumcot, Pluot[®], & Aprium[®], consult your local Valent USA Agricultural Specialist (1-800-6-Valent) for additional specific information.</p>	<p>Apply one pouch of ReTain[®] per acre one to two weeks prior to the anticipated <i>beginning of the normal harvest period of untreated fruit</i> for the current season.</p>

Water Volume: ReTain[®] efficacy requires that fruit and foliage receive thorough spray coverage. To ensure thorough coverage adjust water volumes based on tree size and spacing and use calibrated spray equipment (i.e. orchard air blast sprayer). Excessive spray application volumes that result in spray runoff will reduce product performance. In most cases, 100 gallons per acre has been shown to be effective.

Use of Adjuvants: If improved wetting and coverage of stone fruit (except cherry) is desired, use an organosilicone adjuvant such as Break-Thru[®], Silwet L-77[®], or Sylgard[®] 309 at a final surfactant concentration in the spray tank of up to 0.1% v/v. Do not use a concentration higher than 0.1% v/v. If a non-organosilicone adjuvant is preferred, use Regulaid[®] or NuFilm-P[®] at the rates indicated on the manufacturers' label. To reduce foaming, add the adjuvant last and minimize agitation.

Harvest: The normal harvest period for a particular orchard block refers to that time when fruits not treated with ReTain[®] would be harvested. 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, and closely monitor the fruit maturity development for the current season.

Additional Notes:

- ReTain[®] is to be applied only after fruit set has occurred.
- ReTain[®] has a 7 day preharvest interval (PHI) for Stone Fruit (except cherry).

NUT CROPS

CROP	OBJECTIVE / BENEFIT	APPLICATION TIMING/ USE INSTRUCTIONS
Walnut	Increased nut set in cultivars affected by pistillate flower abortion (PFA). Consult your local walnut tree specialist or Valent USA Agricultural Specialist (1-800-6-Valent) for more information.	Apply one to two pouches* of ReTain [®] per acre, as a single application, to trees when most pistillate flowers are receptive to pollination. In most cases, ReTain [®] applications at 5 to 30 percent pistillate flower bloom have been shown to be effective. Applications made either too early (pre-bloom) or too late (full bloom or later) will significantly reduce efficacy of the treatment.
Pecan	To increase nut set in cultivars that experience low set in some years. Consult your local pecan tree specialist or Valent USA Agricultural Specialist (1-800-6-Valent) for more information.	Apply one to two pouches* of ReTain [®] per acre, as a single application during bloom time. Applications made either too early (pre-bloom) or too late (after full bloom) will reduce the efficacy of the treatment.
<p>Water Volume: ReTain[®] efficacy requires that flower buds and flowers receive thorough spray coverage. To ensure thorough coverage use calibrated spray equipment (i.e. air blast sprayer) and adjust water volumes based on tree size and spacing. Use sufficient water volume to achieve good coverage without excessive runoff. In most cases, 100 to 200 gallons spray volume per acre has been shown to be effective.</p>		
<p>Use of Adjuvants: Use of adjuvants with ReTain[®] for bloom applications has not been fully researched. Some adjuvants will cause a bloom thinning effect and will reduce the benefits of ReTain[®].</p>		
<p>*Rate: Use higher rates on cultivars/orchards that have experienced high incidences of poor nut set.</p>		

CUCUMBER (SEED PRODUCTION ONLY)

CUCUMBER (FOR GYNOECIOUS INBRED SEED PRODUCTION OR HYBRID SEED PRODUCTION WITH GYNOECIOUS POLLINATOR)

CROP	OBJECTIVE / BENEFIT	APPLICATION TIMING/ USE INSTRUCTIONS
<p>Cucumber (<i>Cucumis sativus</i>) Gynoecious inbred breeding lines.</p>	<p>Promotion of staminate (male) flowers in gynoecious (female flowering) cucumber-breeding lines for the purpose of producing inbred and hybrid cucumber seed.</p>	<p>Apply ReTain® directly to gynoecious plants to be converted. Make one to four applications of 250 ppm to 500 ppm active ingredient (a.i.) beginning at early first leaf stage through tenth leaf stage. Use the appropriate skip row technique to achieve desired sex ratio of plants.</p>
<p>Water Volume: Apply ReTain in a sufficient amount of water to ensure good coverage. In most cases, 27 to 54 gallons per treated acre will be sufficient. One pouch of ReTain in 27 gallons of spray solution will provide 500 ppm a.i. One 11.7 oz. (333 g) pouch of ReTain in 54 gallons of spray solution will provide 250 ppm a.i. The application rate and frequency of application will depend on the sensitivity of the individual inbred line to ReTain. Transient leaf yellowing will occur at high rates. If unacceptable leaf yellowing is noted, use lower concentrations in subsequent applications.</p>		
<p>Use of Adjuvants: Use of an adjuvant is not optimum. Addition of an adjuvant to ReTain increases the likelihood of leaf yellowing in young cucumber plants.</p>		
<p>Additional Note: Do not reapply ReTain within 24-hours of application. Do not apply more than two pouches of ReTain (666 g product) per acre per season. Use of ReTain on cucumber is for gynoecious breeding line and hybrid seed production only. Do not apply directly to, or allow spray to drift to cucumber crops grown for fresh or processed markets. Fruit from plants treated with ReTain is not to be used for human or animal consumption. Consult your local vegetable specialist or Valent USA Agricultural Specialist (1-800-6-VALENT) for more information.</p>		

