

73049-41

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

1 / 30 / 2015

1/25

Ms. Maria Herrero (Thomas Bade, Ph.D.)  
Regulatory Manager  
Valent BioSciences Corp.  
870 Technology Way  
Libertyville, IL 60048

Notification Accepted

Date: JAN 30 2015  
Reviewer: S. Bolden

Subject: Label Notification per PRN 98-10 – Add Not for use in California  
Product Name: Promalin  
EPA Registration Number: 73049-41  
Application Date: 12/22/2014  
Decision Number: 498552

Dear Ms. Herrero:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Biopesticides and Pollution Prevention Division (BPPD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped "Notification Accepted" and will be placed in our records.

If you have any questions, you may contact Shenell Bolden at (703) 347-0120 or via email at bolden.shenell@epa.gov.

Sincerely,



Andrew Bryceland, Team Leader  
Biochemical Pesticides Branch  
Biopesticides and Pollution  
Prevention Division (7511P)  
Office of Pesticide Programs

Enclosure

CONCURRENCES

SYMBOL >	7511P							
SURNAME >	Bolden							
DATE >	01/15/15							

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**MASTER LABEL**

**Primary Product name: PROMALIN® Plant Growth Regulator Solution.**

Sublabel I: Promalin Plant Growth Regulator Solution, For use on apples and pears, non-bearing pears, non-bearing sweet cherries

Sublabel II: Fascination™ Plant Growth Regulator Solution, For use on lilies

**Active Ingredients:**

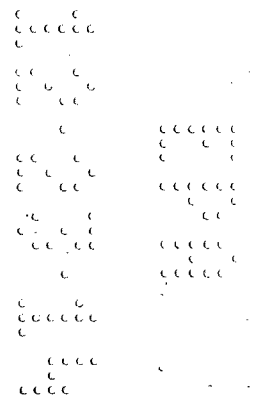
N-(phenylmethyl)-1H-purine 6-amine.....	1.8% w/w
Gibberellins A <sub>4</sub> A <sub>7</sub> .....	1.8% w/w
Other ingredients.....	96.4% w/w
Total:.....	100.0% w/w

EPA Reg. No. 73049-41  
EPA Est No.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

Valent BioSciences Corporation  
870 Technology Way  
Libertyville, IL 60048  
1-800-323-9597

Net Contents: \_\_\_\_\_  
This container will treat \_\_\_acre at the maximum use rate, as indicated for use on \_\_\_\_\_.

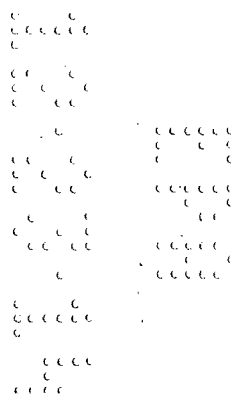


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SUBLABEL

Promalin Plant Growth Regulator Solution

For use on apples and pears, non-bearing pears, non-bearing sweet cherries



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**PROMALIN®  
PLANT GROWTH REGULATOR  
SOLUTION**

For use on apples and pears, non-bearing pears, and non-bearing sweet cherries

Active Ingredients:

N-(phenylmethyl)-1H-purine 6-amine.....	1.8% w/w
Gibberellins A <sub>4</sub> A <sub>7</sub> .....	1.8% w/w
Other ingredients.....	96.4% w/w
Total:.....	100.0% w/w

EPA Reg. No. 73049-41  
EPA Est. No.

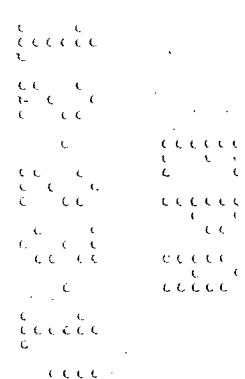
Batch Code: \_\_\_\_\_

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

See inside booklet for First Aid and Precautionary Statements.

Valent BioSciences Corporation  
870 Technology Way  
Libertyville, Illinois 60048  
1-800-323-9597

Net Contents:





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## **USER SAFETY RECOMMENDATIONS**

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

## **ENVIRONMENTAL HAZARDS**

For terrestrial uses: Do not apply directly to water, or 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 washwaters 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 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 on this label 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 4 hours unless wearing appropriate PPE.

