



United States
Environmental Protection Agency
Washington, DC 20460

Registration
 Amendment
 Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number 73049-45	2. EPA Product Manager Janet Andersen	3. Proposed Classification <input type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) ReTain Plant Growth Regulator	PM# 90	
5. Name and Address of Applicant (Include ZIP Code) Valent BioSciences Corp. 870 Technology Way Libertyville, IL 60045 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input checked="" type="checkbox"/> Final printed labels in response to Agency letter dated <u>May 5, 2004</u>
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Metal	<input type="checkbox"/> Plastic
* Certification must be submitted		If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt. No. per container	<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
				<input type="checkbox"/> Other (Specify) _____	
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/>	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled				<input type="checkbox"/> Other _____	

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Maria Pilar Herrero	Title Regulatory Affairs Manager	Telephone No. (Include Area Code) (847) 968-4725
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment, both under applicable law.		6. Date Application Received (Stamped)
2. Signature 	3. Title Regulatory Affairs Manager	
4. Typed Name Maria Pilar Herrero	5. Date June 17, 2004	



17 June 2004

US EPA
Office of Pesticide Programs, BPPD/7511C
Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202

Attn: Dr. Janet Andersen, Director
9th Floor

Subject: EPA File Symbol 73049-45
ReTain Plant Growth Regulator
Final Printed Label

Dear Dr. Andersen,

Enclosed are 5 copies of the final printed labeling for ReTain Plant Growth Regulator, soluble Powder, as per the requirement set forth in the letter granting registration dated May 5, 2004.

If any clarification is needed regarding our response, please contact me at (847) 968-4725 or maria.herrero@valent.com.

Sincerely,

Maria Pilar Herrero
Regulatory Affairs



5/5/14
Gallard

04-4698/RB

PLANT GROWTH REGULATOR

ReTain®

SOLUBLE POWDER

**FOR USE ON APPLE, PEAR AND STONE FRUIT
(EXCEPT CHERRY)**

Active Ingredient:
 (S)-trans-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

"Not for use in the state of California"

**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.

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.

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

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 cleaning equipment or disposing of equipment washwaters.

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.

(continued)

(continued)

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

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-butenic 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 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 cultivar, orchard conditions, and grower objectives, one or more of the following benefits may be associated with this delay: improved harvest management, reduction of preharvest fruit drop, increased fruit size, additional time for color development, maintenance of fruit firmness, improved fruit quality (e.g., reduced incidence and/or severity of water-core), and enhanced storage potential.

For pear growers, ReTain® will offer the same benefits as listed for apples depending on the cultivar and growing conditions. Consult your local Valent Agricultural Specialist (1-800-6-Valent) for specific information on the best use practices for your particular orchard(s).

For stone fruit growers (except cherry), depending on cultivar, orchard conditions, and grower objectives, one or more of the following benefits may be associated with ReTain®: improved harvest management, increased fruit size, maintenance of fruit firmness, reduction of preharvest fruit drop, improved fruit quality, and enhanced storage potential.

Consult your local Valent Agricultural specialist (1-800-6-Valent) for specific information on the best use practices for your particular orchard(s).

APPLICATION INSTRUCTIONS

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

ReTain® is packaged in a water soluble bag inside a metallized polyester pouch. Each water soluble bag contains 11.7 oz (333 grams) of ReTain®. Once the pouch is opened, the entire contents of the water soluble bag must be used.

Crops

ReTain® is for use on apple, pear, and stone fruit (except cherry).

Use Rate

Use one pouch (11.7 oz=333 grams) of ReTain® per acre.

NOTE: See USE OF ADJUVANTS section for the adjuvants and rates for your particular crop and situation.

NOTE: Use the label rate 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

ReTain® is to be applied only after fruit set has occurred. ReTain® has a 21-day preharvest interval (PHI) for apple and pear. ReTain® has a 7-day preharvest interval (PHI) for stone fruit (except cherries).

Pome Fruit:

Apple: Apply one pouch of ReTain® per acre 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 (1-800-6-Valent) 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 for one or more of the possible benefits.

Pear: Follow the instructions given for apple above, except apply ReTain® three to four weeks prior to the anticipated *beginning of the normal harvest period* for the current season. For additional specific information on pears, consult your local Valent Agricultural Specialist (1-800-6-Valent).

