

66330-283

2/17/2009

10015



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

FEB 17 2009

Mr. Bill Washburn  
Regulatory Manager  
Arysta LifeScience North America LLC  
15401 Weston Parkway, Suite 150  
Cary, NC 27513

Subject: Label Notifications for Pesticide Registration Notices 2007-4; Update Company Name  
per Pesticide Registration Notice 98-10

Dear Mr. Washburn,

The Agency is in receipt of your Applications for Pesticide Notification under Pesticide  
Registration Notices (PRN) 98-10 and 2007-4 dated February 3, 2009 for the following products:

<b>Flomet 4L</b>	<b>EPA Registration Number 66330-260</b>
<b>Ethephon 3.9% S&amp;O</b>	<b>EPA Registration Number 66330-283</b>
<b>Iprodione 2SE Turf</b>	<b>EPA Registration Number 66330-305</b>
<b>Pix® Plant Regulator</b>	<b>EPA Registration Number 66330-345</b>
<b>Pix® Ultra Plant Regulator</b>	<b>EPA Registration Number 66330-350</b>
<b>Ethephon 3# Plant Regulator</b>	<b>EPA Registration Number 66330-363</b>

The Registration Division (RD) has conducted its review of these requests for their  
applicability under PRNs 98-10 and 2007-4 and finds that the label changes requested fall within  
the scope of PRNs 98-10 and 2007-4. The labels submitted with the applications have been  
stamped "Notification" and will be placed in our records.

Please be reminded that 40 CFR Part 156.140(a)(4) requires that a batch code, lot  
number, or other code identifying the batch of the pesticide distributed and sold be placed on  
nonrefillable containers. The code may appear either on the label (and can be added by non-  
notification/PR Notice 98-10) or durably marked on the container itself.

Mac 1/5/10

If you have any questions, please call me directly at 703-305-6249 or Steve Schaible of my staff at 703-308-9362.

Sincerely,



Linda Arrington  
Notifications & Minor Formulations Team Leader  
Registration Division (7505P)  
Office of Pesticide Programs

3015

Please read instructions on reverse before completing form.

Form Approved, OMB No. 2070-0060, Approval expires 05-31-98

**EPA**

United States  
Environmental Protection Agency  
Washington, DC 20460

☐ Registration  
☐ Amendment  
☒ Other:

OPP Identifier Number

**Application for Pesticide - Section I**

1. Company/Product Number <b>66330-283</b>	2. EPA Product Manager <b>TONY KISH</b>	3. Proposed Classification <input type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) <b>ETHEPHON 3.9% S&amp;O</b>	PM# <b>22</b>	
5. Name and Address of Applicant (Include ZIP Code)  <b>Arysta LifeScience North America, LLC 15401 Weston Parkway, Suite 150 Cary, NC 27513</b>  <input type="checkbox"/> Check if this is a new address	6. <b>Expedited Review.</b> In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to: <b>NOTIFICATION</b> EPA Reg. No. <b>NOTIFICATION</b> Product Name <b>NOTIFICATION</b> <b>FEB 17 2009 NOTIFICATION</b>	

**Section - II**

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

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

**Notification of label change per PR Notice 2007-4.** This notification is consistent with guidance in PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156. No other changes have been made to the labeling or the Confidential Statement of Formula for this product. I understand that it is a violation of 18 USC Sec 1001 to willfully make any false statement to EPA. I further understand that if the amendment is not consistent with the requirements of 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

**Notification of label change per PR Notice 98-10.** This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 USC Sec 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

**Section - III**

1. Material This Product Will Be Packaged In:			
Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2. Type of Container <input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify)
*Certification must be submitted		If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt. No. per container
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container	4. Size(s) Retail Container <b>1.0 gal., 2.5 gal, 5.0 gal and Bulk</b>	5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Other <input checked="" type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled			

