

73049-468

7/19/2010

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

1/11

Thomas Bade, Ph.D.  
Valent BioSciences Corp.  
870 Technology Way  
Libertyville, IL 60048

JUL 19 2010

Dear Dr. Bade:

Subject: Label Amendment to amend directions for use on pineapple  
VBC-30102  
EPA Reg. No.: 73049-468  
Your submission dated June 1, 2010  
Decision Number: 434818

The amendment referred to above submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, has been received and reviewed, and the amendment is acceptable provided that you submit and/or cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions. Please submit three (3) copies of your final printed labeling prior to shipment of your product. Should you have any questions, you may contact Mr. Colin Walsh directly at (703) 308-0298 or via email at [walsh.colin@epa.gov](mailto:walsh.colin@epa.gov).

Sincerely,

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

CONCURRENCES

SYMBOL	7511P	7511P					
SURNAME	Walsh	COLF					
DATE	7/19/10	7/13/10					

VBC-30102™  
PLANT GROWTH REGULATOR  
LIQUID CONCENTRATE

ACTIVE INGREDIENT:

[S]- <i>trans</i> -2-Amino-4-(2-aminoethoxy)-3-butenoic acid hydrochloride .....	20.0%
OTHER INGREDIENTS.....	80.0%
TOTAL.....	100.0%

EPA Reg. No. 73049-468  
EPA Est. 33762-IA-001

Registrant:  
Valent BioSciences Corporation  
870 Technology Way  
Libertyville, IL 60048

Lot No.

Net Weight: 1.67 lb / gallon

**ACCEPTED**  
JUL 19 2010

Under the Federal Insecticide, Fungicide,  
and Rodenticide Act, as amended, for  
the pesticide registered under  
EPA Reg. No. 73049-468

One bottle will treat up to 7.6 acres of nut crops at the maximum use rate.  
One bottle will treat up to 7.4 acres of cucumber crops at the maximum use rate.  
One bottle will treat up to 3.3 acres of pineapple crops at the maximum use rate.

**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**

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

**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.

<b>FIRST AID</b>	
<b>If inhaled</b>	--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.
<b>If on skin or clothing</b>	--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.
<b>HOT LINE NUMBER</b>	
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.	

**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

## 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

For terrestrial uses: 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 or 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 VBC-30102™ only as directed.

VBC-30102™ contains 20% (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 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.
- Because the proper timing of VBC-30102™ 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 VBC-30102™ 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 VBC-30102™ 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 VBC-30102™ to plants under stress (e.g. heat, water, disease, insect). Injured or stressed plants may not respond to VBC-30102™.
- Do not use overhead cooling or irrigation equipment for at least 8 hours following VBC-30102™ application.
- Do not apply VBC-30102™ if rain is expected within 8 hours of application.

**COMPATIBILITY WITH OTHER AGRICULTURAL PRODUCTS**

VBC-30102™ can be tank-mixed with DiPel®, Biobit®, and Xentari® biological insecticides. Compatibility and performance data for VBC-30102™ with other agricultural products are not available.

## PINEAPPLE

CROP	OBJECTIVE / BENEFIT:	APPLICATION TIMING/ USE INSTRUCTIONS
<p><b>Pineapple</b></p>	<p>Reduce the incidence of Natural Induction (NI) of flowering in pineapple, 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.</p> <p>Consult your local Valent BioSciences Corporation Specialist for specific information on the best use practices.</p>	<p>Apply 1 pint of VBC-30102™ (95 grams AVG active ingredient) per acre directing the spray pattern toward the apex of the stem (plant core) of pre-flowering pineapples.</p> <p>Make the first application of VBC-30102™ 7 days prior to the first anticipated occurrence of conditions that favor NDF. Make subsequent applications at 7 day intervals when conditions favor NDF.</p> <p>Apply no more than 23 pints of VBC-30102™ (2200 grams AVG active ingredient) per acre per crop of pineapples.</p> <p>Conditions that favor NDF in pineapple include:</p> <ul style="list-style-type: none"> <li>• cool temperatures (&lt; 68 °F);</li> <li>• short photoperiod (&lt; 12 hr);</li> <li>• prolonged overcast and rainy weather</li> <li>• pre-flowering plant weights greater than 3.0 kg.</li> </ul> <p>Make the last application of VBC-30102™ per growing cycle prior to artificial induction of flowers (forcing).</p>
<p><b>Water Volume:</b> VBC-30102™ efficacy requires that the plant core receive thorough spray coverage. Insufficient spray application volumes or uneven application patterns will reduce product performance. Spray volumes of 125 to 250 gallons per acre have been shown to be effective.</p>		
<p><b>Adjuvants:</b> VBC-30102™ may be used with Break-Thru®, RNA Si 100, Silwet L-77®, or Sylgard® 309 organosilicone surfactants at a final surfactant concentration of 0.05 - 0.1% (v/v). To reduce foaming, add the adjuvant last and minimize agitation.</p>		
<p><b>IMPORTANT:</b></p> <ul style="list-style-type: none"> <li>• Apply VBC-30102™ to pineapple plants only prior to initiation of flowering. Applying VBC-30102™ to pineapples that have undergone NDF may result in malformed fruit that must be culled.             <ul style="list-style-type: none"> <li>○ Do not spray onto pineapple plants that are in bloom or have fruit.</li> <li>○ Do not allow spray to drift onto pineapple plants that are in bloom or have fruit.</li> <li>○ Do not apply VBC-30102™ to pineapples if chilling and other conditions that favor NDF have occurred prior to first scheduled application.</li> <li>○ Once the first application of VBC-30102™ has been made, continued control of NDF by VBC-30102™ will require additional applications during the entire period of susceptibility to NDF up to 7 days prior to the time of forcing.</li> <li>○ If more than 7 days have elapsed since the previous VBC-30102™ application, pineapples will again become susceptible to NDF even if previously treated with VBC-30102™.</li> <li>○ If a chilling event or other conditions that favor NDF have occurred later than 7 days from the previous application, but before subsequent VBC-30102™ applications can be made, no further applications of VBC-30102™ should be made.</li> </ul> </li> <li>• Except for approved adjuvants, combination effects and potential interactions between VBC-30102™ and other agrochemical products have not been thoroughly tested. Tank-mixing VBC-30102™ with other agrochemical products may reduce the efficacy of VBC-30102™.</li> </ul>		