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:

- v Coveralls
- v Waterproof gloves
- v Shoes plus socks

### PRODUCT INFORMATION

Promalin is a plant growth regulator for use on apples and pears, non-bearing pears and non-bearing sweet cherries. When applied according to label directions to healthy, well-managed trees and under favorable weather conditions (see General Instructions), Promalin provides one or more of the following benefits in some varieties:

1. Improve the shape of apples through fruit elongation and development of more prominent calyx lobes ("typiness"). These desirable effects will be more evident in years when natural typiness is limited.
2. Increase fruit size and weight on most apple varieties. Some fruit thinning has been known to occur from the use of Promalin.
3. Increase lateral bud break and shoot growth (branching), and improve branch angle on nursery stock and young trees of most apple varieties. This effect provides a better tree framework for early cropping.
4. Increase lateral bud break and shoot growth, and improve branch angle on non-bearing trees of most European pear and sweet cherry varieties, including nursery stock. This effect provides a better tree framework for early cropping.

5. To increase fruit set in apple and pears after a frost during flowering.

### GENERAL INSTRUCTIONS

- v Do not apply this product through any type of irrigation system.
- v When a range of rates is indicated, use the concentration and spray volume directed locally by the Valent BioSciences Corporation agricultural specialist (1-800-323-9597).
- v For optimum effectiveness, thorough spray coverage must be achieved. All parts of the plant must receive the spray or desired results will not occur. On bearing trees, direct approximately 85% of the spray volume into the upper two-thirds of the trees.
- v Promalin applications made under slow drying conditions (cool to warm temperatures, medium to high relative humidity, and no wind) will increase absorption by the plant, thus optimizing effectiveness. Night-time applications are encouraged when day-time conditions are not conducive to slow drying conditions.
- v Do not apply Promalin when air temperatures are below freezing or greater than 90°F.
- v For optimum results, have the water pH near neutral (pH 7) and always below 8.5
- v Rainfall or overhead irrigation within 6 hours after spraying will often reduce the activity of Promalin.
- v **Compatibility:** The Promalin Application Instructions refer to use of the product alone. Data concerning the compatibility of Promalin with other agricultural compounds is not available. Valent BioSciences Corporation does not assume responsibility for unexpected results due to the tank mixing of Promalin with other products.
- v **Mixing Instructions:** Add the required amount of Promalin to a spray tank about half-filled with water. Agitate while bringing the total volume of water to the required level. Mix new solutions only in a clean, empty spray tank, and use within 24 hours. Discard any unused spray material following local, state, or federal law.



**APPLICATION INSTRUCTIONS FOR FRUIT DEVELOPMENT**

**Rate and Timing**

**1. For Improved Typiness and Size:**

<b>Crop</b>	<b>Objective / Benefit</b>	<b>PRODUCT/A</b>	<b>APPLICATION METHOD and TIMING</b>
Apple - Single Application	To improve Typiness and Size	16 - 32 ounces (1 -2 pints)	Make a single application of 1-2 pints of Promalin per acre from early king bloom to the early stages of petal fall of the side blossoms.
Apple – Split applications	To improve Typiness and Size during prolonged bloom periods	8 - 16 ounces (0.5 -1 pints)	Make the first application of 0.5 to 1 pint of Promalin per acre at the beginning of the bloom period, from early king bloom to the early stages of petal fall of the side bloom. Make the second application of 0.5 to 1 pint of Promalin per acre 3 to 21 days later, or when the remainder of the canopy comes into bloom.
<p>Note:</p> <ul style="list-style-type: none"> <li>• When the bloom period is prolonged, two applications give the best results.</li> <li>• Do not exceed the maximum indicated rate of 2 pints per acre for the combined sprays.</li> </ul>			

## 2. To increase Fruit Set after frost (Not for use in California)

Crop	Objective / Benefit	PRODUCT/A	APPLICATION METHOD and TIMING
Apple	To increase fruit set after frost.	16-32 ounces (1 - 2 pints)	Apply within 24 hours after a frost event when the majority of the crop is between early bloom and full bloom. Apply in 75 to 150 gallons of water per acre.
Note: <ul style="list-style-type: none"> <li>Do not apply to frozen foliage, blossoms or developing fruit. Allow trees to completely thaw prior to application.</li> <li>Apply Promalin in sufficient amount of water to ensure thorough, but not excessive coverage. Adjust water volume based on tree size and spacing.</li> <li>Do not use a surfactant.</li> <li>Do not apply more than twice for this use.</li> </ul>			

Maximum application:

Product use per season for all uses described above, should not exceed 6 pints.