**Section - IV**

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application)		
Name <b>Bill Washburn</b>	Title <b>Regulatory Manager</b>	Telephone No. (Include Area Code) <b>904-432-5118</b>
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete, acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received <b>(Stamped)</b>
2. Signature <i>Bill Washburn</i>	3. Title <b>Regulatory Manager</b>	
4. Typed Name <b>Bill Washburn</b>	5. Date <b>02/03/09</b>	



February 3, 2009

Mr. Tony Kish, PM 22  
Document Processing Desk (NOTIF)  
Office of Pesticide Programs – 7504P  
U.S. Environmental Protection Agency  
One Potomac Yard, Room S-4900  
2777 South Crystal Drive  
Arlington, VA 22202

**Subject: ETHEPHON 3.9% S&O  
EPA Reg. No. 66330-283**

***Notification of Label Change per PR Notice 2007-4  
and PR Notice 98-10***

Dear Mr. Kish:

Please find the following enclosed:

- Application for Pesticide Registration (Other) dated 02/03/09.
- One highlighted copy of subject label, showing all changes.
- One clean copy of the subject label.

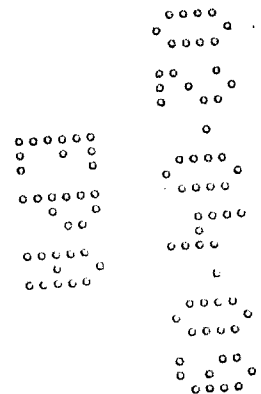
Notification of label change per PR Notice 2007-4. This notification is consistent with guidance in PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156. No other changes have been made to the labeling or the Confidential Statement of Formula for this product. I understand that it is a violation of 18 USC Sec 1001 to willfully make any false statement to EPA. I further understand that if the amendment is not consistent with the requirements of 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Also in this submission, we are using PR Notice 98-10 to update the name of the company, emergency telephone numbers and warranty. Arysta LifeScience North America Corporation was changed to Arysta LifeScience North America, LLC.

Should you have any questions or comments, please do not hesitate to contact me at 901-432-5118 or by e-mail at [bill.washburn@arystalifescience.com](mailto:bill.washburn@arystalifescience.com)

Sincerely,

Bill Washburn  
Regulatory Manager



**ETHEPHON 3.9% S&O**

For Use in Production of Cucumber, Squash and Pumpkin Hybrid Seed,  
For Inducing Flowering of Ornamental Bromeliads, For Reducing  
Plant Height of Potted Daffodils and Stem Topple of Potted  
Hyacinths and For Increased Lateral Branching in Ornamentals

**ACTIVE INGREDIENT:**

Ethephon, [(2-chloroethyl) phosphonic acid]\*..... 3.9%

**INERT INGREDIENTS:** ..... 96.1%

**TOTAL:** ..... 100.0%

\*This product contains 0.33 lbs. Ethephon per gallon

**NOTIFICATION**  
**NOTIFICATION**

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

**NOTIFICATION**  
**NOTIFICATION**  
FEB 17 2009

<b>FIRST AID</b>	
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<p><b>NOTE TO PHYSICIAN</b></p> <p>Probable mucosal damage may contraindicate the use of gastric lavage. Treat symptomatically. Consideration should be given to the possibility that over exposure to materials other than this product may have occurred. No specific antidote is available.</p>	
<p><b>EMERGENCY TELEPHONE NUMBERS:</b> Have the product container or label with you when calling a poison control center or doctor, or going for treatment.</p> <p><b>FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE CALL:</b> 1-866-303-6952</p> <p><b>FOR CHEMICAL EMERGENCY:</b> Spill, leak, fire, exposure, or accident call CHEMTREC 1-800-424-9300</p>	

EPA Reg. No. 66330-283

AD 091905

NET CONTENTS:

EPA Est. No. 51036-CA-1

Manufactured For:  
ARYSTA LIFESCIENCE NORTH AMERICA, LLC  
15401 Weston Parkway, Suite 150  
Cary, NC 27513

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

Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some of the materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart. Applicators and other handlers must wear:

1. Coveralls over long-sleeved shirt and long pants
2. Chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride.
3. Chemical-resistant footwear plus socks.
4. Eye protection.
5. Chemical-resistant headgear for overhead exposure.
6. Chemical-resistant apron when mixing or loading or cleaning equipment.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instruction for cleaning/maintaining PPE. If no such instruction for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

Users should:

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

**ENVIRONMENTAL HAZARDS**

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.