Stone fruit (except cherry):

Peach and nectarine: Apply one pouch of ReTain® per acre 7-14 days 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. 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. Consult your local tree fruit specialist or Valent Agricultural Specialist (1-800-6-Valent) for more information.

Plum, prune, apricot, and interspecific apricot and plum (such as Plumcot, Pluot®, and Aprium®): Follow the use instructions given for peach and nectarine. For these crops, consult your local Valent Agricultural Specialist (1-800-6-Valent) for additional specific information.

NOTE: 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 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 good coverage of the tree canopy. Product efficacy requires that fruits and foliage receive uniform spray coverage or else the desired result may not occur. 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.

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

Use of Adjuvants

Apple and pear: 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 90°F) weather conditions prevail or are anticipated. Do not use a surfactant concentration greater than 0.1% (v/v). To reduce foaming, add the organosilicone surfactant last and minimize agitation.

Stone fruit (except cherry): ReTain® can be applied to stone fruit with or without the addition of an adjuvant. Under some conditions, surfactants may improve ReTain® performance by facilitating good coverage and spreading. If the use of a surfactant is desired, ReTain® may be applied to stone fruit with an organosilicone surfactant 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). To reduce foaming, add the surfactant last and minimize agitation. ReTain® also may be applied to stone fruit with other non-ionic surfactants, such as Regulaid®, or with a spreader-sticker such as NuFilm-P®, using the rates indicated on the manufacturer's label.

Important Considerations

- For best results, apply ReTain® under slow drying conditions, e.g. early in the morning or at night, in order to ensure adequate absorption.
- Do not make applications during the day or early evening when fruit is still hot.
- Maintain solution pH between 6 and 8.
- 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 in damaged fruit.
- 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 reduce the benefit profile of ReTain® at harvest or in storage.
- ReTain® has a 21-day preharvest interval (PHI) for apple and pear.
- ReTain® has a 7-day preharvest interval (PHI) for stone fruit (except cherries).

Compatibility With Other Agricultural Products
ReTain® can also be tank mixed with DiPel®, Biobit®, and Xentari® biological insecticides. Compatibility and performance data for ReTain® with other agricultural products are not available.

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
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.

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.

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5/15

↑
TEAR HERE

List No. 12017-04-02

PLANT GROWTH REGULATOR

Retain®

SOLUBLE POWDER

Active Ingredient:
 [S]-trans-2-Amino-4-(2-amino-3-butenoic acid hydrochloride)..... 15%
 Other Ingredients..... 85%
 Total..... 100%

**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.
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

Keep the product container or label with you when calling a poison control center or doctor, or going to hospital for treatment. You may also contact 1-800-892-0099 (24 hours) for emergency medical treatment or transport emergency information. For all other information, call 1-800-6-Valent.

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

Part No. 73049-45
Cat. No. 33967-NJ-1

VALT BIOSCIENCES®
 CORPORATION
 870 TECHNOLOGY WAY
 LIBERTYVILLE, IL 62550

© 2004
23-0321/R7

NET WT (333 GRAMS)

FPO
 (01) 0 06 53204 16178 9

ReTain®

PLANT GROWTH REGULATOR
SOLUBLE POWDER
FOR USE ON APPLE, PEAR, & STONE FRUIT (EXCEPT CHERRY)

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

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

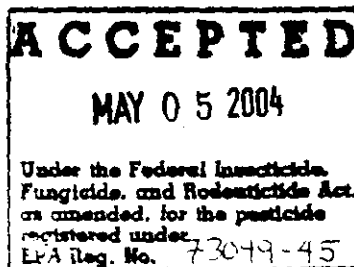
Net Weight: 11.7 oz (333 grams)

KEEP OUT OF REACH OF CHILDREN
CAUTION

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

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7/15

APPLICATION GUIDE

ReTain®

PLANT GROWTH REGULATOR
SOLUBLE POWDER
FOR USE ON APPLE, PEAR, & STONE FRUIT (EXCEPT CHERRY)

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

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

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 cleaning equipment or disposing of equipment washwaters.

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.