## 3. To increase fruit set in Pears (Not for Use in California)

Crop	Objective / Benefit	PRODUCT/A	APPLICATION METHOD and TIMING
Pears	To increase fruit set	8-16 ounces (0.5 -1 pints)	Without frost begin the applications at beginning of flowering, second application between full bloom and petal fall. In the case of frost damage between pink bud and petal fall apply within 24 h.
Note: <ul style="list-style-type: none"> <li>Do not apply to frozen foliage, blossoms or developing fruit. Allow trees to completely thaw prior to application.</li> <li>Apply Promalin in sufficient amount of water to ensure thorough, but not excessive coverage. Adjust water volume based on tree size and spacing.</li> <li>Do not use a surfactant.</li> <li>Do not apply more than twice for this use.</li> </ul>			

**Spray Volume**

Apply Promalin in a sufficient amount of water to ensure thorough, but not excessive, coverage. Adjust water volumes based on tree size and spacing. A spray volume of 75-150 gallons/acre is adequate for most orchards. Excessive spray application volumes that result in spray runoff have been known to reduce product performance.

# APPLICATION INSTRUCTIONS FOR LATERAL BRANCHING AND TREE DEVELOPMENT

## Rate and Timing

### 1. Application for Branching:

A single foliar application of Promalin or a Promalin-latex paint spot application is applied to apples, non-bearing pears, and non-bearing sweet cherry trees, including nursery stock, to increase lateral bud break and shoot growth, improve branch angles, and provide a better tree framework for early cropping.

**Table 1 -- Foliar Applications**

Crop	Rate	Timing
<b>Apples</b> (Nursery and Orchard)	125-500 ppm <sup>1</sup> (0.25-1 pint Promalin per 5 gallons of spray solution) <sup>2</sup>	For orchard trees (apples and non-bearing pears), apply at 1-3 inches of new terminal growth.
<b>Non-bearing Pears</b> (Nursery and Orchard)	250-1,000 ppm (0.5-2 pints Promalin per 5 gallons of spray solution)	For nursery stock (apples, non-bearing pears and non-bearing sweet cherries) treat after trees have reached a terminal height at which lateral branching is desired.
<b>Non-bearing Sweet Cherries</b> (Nursery Only)	250-1,000 ppm (0.5-2 pints Promalin per 5 gallons of spray solution)	

<sup>1</sup> parts per million

<sup>2</sup> Do not exceed 2 pints per acre.

**Table 2 -- Latex Applications**

Crop	Rate	Timing
<b>Apples</b> (Nursery and Orchard)  <b>Non-bearing Sweet Cherries</b> (Orchard Only)	5,000 - 7,500 ppm <sup>1</sup> [0.2-0.33 pint (3.2-5.3 fluid ounces) Promalin per pint of latex paint]	Apply in the spring when terminal buds begin to swell but before shoots emerge.

1 parts per million

NOTE: Do not apply the Promalin-latex paint mixture after bud break. Applications after buds have broken have been known to cause some injury to tender shoot tips and fail to promote shoot growth from that point.

NOTE: Uniformly apply the Promalin-latex paint mixture with a brush or sponge to cover the bark surface thoroughly. Apply only to one year old wood.

NOTE: Any type of application of Promalin to non-bearing pears and non-bearing sweet cherries must not be made later than one year prior to first anticipated fruit harvest.

**STORAGE AND DISPOSAL**

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

**Pesticide Storage:** Store below 75°F (24°C). Keep containers tightly closed when not in use.

**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:** 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 and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a 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.

Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact Ag Container Recycling Council at 202-861-3144 or [www.acrecycle.org](http://www.acrecycle.org). If recycling is not available puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**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. USER ASSUMES ALL RISKS OF USE, STORAGE OR HANDLING NOT IN STRICT ACCORDANCE WITH ACCOMPANYING DIRECTIONS.

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15/25

SUBLABEL

Fascination<sup>®</sup> Plant Growth Regulator Solution

For use on lilies

16/25

# FASCINATION<sup>®</sup>

## PLANT GROWTH REGULATOR (PGR)

Active Ingredients:

N-(phenylmethyl)-1H-purine 6-amine.....	1.8% w/w
Gibberellins A <sub>4</sub> A <sub>7</sub> .....	1.8% w/w
Other ingredients.....	96.4% w/w
Total:.....	100.0% w/w

EPA Reg. No. 73049-41  
EPA Est. No.

Batch Code: \_\_\_\_\_

### KEEP OUT OF REACH OF CHILDREN CAUTION

<b>FIRST AID</b>	
If in eyes	--Hold eye open and rinse slowly and gently with water for 15-20 minutes. --Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. --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. For medical emergencies, you may also call toll-free 1-800-892-0099 for treatment information.	

See inside booklet for Precautionary Statements.

Valent BioSciences Corporation  
870 Technology Way  
Libertyville, IL 60048  
1-800-323-9597

Net Contents:



## PRECAUTIONARY STATEMENTS Hazard To Humans & Domestic Animals

### CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling, and before eating, drinking, chewing gum, or using tobacco.

#### Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

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

#### User Safety Requirements:

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### USER SAFETY RECOMMENDATIONS

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing

#### ENVIRONMENTAL HAZARDS

For terrestrial uses: Do not apply directly to water, or 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 washwaters or rinsate.

## DIRECTIONS FOR USE

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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

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## PRODUCT INFORMATION

Fascination PGR is an extremely active plant growth regulator. Care must be used in measuring, diluting, and applying Fascination PGR.

A foliar application of Fascination PGR supplies plants with an additional source of the naturally occurring plant hormones, gibberellin and cytokinin. Gibberellin and cytokinin are involved in nearly all processes of plant development. Together, gibberellin and cytokinin promote a number of desirable effects, including preventing leaf yellowing and delaying flower senescence in lilies.

Additionally, gibberellin applications have been shown to increase flower size, to reduce the minimum temperature required to initiate plant growth, to initiate flowering, and to overcome bud and seed dormancy. Cytokinins are involved in cell enlargement, tissue differentiation, chloroplast development, the stimulation of cotyledon growth, the delay of aging in leaves, and many other aspects of plant development.

## GENERAL INSTRUCTIONS

An effective dose of Fascination PGR is strongly dependent on application volume. Plant response can vary if a given rate is applied at different spray volumes. Uniformity of spray solution is equally important. **For foliar applications uniformly apply 2 quarts of finished spray solution to 100 sq. ft. of bench area.**

Differences in plant response to Fascination PGR due to differences in plant surfaces, leaf orientation, and plant structure are possible. Extreme temperatures can influence plant response to Fascination PGR. Apply Fascination PGR during morning or late afternoon hours when drying conditions are slower, and when plants are not under environmental stress.

Tank mixing of this product with any other product, which is not specifically and expressly authorized by the label, shall be the exclusive risk of the user, applicator and/or application advisor.

## DETERMINING OPTIMAL APPLICATION RATES

Fascination PGR contains equivalent portions of 6-Benzyladenine (6BA) and Gibberellin ( $GA_{4+7}$ ). The rates given on this label are rate ranges and an optimum. Fascination PGR rate depends on desired expectations, and physical and environmental factors. Specific growing practices such as watering, potting media, fertilization, temperature, and light conditions will affect plant responses to a given Fascination PGR rate.

Results from Fascination PGR applications are dependent upon timing, rate, frequency of application, and plant vigor at application, and plant tissues that are sprayed.

To determine optimum use rates, conduct trials on a small number of plants under actual use conditions using the lowest indicated rate.