Avoid spray drift to nearby crops as this product may cause temporary modifications in plant growth. Do not contaminate water used for irrigation or domestic purposes.

Prolonged exposures to spray deposits can damage acrylic plastics, certain paints, and metals. Remove automobiles and other vehicles from the treatment area prior to application to prevent spray deposits from falling on vehicles and potentially damaging finishes. Rinse acrylic plastic materials and painted surfaces exposed to inadvertent spray deposits using soap and water within an hour after exposure.

#### **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply through any type of irrigation system.

Read entire label before using this product.

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 regulations.

#### **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 expectations pertaining to the statements on this label about personal protective equipment (PPE), notification to workers and restricted-entry

intervals. 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 48 hours.

The REI increases to 72 hours in outdoor areas where average rainfall is less than 25 inches a year.

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:

1. Coveralls over short-sleeved shirt and short pants.
2. Chemical-resistant gloves made of any waterproof material.
3. Chemical-resistant footwear plus socks.
4. Chemical-resistant headgear for overhead exposure.
5. Protective eyewear.

Notify workers of the application by warning them orally and posting warning signs at entrances to treated areas.

#### **STORAGE AND DISPOSAL**

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

**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:**

**Containers equal to or less than 5 gallons:** 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  $\frac{1}{4}$  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, or 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.

**Refillable containers greater than 5 gallons:** Refillable container. Refill this container with this pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about



10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

#### **GENERAL INFORMATION**

For ground application only.

Apply ETHEPHON 3.9% S&O spray solution within 4 hours after mixing. Mix only the amount of spray you plan to use immediately. DO NOT save unused diluted spray solutions as they will not be as effective as fresh solutions.

Plants sprayed with ETHEPHON 3.9% S&O often flower 7 to 10 days earlier than untreated. Therefore pollen source plants should be seeded prior to seed parent to insure adequate pollen availability for hybrid seed production.

Temporary growth inhibition resulting from shortened internodes may be observed.

#### **FLOWER INDUCTION OF BROMELIADS**

A foliar spray of ETHEPHON 3.9% S&O initiates flowering of ornamental bromeliads such as ANANAS, AECHMEA, NEOREGELIA, VRIESIA, and BILLBERGIA.

#### **HYBRID SEED PRODUCTION**

A foliar spray of ETHEPHON 3.9% S&O Plant Growth Regulator will modify sex expression and flowering pattern of cucumbers and squash to facilitate hybrid seed production. Do not use on cucumbers or squash to be harvested for fresh or processed markets.

#### **DEFOLIATION**

A foliar spray of ETHEPHON 3.9% S&O applied after buds are matured, will initiate earlier leaf drop of Roses, Tallhedge, and Apple nursery stock (in Washington only). This will allow digging of stock plants prior to the onset of unfavorable weather.

#### **INCREASING LATERAL BRANCHING**

(Varieties such as Azalea, Begonia, Chrysanthemum, Geranium, Impatiens, Lantana, Verbena, Vinca)

A foliar spray of ETHEPHON 3.9% S&O in conjunction with hand

pinching will increase the number of lateral branches on ornamental plant species. When used on Geranium stock plants prior to normal pinching time, an increase in the number of lateral branches to be used as cutting material can be expected. Bougainvillea will be defoliated by applications of ETHEPHON 3.9% S&O but nodes will break a few weeks after treatment.