PINEAPPLE

CROP	OBJECTIVE / BENEFIT:	APPLICATION TIMING/ USE INSTRUCTIONS
<p>Pineapple</p>	<p>Reduce the incidence of natural induction of flowering in pineapple (NI), also known as Naturally Differentiated Flowering (NDF).</p> <p>Reduction of NDF allows for artificial induction of flowers (forcing) at the appropriate plant maturity to give more uniform flowering and consequently more uniform fruit maturity. This has been shown to result in:</p> <ul style="list-style-type: none"> • larger and more uniform fruit size, and • a more concentrated harvest period. <p>Consult your local Valent USA Agricultural Specialist (800-6-VALENT) for specific information on the best use practices.</p>	<p>Apply ReTain[®] directly to foliage of pre-flowering pineapple plants using 50 to 200 ppm AVG active ingredient (a.i.) For best results, make the first application of ReTain[®] 7 days prior to the first anticipated occurrence of conditions that favor NDF. Make subsequent applications at 7-14 day intervals when conditions favor NDF. Make up to 10 applications per growing cycle. Use higher rates on cultivars/plantations that experience high incidences of NDF.</p> <p>See Table 1 for determination of ReTain[®] application rates.</p> <p>Conditions that favor NDF in pineapple are:</p> <ul style="list-style-type: none"> • cool temperatures (< 68°F); • short photoperiod (< 12 hr); • when pre-flowering plants weigh more than 3.1 lbs. <p>Make the last application of ReTain[®] per growing cycle prior to artificial induction of flowers (forcing).</p>
<p>Water Volume: ReTain[®] efficacy requires that pineapple plants receive thorough spray coverage. Insufficient spray application volumes or uneven application patterns will reduce product performance. In most cases, a spray volume of 90 to 300 gallons per acre, has been shown to be effective.</p>		
<p>Adjuvants: For optimal response, use ReTain[®] with Break-Thru[®], RNA Si 100, Silwet L-77[®], or Sylgard[®] 309 organosilicone surfactants. Use a final surfactant concentration of 0.05 - 0.1% (v/v). To reduce foaming, add the adjuvant last and minimize agitation.</p>		
<p>Additional Notes:</p> <ul style="list-style-type: none"> • Apply ReTain[®] to pineapple plants prior to flowering. Do not allow spray to drift onto pineapple plants that are in bloom or have fruit. • Combination effects and potential interactions between ReTain[®] and other agrochemical products have not been thoroughly tested. Tank-mixing ReTain[®] with other agrochemical products may reduce the efficacy of ReTain[®]. • Leaf discoloration can occur in some cultivars at high use rates and shorter application intervals. If unacceptable leaf discoloration is noted, reduce concentration of a.i. in subsequent applications. 		

Table 1 – Parts per Million (ppm) of AVG in Spray Tank at Varying Spray Volumes and Numbers of ReTain® Pouches per Acre

Number of ReTain pouches/A	AVG Parts per Million (ppm) at Specified Gallons per Acre (gpa)					
	90 gpa	100 gpa	150 gpa	200 gpa	250 gpa	300 gpa
1	147 ppm	132 ppm	88 ppm	66.0 ppm	53 ppm	
2			176 ppm	132 ppm	106 ppm	88 ppm
3				198 ppm	159 ppm	132 ppm
4						176 ppm

Each 11.7 oz (333 grams) Pouch/Water soluble bag of ReTain® contains 1.76 ounces (50 grams) of AVG active ingredient (a.i.)

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.

NOTICE TO USER

Warranty and Disclaimer Statement:

To the fullest extent permitted by law, 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. To the fullest extent permitted by law, 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 Momentive Performance Materials
- Sylgard® 309 is a registered trademark of Dow Corning Corporation.
- Biobit®, DiPel® and XenTari® are registered trademarks of Valent BioSciences Corporation.
- NuFilm-P® is a registered trademark of Miller Chemical and Fertilizer Corporation.
- Regulaid® is a registered trademark of KALO, Inc.
- Aprium® and Pluot® are registered trademarks of Zaiger Genetics.