### LIMITATIONS

- Do not apply to plants under pest, nutritional, or water stress. Fascination PGR will not correct or substitute for treatment of pest, nutrient, or water stresses, all of which may result in lower leaf yellowing as a symptom.
- The active ingredient in Fascination PGR is not readily translocated throughout the plant following applications. Thus, plant parts not covered with Fascination PGR will not be affected.
- Do not apply this product through any type of irrigation system.
- Avoid drift onto non-target species or plant tissues.
- Do not mix Fascination PGR with pesticides or fertilizers.
- Over-application results in accelerated growth and excessive elongation.
- Do not apply Fascination PGR to any food crop.
- Do not reuse soil or media from plants treated with Fascination PGR.

### MIXING INSTRUCTIONS AND RATE CONVERSION TABLE

Fascination PGR mixes readily with water.

**Foliar Applications:** Always make sure application equipment is thoroughly clean before mixing. When preparing Fascination PGR for use as a foliar spray, fill tank to one half full. Add the determined optimal amount of Fascination PGR according to the rate conversion table below. Complete filling the tank.

**Rate Conversion Table**

PPM (parts per million) (6BA/GA <sub>4+7</sub> )	ml/ L	ml/ Gallon	Fl. Oz./ Gallon
1/1	0.06	0.2	0.007
5/5	0.3	1.1	0.04
10/10	0.6	2.1	0.07
25/25	1.4	5.3	0.18
50/50	2.8	10.5	0.36
75/75	4.2	15.8	0.53
100/100	5.5	21.0	0.71

### APPLICATION INSTRUCTIONS FOR PREVENTION OF LEAF YELLOWING IN EASTER AND LA HYBRID LILIES

Fascination PGR is applied to Easter (*Lilium longiflorum*) and LA Hybrid (*longiflorum*-Asiatic crosses) lilies to decrease yellowing and necrosis of lower leaves and delay flower senescence. Gradual leaf yellowing usually begins near or before visible bud stage. Post-harvest leaf yellowing is known to be dramatic, with rapid leaf yellowing occurring on finished plants prior to their sale. When used preventatively, Fascination PGR inhibits both types of leaf yellowing on Easter and LA Hybrid lilies. Additionally, an application of Fascination PGR to flower buds has been shown to delay flower senescence.

Apply Fascination PGR with standard spray equipment. Avoid high spray pressure when applying to the lower leaves as high pressure can cause "misting" of spray particles. These small spray particles are often deposited on immature foliage and contribute to unwanted stem elongation. For optimum effectiveness, thorough spray coverage must be achieved; only plant parts covered with spray solution will be protected from leaf yellowing. Leaves or parts of leaves not covered with Fascination PGR will not be protected from chlorosis.

When making directed applications to lilies, apply enough solution to ensure coverage of the lower leaves, but do not apply more than 15 ml of finished solution per plant, as Fascination PGR applied to soil can contribute to unwanted stem elongation due to root uptake.

**Early-season Application Directions**

Foliar Fascination PGR applications directed only toward the lower foliage have proven to reduce lower leaf yellowing on greenhouse-grown Easter and LA Hybrid lilies.

- ◆ Apply 7 to 10 days prior to visible bud stage.
- ◆ Protection from leaf yellowing lasts up to 3 weeks after application. Thus, a second application is required for subsequent protection from leaf yellowing.
- ◆ Avoid direct contact of spray solution to immature leaves. Spray solution contacting immature leaves has the potential to result in unwanted stem elongation.

Rate (PPM) (parts per million)	Timing	Method
10/10 (6BA/GA <sub>4+7</sub> )	<i>Early-season</i> (7 to 10 days prior to visible bud stage)	Directed foliar spray  Apply only to lower leaves to minimize stem elongation

**Mid-season Application Directions**

A second foliar Fascination PGR application directed only toward the lower foliage has proven to reduce leaf yellowing on greenhouse-grown Easter and LA Hybrid lilies that often occurs just prior to shipping/flowering.

- ◆ Apply 7 to 10 days after visible bud.
- ◆ Avoid direct contact of spray solution to immature leaves. Spray solution contacting immature leaves has been known to result in unwanted stem elongation.