#### **REDUCTION OF PLANT HEIGHT AND STEM TOPPLE**

A foliar spray of ETHEPHON 3.9% S&O will aid in reducing total plant height of potted daffodils and stem topple of potted hyacinths at time of full flower.

#### **HYBRID SEED PRODUCTION**

ETHEPHON 3.9% S&O modifies sex expression and flowering pattern of cucumber, squash and pumpkins to facilitate hybrid seed production.

Application of ETHEPHON 3.9% S&O increases the number of pistillate (female) and decreases the number of staminate (male) flowers. ETHEPHON 3.9% S&O brings about earlier formation of female flowers at lower nodes where normally only male flowers are formed in standard (monoecious) cucumber, squash and pumpkin varieties.

Sexual modification towards femaleness in treated plants is temporary (5 to 15 nodes). Variety, location, climate and cultural practices may influence the best rate for treatment. Due to the wide range in sensitivity of cucumber and squash cultivars excessive injury may result from ETHEPHON 3.9% S&O application even when all label directions are followed. Treatment cultivars classified as strongly male (Straight Neck, Crookneck) may result in an unacceptable level of male flowers remaining. New breeding lines will require trial applications before full scale treatments are made.

#### **HYBRID SEED PRODUCTION IN CUCUMBER AND SQUASH**

Amounts to Use: Apply 1 quart per acre of ETHEPHON 3.9% S&O in 40 to 100 gallons of water (100 to 250 ppm). The actual amount needed to achieve a satisfactory level of performance without excessive injury is dependent on the specific cultivar and environmental conditions at the time of treatment. Spray plants at the two leaf stage.

**DO NOT HARVEST ANY TREATED CUCUMBERS OR SQUASH FOR HUMAN OR ANIMAL CONSUMPTION. TREATMENTS ARE TO BE MADE FOR SEED PRODUCTION ONLY**

When germination is variable, a repeat application 7-10 days after the first may be necessary.

11/09/15

**HYBRID SEED PRODUCTION IN PUMPKINS (ILLINOIS ONLY)**

Amounts to Use: Apply 3 quarts of ETHEPHON 3.9% S&O per acre in 40 to 100 gallons of water (300 to 750 ppm) per acre. Apply no more than 6 spray applications per year at 7-10 day intervals beginning at the 2-4 leaf stage. Do not harvest within 42 days of last application.

Do not harvest any treated pumpkins for human or animal consumption. Treatments are to be made for seed production only.

**HYBRID SEED PRODUCTION IN CUCUMBERS, PUMPKINS, AND SQUASH (CALIFORNIA ONLY)**

Amounts to Use: Apply up to 3 quarts per acre of ETHEPHON 3.9% S&O in 40 to 100 gallons of water (300 to 750 ppm) by ground application. Apply no more than 6 spray applications per year at 3 to 10 day intervals beginning at the first true leaf stage.

Do not harvest within 60 days of last application.

Do not harvest any treated pumpkins for human or animal consumption. Treatments are to be made for seed production only.

The actual amount and number of applications needed to achieve a satisfactory level of performance without excessive injury is dependent on the specific cultivar and environmental conditions at time of treatment.

**FLOWER INDUCTION OF BROMELIADS**

ETHEPHON 3.9% S&O initiates flowering of ornamental bromeliads such as ANANAS, AECHMEA, NEOREGELIA, VRIESIA and BILLBERGLA.

**AMOUNTS TO USE**

For most bromeliad varieties, mix 8 fluid ounces of ETHEPHON 3.9% S&O per gallon of water. This prepares a spray concentration of approximately 2,500 ppm of ethephon. Spray all surfaces of the plant to "wet". Avoid overspraying to "runoff" which may cause damage to leaves or the growing points. For treating groups of plants, use approximately ½ pint of spray solution per 10 square feet of greenhouse bench or outdoor bed area.

Apply ETHEPHON 3.9% S&O spray solutions within 4 hours after mixing. Mix up only the amount of spray you plan to use immediately. DO NOT save unused diluted spray solutions as they will not be as effective as fresh solutions.