### 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 250 ml to 500 ml (8.4 fl oz. to 16.8 fl oz.) of VBC-30102™ (50 to 100 gm AVG HCl)* per acre, as a single application, to trees when most pistillate flowers are receptive to pollination. In most cases, VBC-30102™ 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 250 ml to 500 ml (8.4 fl oz. to 16.8 fl oz.) of VBC-30102™ (50 to 100 gm AVG HCl)* 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><b>Water Volume:</b> VBC-30102™ 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><b>Use of Adjuvants:</b> Use of adjuvants with VBC-30102™ for bloom applications has not been fully researched. Some adjuvants will cause a bloom thinning effect and will reduce the benefits of VBC-30102™.</p>		
<p><b>*Rate:</b> 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><b>Cucumber</b> (<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 VBC-30102™ 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><b>Water Volume:</b> Apply VBC-30102™ in a sufficient amount of water to ensure good coverage. In most cases, 27 to 54 gallons per treated acre will be sufficient. 250 ml (8.4 fl oz.) of VBC-30102™ (50 gm AVG HCl) in 27 gallons of spray solution will provide 500 ppm a.i. 250 ml (8.4 fl oz.) of VBC-30102™ (50 gm AVG HCl) 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 VBC-30102™. Transient leaf yellowing will occur at high rates. If unacceptable leaf yellowing is noted, use lower concentrations in subsequent applications.</p>		
<p><b>Use of Adjuvants:</b> Use of an adjuvant is not optimum. Addition of an adjuvant to VBC-30102™ increases the likelihood of leaf yellowing in young cucumber plants.</p>		
<p><b>Additional Note:</b> Do not reapply VBC-30102™ within 24-hours of application. Do not apply more than 500 ml of VBC-30102™ (100 gm AVG HCl) per acre per season. Use of VBC-30102™ 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 VBC-30102™ 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>		

**Table 1 – Parts per Million (ppm) of AVG in Spray Tank at Varying Spray Volumes and Amounts of VBC-30102™ (AVG HCl) per Acre**

Amount of VBC-30102™, (AVG HCl)/A	AVG Parts per Million (ppm) at Specified Gallons per Acre (gpa)					
	90 gpa	100 gpa	150 gpa	200 gpa	250 gpa	300 gpa
0.25 pt (118 mL) of VBC-30102™ (23.8 gm AVG HCl)	70 ppm	63 ppm				
0.5 pt (237 mL) of VBC-30102™ (47.5 gm AVG HCl)	140 ppm	126 ppm	84 ppm	63 ppm	50 ppm	
1 pt (473 mL) of VBC-30102™ (95 gm AVG HCl)			167 ppm	126 ppm	100 ppm	84 ppm
2 pt (946 mL) of VBC-30102™ (190 gm AVG HCl)					200 ppm	176 ppm

Each pint of VBC-30102™ contains 95 gm AVG HCl 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 Handling:** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available. If recycling is not available puncture container and dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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## NOTICE TO USER

Warranty and Disclaimer Statement: To the extent consistent with applicable 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 extent consistent with applicable law, user assumes all risks of use, storage or handling not in strict accordance with accompanying directions.

Break-Thru<sup>®</sup> is a registered trademark of Goldschmidt Chemical Corporation  
RNA Si 100 is a product of RNA Corporation.

Silwet L-77<sup>®</sup> is a registered trademark of Momentive Performance Materials

Sylgard<sup>®</sup> 309 is a registered trademark of Dow Corning Corporation.

Biobit<sup>®</sup>, DiPel<sup>®</sup> and XenTari<sup>®</sup> are registered trademarks of Valent BioSciences Corporation.

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