Supplemental Label



REGISTRANT:
Valent BioSciences Corporation
870 Technology Way, Suite 100
Libertyville, IL 60048
EPA Reg. No. 73049-45

ReTain®

Plant Growth Regulator
SOLUBLE POWDER
For use in Hawaii

DIRECTIONS FOR USE: It is a violation of Federal law to use this product in a manner inconsistent with its labeling. **READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.**

Please see Table 1 to determine the number of ReTain® pouches needed per acre based on rate and water volume.

PINEAPPLE

CROP	OBJECTIVE / BENEFIT	APPLICATION TIMING / USE INSTRUCTIONS
Pineapple	<p>Reduce the incidence of natural induction of flowering in pineapple (NI), also known as Naturally Differentiated Flowering (NDF).</p> <p>Reduction of NDF allows for artificial induction of flowers (forcing) at the appropriate plant maturity to give more uniform flowering and consequently more uniform fruit maturity. This has been shown to result in:</p> <ul style="list-style-type: none"> • larger and more uniform fruit size, and • a more concentrated harvest period. <p>Consult your local Valent USA Agricultural Specialist (800-6-VALENT) for specific information on the best use practices.</p>	<p>Apply ReTain directly to foliage of pre-flowering pineapple plants using 50 to 200 ppm AVG active ingredient (a.i.) For best results, make the first application of ReTain 7 days prior to the first anticipated occurrence of conditions that favor NDF. Make subsequent applications at 7-14 day intervals when conditions favor NDF. Make up to 10 applications per growing cycle. Use higher rates on cultivars/ plantations that experience high incidences of NDF.</p> <p>See Table 1 for determination of ReTain application rates.</p> <p>Conditions that favor NDF in pineapple are:</p> <ul style="list-style-type: none"> • cool temperatures (< 68°F); • short photoperiod (< 12 hr); • when pre-flowering plants weigh more than 3.1 lbs. <p>Make the last application of ReTain per growing cycle prior to artificial induction of flowers (forcing).</p>

Water Volume: ReTain efficacy requires that pineapple plants receive thorough spray coverage. Insufficient spray application volumes or uneven application patterns will reduce product performance. In most cases, a spray volume of 90 to 300 gallons per acre, has been shown to be effective.

Adjuvants: For optimal response, use ReTain with Break-Thru®, RNA Si 100, Silwet L-77®, or Sylgard® 309 organosilicone surfactants. Use a final surfactant concentration of 0.05 - 0.1% (v/v). To reduce foaming, add the adjuvant last and minimize agitation.

Additional Notes:

- Apply ReTain to pineapple plants prior to flowering. Do not allow spray to drift onto pineapple plants that are in bloom or have fruit.
- Combination effects and potential interactions between ReTain and other agrochemical products have not been thoroughly tested. Tank-mixing ReTain with other agrochemical products may reduce the efficacy of ReTain.
- Leaf discoloration can occur in some cultivars at high use rates and shorter application intervals. If unacceptable leaf discoloration is noted, reduce concentration of a.i. in subsequent applications.

ACCEPTED

OCT 22 2007

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 73049-45

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Table 1 - Parts per Million (ppm) of AVG in Spray Tank at Varying Spray Volumes and Numbers of ReTain Pouches per Acre

Number of ReTain pouches/A	AVG Parts per Million (ppm) at Specified Gallons per Acre (gpa)					
	90 gpa	100 gpa	150 gpa	200 gpa	250 gpa	300 gpa
1	147 ppm	132 ppm	88 ppm	66.0 ppm	53 ppm	
2			176 ppm	132 ppm	106 ppm	88 ppm
3				198 ppm	159 ppm	132 ppm
4						176 ppm

Each 11.7 oz (333 grams) Pouch/Water soluble bag of ReTain contains 1.76 ounces (50 grams) of AVG active ingredient (a.i.)

THIS LABELING MUST BE IN THE POSSESSION OF THE USER AT THE TIME OF APPLICATION. READ THE LABEL AFFIXED TO THE CONTAINER FOR RETAIN BEFORE APPLYING. USE OF RETAIN ACCORDING TO THIS SUPPLEMENTAL LABELING IS SUBJECT TO THE USE PRECAUTIONS AND LIMITATIONS IMPOSED BY THE LABEL AFFIXED TO THE CONTAINER FOR RETAIN.

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Registrant:

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