The degree of flower induction with a given rate of ETHEPHON 3.9%

S&O is influenced by the plant age, variety, growth rate, climate and cultural conditions. Lower rates may force flowering or produce desirable foliage coloring on certain varieties. Trial applications at lower rates are suggested before making extensive treatments.

#### **GUIDELINES FOR CONSISTENT FLOWER FORCING**

1. Grow plants on photoperiods regulated to maintain plants vegetatively active prior to treatment; long days for ANANAS, BILLBERGIA, NEOREGELIA, and short days for AECHMEA, and VRIESIA.
2. Treat mature plants that have well established root systems. Treatments too early in the development of the plant will cause erratic flower initiation and the few flowers formed will be small.
3. Remove water at base of leaves. Allow foliage to dry prior to treatment. Water may be replaced 24 hours after treatment.
4. A minimum night temperature of 65-70° or higher should be maintained throughout the forcing period.
5. Do not apply fertilizer two weeks prior to or for two weeks after treatment.

**NOTE:** Inconsistent results may be obtained if the local surface is covered with algae.

#### **DEFOLIATION**

A foliar spray of ETHEPHON 3.9% S&O will cause earlier leaf drop of roses, tallhedge and apple nursery stock. Apply only after the buds are mature or some injury may result.

**FOR ROSES:** Mix 1 quart of ETHEPHON 3.9% S&O in 10 gallons of water and apply to thoroughly wet foliage. Amount of spray used will depend on the size of the rose bush. Amount of defoliation obtained will depend on the variety and temperature. The addition of 1 pint of nonionic surfactant such as Tween 20 or X-77 per 100 gallons of spray solution will improve defoliation. Do not apply to sensitive varieties such as Red American Beauty as bud injury may result.

**FOR TALLHEDGE BUCKTHORN:** Mix 5 to 10 quarts ETHEPHON 3.9% S&O in 10 gallons water and apply to thoroughly wet foliage. Amount of spray used will depend on size of tallhedge. Use the higher rate when temperatures are cool or earlier defoliation is desired.

**FOR APPLE NURSERY STOCK IN WASHINGTON:** Mix 1-2 pints ETHEPHON 3.9% S&O plus 3 quarts Dupont Surfactant WK in 50 gallons water and apply no more solution than is necessary to moisten foliage without runoff. A second treatment 3-7 days later using the above rates may be applied. Apply no more than 4 pints ETHEPHON 3.9% S&O per season. Do not use on Rome apples as defoliation will not be satisfactory. Amount of defoliation obtained will depend on variety and temperatures.

#### **INCREASED LATERAL BRANCHING**

A foliar spray of ETHEPHON 3.9% S&O will increase lateral branching in the following ornamental species: Azalea, Garden Chrysanthemum (perennial species) Fuchsia, Zonal Geranium, Ivy Geranium, Lantana, Verbena, Vinca vines (vinca major). To minimize the risk of unacceptable plant injury do not use ETHEPHON 3.9% S&O on ornamental varieties or species not specifically listed on the label.

When applied to plants ETHEPHON 3.9% S&O readily enters the plant and breaks down to ethylene, a naturally occurring plant hormone. Ethylene production within the plant is stimulated by stress. For this reason, it is important that plants being treated are not under stress from drought, high temperature, disease or other environmental stresses. Treating stressed plants can cause severe injury such as defoliation or leaf scorching. While injury from ETHEPHON 3.9% S&O usually does not kill the plant, it can render the plant unsightly and unfit for sale. The activity of ETHEPHON 3.9% S&O is linked to plant growth activity and is therefore slower acting when temperatures are below 60F or very high above 95F.