Rate (PPM) (parts per million)	Timing	Method
10/10 (6BA/GA <sub>4+7</sub> )	<i>Mid-season</i> (7 to 10 days after visible bud stage)	Directed foliar spray  Apply only to lower leaves to minimize stem elongation

**Late-season Application Directions**

A late-season Fascination PGR application contacting foliage and flower buds has proven to reduce leaf yellowing and prolong flowering of Easter and LA Hybrid lilies during shipping and in the post-harvest environment. Fascination PGR will prevent the chlorosis that often afflicts lilies following storage in a cooler. Protection from leaf yellowing lasts for up to 14 days after placement of plants into a cooler. Fascination PGR has shown to increase flower longevity of Easter and LA Hybrid lilies.

- ◆ Apply when largest flower bud is at least 8 cm in length. Application to plants with smaller flower buds has been known to result in stem elongation and taller plants.
- ◆ Do not apply more than 14 days prior to placement into a cooler or shipping, as suitable protection will not be achieved.

Rate (PPM) (parts per million)	Timing	Method
100/100 (6BA/GA <sub>4+7</sub> )	<i>Late-season</i> (when first bud reaches at least 8 cm in length and no more than 14 days prior to placement in a cooler or shipping)	Foliar spray  Apply to foliage and flower buds

### APPLICATION INSTRUCTIONS FOR PREVENTION OF LEAF YELLOWING IN ORIENTAL LILY

Apply Fascination PGR to Oriental lily to decrease yellowing and necrosis of lower leaves and delay flower senescence. Gradual leaf yellowing often begins at or near the visible bud stage. Post-harvest leaf yellowing is known to be dramatic with rapid leaf yellowing occurring on finished plants prior to their sale. When used preventatively, Fascination PGR inhibits both types of leaf yellowing on Oriental lily. Additionally, an application of Fascination PGR to flower buds has shown to delay flower senescence.

#### Mid-season Application Directions

Foliar Fascination PGR applications contacting foliage have shown to reduce lower leaf yellowing on greenhouse-grown Oriental lily.

- ◆ Apply within 7 to 10 days before or after visible bud stage.
- ◆ Protection from leaf yellowing lasts up to 3 weeks after application. Thus, a second application is required for subsequent protection from leaf yellowing.

Rate (PPM) (parts per million)	Timing	Method
100/100 (BA/GA <sub>4+7</sub> )	<i>Mid-season</i> (7 to 10 days before or after visible bud stage)	Foliar spray

#### Late-season Application Directions

A second foliar Fascination PGR application contacting foliage and flower buds has proven to reduce leaf yellowing and prolong flowering of Oriental lily. A late-season Fascination PGR application will prevent leaf chlorosis that often occurs just prior to shipping/flowering, in a storage cooler, and during shipping in the post-harvest environment.

- ◆ Do not apply more than 14 days prior to placement into a cooler or shipping, as suitable protection will not be achieved.
- ◆ Protection from leaf yellowing lasts for 14 days after plants are placed into a cooler.

Rate (PPM) (parts per million)	Timing	Method
100/100 (BA/GA <sub>4+7</sub> )	<i>Late-season</i> (no more than 14 days prior to placement in a cooler or shipping)	Foliar spray  Apply to foliage and flower buds

## APPLICATION INSTRUCTIONS FOR PROMOTION OF PLANT GROWTH IN POINSETTIA

Apply Fascination PGR to poinsettia (*Euphorbia pulcherrima*) to increase stem length, leaf size and bract size. When used early in production during vegetative growth under long days, Fascination PGR can enhance stem elongation and help plants achieve a final desired height. First time users of Fascination PGR on poinsettia will achieve the best results by testing a small number of plants for each variety due to potential differences in response among varieties.

It is important to avoid an over application that will result in a stretched appearance and lower plant quality. Applications are best early in the crop with sequential applications made if needed. A single application of Fascination PGR will not increase plant height by more than one inch.

Apply Fascination PGR with standard spray equipment. For optimum effectiveness, thorough spray coverage must be achieved, as foliar applications of Fascination PGR are not readily translocated throughout the plant. Thus, plant parts not covered with Fascination PGR will not be affected. Non-uniform application often results in a lateral shoot elongating to a greater extent than another.