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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

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 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 cultivar, orchard conditions, and grower objectives, one or more of the following benefits may be associated with this delay: improved harvest management, reduction of preharvest fruit drop, increased fruit size, additional time for color development, maintenance of fruit firmness, improved fruit quality (e.g., reduced incidence and/or severity of watercore), and enhanced storage potential.

For pear growers, ReTain[®] will offer the same benefits as listed for apples, depending on the cultivar and growing conditions. Consult your local Valent Agricultural Specialist (1-800-6-Valent) for specific information on the best use practices for your particular orchard(s).

For stone fruit growers (except cherry), depending on cultivar, orchard conditions, and grower objectives, one or more of the following benefits may be associated with ReTain[®]: improved harvest management, increased fruit size, maintenance of fruit firmness, reduction of preharvest fruit drop, improved fruit quality, and enhanced storage potential.

Consult your local Valent Agricultural Specialist (1-800-6-Valent) for specific information on the best use practices for your particular orchard(s).

APPLICATION INSTRUCTIONS

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

ReTain® is packaged in a water soluble bag inside a metallized polyester pouch. Each water soluble bag contains 11.7 oz (333 grams) of ReTain®. Once the pouch is opened, the entire contents of the water soluble bag must be used.

Crops

ReTain® is for use on apple, pear, and stone fruit (except cherry).

Use Rate

Use one pouch (11.7 oz =333 grams) of ReTain® per acre.

NOTE: See USE OF ADJUVANTS section for the adjuvants and rates for your particular crop and situation.

NOTE: Use the label rate 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

ReTain® is to be applied only after fruit set has occurred. ReTain® has a 21 day preharvest interval (PHI) for Apple & Pear. ReTain® has a 7 day preharvest interval (PHI) for Stone Fruit (except cherries).

Pome Fruit:

Apple: Apply one pouch of ReTain® per acre, 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 (1-800-6-Valent) 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 for one or more of the possible benefits.

Pear: Follow the instructions given for apple above, except apply ReTain® three to four weeks prior to the anticipated *beginning of the normal harvest period* for the current season. For additional specific information on pears, consult your local Valent Agricultural Specialist (1-800-6- Valent) .

Stone Fruit (except cherry):Peach & Nectarine: Apply one pouch of ReTain® per acre 7-14 days 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. 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. Consult your local tree fruit specialist or Valent Agricultural Specialist (1-800-6-Valent) for more information.

Plum, Prune, Apricot, and Interspecific Apricot and Plum (such as Plumcot, Pluot®, & Aprium®): Follow the use instructions given for peach and nectarine. For these crops, consult your local Valent Agricultural Specialist (1-800-6-Valent) for additional specific information.

NOTE: 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 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 good coverage of the tree canopy. Product efficacy requires that fruits and foliage receive uniform spray coverage or else the desired result may not occur. 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.

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

Use of Adjuvants

Apple & Pear: 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 90°F) weather conditions prevail or are anticipated. Do not use a surfactant concentration greater than 0.1% (v/v). To reduce foaming, add the organosilicone surfactant last and minimize agitation.

Stone Fruit (except cherry): ReTain[®] can be applied to stone fruit with or without the addition of an adjuvant. Under some conditions, surfactants may improve ReTain[®] performance by facilitating good coverage and spreading. If the use of a surfactant is desired, ReTain[®] may be applied to stone fruit with an organosilicone surfactant 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. To reduce foaming, add the surfactant last and minimize agitation. ReTain[®] also may be applied to stone fruit with other non-ionic surfactants, such as Regulaid[®], or with a spreader-sticker such as NuFilm-P[®], using the rates indicated on the manufacturers' label.

Important Considerations

- For best results, apply ReTain[®] under slow drying conditions, e.g. early in the morning or at night, in order to ensure adequate absorption.
- Do not make applications during the day or early evening when fruit is still hot.
- Maintain solution pH between 6 and 8.
- 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 in damaged fruit.
- 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 reduce the benefit profile of ReTain[®] at harvest or in storage.

- ReTain[®] has a 21 day preharvest interval (PHI) for Apple & Pear.
- ReTain[®] has a 7 day preharvest interval (PHI) for Stone Fruit (except cherries).

Compatibility With Other Agricultural Products

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

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

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.

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