**FOR STOCK PLANTS (EXCEPT AZALEA):** Mix 1 pint (16 fluid ounces) of ETHEPHON 3.9% S&O in 10 gallons of water (500 ppm) and spray to thoroughly wet foliage, but not to runoff. Make applications at normal pinching times instead of hand pinching. To optimize the vigor of cuttings, do not make applications for 2 weeks prior to harvesting cuttings from stock plants.

**FOR FINISHED PLANTS (EXCEPT AZALEA):** Mix 1 pint (16 fluid ounces) of ETHEPHON 3.9% S&O in 10 gallons of water (500 ppm) and spray to thoroughly wet foliage, but not runoff. Make applications at normal pinching time instead of hand pinching. To ensure flowering and full foliage on finished plants do not make applications for 6 to 8 weeks prior to bloom or planned sale.

**FOR BOTH STOCK AND FINISHED PLANTS:** Mix 2.5 to 5 quarts of ETHEPHON 3.9% S&O in 10 gallons of water (2,500 to 5,000 ppm) and apply to thoroughly wet foliage. The amount of spray will depend upon the size of the plant being treated. Application should be made at normal pinching times and can be used in conjunction with hand pinching or chemical pinching agents. Use the higher rate on

vigorous tolerant varieties as determined by experience. To prevent unacceptable plant injury, do not treat sensitive varieties such as Sweetheart, and other varieties as determined by experience. To optimize the vigor of cuttings, do not make application for 2 weeks prior to harvesting cuttings from stock plants. To ensure full foliage and on finished plants, do not make applications for 6 to 8 weeks prior to bloom or planned sale.

#### **REDUCTION OF HYACINTH STEM TOPPLE AND DAFFODIL PLANT HEIGHT**

To reduce potted hyacinth stem topple at time of full flower, apply a foliar spray of ETHEPHON 3.9% S&O before florets have opened. Most cultivars will respond to applications of ETHEPHON 3.9% S&O at 1000 to 2000 ppm (1/2 to 1 pint in 2.5 gallons of water) of ETHEPHON 3.9% S&O. Bismarck, Jan Bos, Blue Giant, Delft Blue, and Madame Kruger may benefit from a second spray 2 days after the first.

To reduce total plant height of potted daffodils, apply a foliar spray of ETHEPHON 3.9% S&O when the shoots are 3 to 4 inches tall. Most cultivars will respond to 2000 ppm (1 pint in 2.5 gallons) sprays of ETHEPHON 3.9% S&O. For earlier forcing, Dutch Master, Joseph MacLeod, Flower Record, and Barret Browning will benefit from a second spray 2 or 3 days after the first. Bridal Crown and Geranium require only 1000 ppm (1/2 pint in 2.5 gallons of water). Gold Medal, Van Sion, February Gold, and Tete-a-Tete do not require ETHEPHON 3.9% S&O treatment.

#### **Warranty and Disclaimer Statement**

The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Such risks may arise from weather conditions, soil factors, off-target movement, unconventional farming techniques, the presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond

the control of Arysta LifeScience North America, LLC ("Arysta"), and can cause crop injury, injury to non-target crops or plants, ineffectiveness of the product, or other unintended consequences. All such risks shall be assumed by the user or buyer. Arysta warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions. This warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to Arysta, and is subject to the inherent risks described above.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARYSTA DISCLAIMS ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARYSTA, MANUFACTURER, AND SELLER DISCLAIM AND SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE, HANDLING, APPLICATION, STORAGE, OR DISPOSAL OF THIS PRODUCT OR FOR DAMAGES IN THE NATURE OF PENALTIES, AND THE USER AND BUYER WAIVE ANY RIGHT THAT THEY MAY HAVE TO SUCH DAMAGES. NO AGENT, REPRESENTATIVE OR EMPLOYEE OF ARYSTA IS AUTHORIZED TO MAKE ANY WARRANTY, GUARANTEE OR REPRESENTATION BEYOND THOSE CONTAINED HEREIN OR TO MODIFY THE WARRANTIES CONTAINED HEREIN.

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**NOTIFICATION**

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