When making applications of Fascination PGR to poinsettia, the use of a wetting agent, such as Capsil, is required to insure complete leaf wetting. Fascination PGR that runs off the leaf without wetting is not effective.

### Early-season Application Directions

- ◆ Apply during vegetative growth prior to short days and flower initiation if internode extension is desired.
- ◆ Application of Fascination from start of short days until plants are two to three weeks past first color can contribute to delayed bract coloration or "greening" of bracts just starting to color. Therefore, application after start of short days through two weeks after first color is not recommended unless the applicator is willing to accept delay in complete bract coloration and shipping.

Rate (PPM) (parts per million)	Timing	Method
3/3 (6BA/GA <sub>4+7</sub> )	<i>Early-season</i> During vegetative growth prior to flower initiation	Foliar spray  Be certain all foliage is evenly wet by spray application.

### Late-season Application Directions

A late-season Fascination PGR application contacting foliage and bracts has been shown to promote bract expansion. Depending on the developmental stage applied, it also increases final plant height.

- ◆ Late-season applications will increase bract size, especially on bracts "stunted" due to growth retardant applications. It will also help elongate petioles and expand bracts where the flower/inflorescence/bracts are "buried" in the leaves, often resulting in plants becoming salable at an earlier date.
- ◆ When applying Fascination PGR to promote stem and/or bract expansion, start with 3 ppm unless previous experience warrants higher use rates.
- ◆ Late applications require the addition of a wetting agent as bracts often develop a very waxy, water repellent cuticle that readily sheds the spray solution.
- ◆ The more mature the inflorescence, the higher the Fascination PGR rate required to obtain the desired response.

- ◆ As Fascination PGR promotes bract expansion, bract color appears lighter (diluted) immediately following application as bracts expand. Given time, bracts normally develop a more intense color, although they are often never as dark as bracts on non-sprayed plants.
- ◆ Application to bracts of white-colored varieties about 7 days before anthesis has been shown to "whiten" or "smoothen" the appearance of the bracts.

Rate (PPM) (parts per million)	Timing	Method
3/3 to 10/10 (6BA/GA <sub>4+7</sub> )	<i>Late-season</i> 7 to 14 days before anthesis	Foliar spray  Be certain adequate wetting agent is in the spray solution so bracts evenly wet.

**APPLICATION INSTRUCTIONS FOR PROMOTION OF PLANT GROWTH IN BEDDING PLANTS, ANNUAL AND PERENNIAL POTTED CROPS, FIELD-GROWN ORNAMENTALS AND BULB CROPS**

Apply Fascination PGR to bedding plants, annual and perennial potted crops, and bulb crops to promote plant growth and stem elongation. Applying Fascination PGR can dramatically promote stem elongation of most dicot and monocot plants. Additionally, utilize a foliar Fascination PGR application to overcome over-application(s) of a gibberellin-inhibiting plant growth regulator. In most cases, Fascination PGR does not increase the number of leaves formed; stem elongation is due to increased internode length. Therefore, it is important to avoid an over application that will result in a stretched appearance and lower plant quality. Fascination PGR does not substitute for good crop culture.

- ◆ When applying Fascination PGR to promote plant growth, start with 1 ppm unless previous experience warrants higher use rates. The most common rates for using Fascination PGR to promote plant growth and stem elongation are 3/3 to 5/5 ppm.
- ◆ If desired results are not evident, reapplication or an increase in rate is often warranted. However, wait a minimum of 5 days to reapply Fascination PGR to previously treated plants.

Rate (ppm) (parts per million)	Timing	Method
1/1 to 25/25 (6BA/GA <sub>4+7</sub> )	<i>Apply directly to plant foliage</i>	Foliar application



## STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store below 75°F (24°C). Keep containers tightly closed when not in use.

**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:** 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 and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a 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.

Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact Ag Container Recycling Council at 202-861-3144 or [www.acrecycle.org](http://www.acrecycle.org). If recycling is not available puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## 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. USER ASSUMES ALL RISKS OF USE, STORAGE OR HANDLING NOT IN STRICT ACCORDANCE WITH ACCOMPANYING DIRECTIONS.**

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