

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

OFFICE OF PRÉVENTION, PESTICIDES AND TOXIC SUBSTANCES

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

MAR 12 2009

Subject: Label Notification(s) for Pesticide Registration Notice 2007-4 and 98-10 Storage & Disposal and Other Changes

Dear Registrant:

The Agency is in receipt of your Application(s) for Pesticide Notification under Pesticide Registration Notice (PRN) 2007-4 dated January 28, 2009 for:

EPA Registration 66330-273

**Pluck Cotton Boll Opener** 

The Registration Division (RD) has conducted a review of this request for applicability under PRN 2007-4 and 98-10, and finds that the label change(s) requested falls within the scope of PRN-2007-4 and 98-10. The label has been date-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.

If you have any questions, please contact me directly at 703-305-6249 or Banza Djapao of my staff at 703-305-7269.

Sincerely,

Linda Arrington

Notifications & Minor Formulations Team Leader Registration Division (7505P)

Office of Pesticide Programs

116

Please read instructions on reverse before completing form. Form Approved, OMB No. 2070-0060, Approval expires 05-31-9 **OPP Identifier Number United States** ☐ Registration **Environmental Protection Agency** ☐ Amendment Washington, DC 20460 Other: Application for Pesticide - Section I 1. Company/Product Number 2. EPA Product Manager Proposed Classification 66330-273 TONY KISH 4. Company/Product (Name) PM# None Restricted PLUCK COTTON BOLL OPENER 22 5. Name and Address of Applicant (Include ZIP Code) 6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(l), my product is similar or identical in composition and labeling Arysta LifeScience North America, LLC NOTIFICATION 15401 Weston Parkway, Suite 150 EPA Reg. No. Cary, NC 27513 Product Name Check if this is a new address Section - II Amendment - Explain below. Final printed labels in response to Agency letter dated \_\_\_\_ Resubmission in response to Agency letter dated "Me Too" Application Notification - Explain below. 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, 156.146, 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. 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: Water Soluble Packaging Child-Resistant Packaging Unit Packaging Type of Container Yes\* Yes Yes Metal ⊠ No X No ⊠ No Plastic If "Yes" No. per If "Yes" No. per Glass Unit Packaging wgt. container Package wgt. container \*Certification must Paper be submitted Other (Specify) 3. Location of Net Contents Information 4. Size(s) Retail Container Location of Label Directions X Label Container On Label 1.0 gal., 2.5 gal, 5.0 gal On labeling accompanying product 6. Manner in Which Label is Affixed to Product Lithograph Other Paper glued Stenciled Section - IV 1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application) Telephone No Include Area Name Code) Bill Washburn Regulatory Manager 901-432-5118 6. Date Application Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I Received acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both (Stamped) under applicable law. 2. Signature Regulatory Manager Biel Washluun 4. Typed Name Bill Washburn 01/28/09

January 28, 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:

**PLUCK COTTON BOLL OPENER** 

EPA Reg. No. 66330-273

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 01/28/09.
- 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.

Please acknowledge acceptance of this notification by stamping the extra copy of this letter and returning in the enclosed self-addressed stamped envelope. 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

Sincerely,

Bill Washburn

Regulatory Manager

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## PLUCK COTTON BOLL OPENER

NOTIFICATION

FOR COMMERCIAL USE OR AGRICULTURAL USE ONLY NOT FOR RESIDENTIAL USE

MAR 1 2 2009

ACTIVE INGREDIENT:

Ethephon (2-Chloroethyl) phosphonic acid*	55.4%
INERT INGREDIENTS:	44.6%
TOTAL	100.0%

\*This product contains 6 pounds ethephon per gallon.

KEEP OUT OF REACH OF CHILDREN DANGER PELIGRO

Si Usted no entiende la etiqueta, busque a alguien para que se la explique a Usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

#### FIRST AID

#### 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.

## 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.

# IF SWALLOWED:

- Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. EMERGENCY TELEPHONE NUMBERS: Have the product container or label with you when calling a poison control center or doctor or going for treatment.

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE CALL: 1-866-303-6952

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident call CHEMTREC 1-800-424-9300

See elsewhere on label for additional precautionary statements

EPA Reg. No. 66330-273

EPA Est. No. 51036-GA-1

AD 012601

Manufactured For: Arysta LifeScience North America, LLC 15401 Weston Parkway, Suite 150 Cary, NC 27513

NET	CONTENTS	•

## PRECAUTIONARY STATEMENTS

#### DANGER

# HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CORROSIVE. Causes irreversible eye damage and skin burns. Harmful if swallowed or absorbed through skin. Avoid breathing spray mist. Do not get in eyes, on skin or on clothing. Keep away from domestic animals.

## PERSONAL PROTECTIVE EQUIPMENT

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

- 1. Coveralls over long-sleeved shirt and long pants.
- 2. Chemical-resistant gloves (such as Nitrile, Butyl, Neoprene or Barrier Laminate)
- 3. Chemical-resistant footwear plus socks.
- 4. Protective eyewear.
- 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 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.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides 40 CFR 170.240.(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

## 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. Then wash body thoroughly and put on clean clothing.

3. 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, 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.

# USE PRECAUTIONS

Do not plant another crop within 30 days after treatment.

Mix only the amount of spray you expect to use each day. Do not allow mixed solution to stand overnight.

Avoid spray drift to nearby crops as this product will cause modifications in plant growth. Plant injury or reduced yields will result.

#### DIRECTIONS FOR USE

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

## GENERAL PRECAUTIONS AND RESTRICTIONS

Do not contaminate water used for irrigation or domestic purposes.

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, 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:

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

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

Do not apply PLUCK COTTON BOLL OPENER through any type of irrigation system.

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR.

The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator is responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.

2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory below.

#### AERIAL DRIFT REDUCTION ADVISORY

Information on droplet size:

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (See Wind, Temperature and Humidity, and Temperature Inversions).

# Controlling droplet size:

- \* Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- \* Pressure Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- \* Number of Nozzles Use the minimum number of nozzles that provide uniform coverage.
- \* Nozzle Orientation Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- \* Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produces larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produces the largest droplets and the lowest drift.

# BOOM LENGTH

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

#### APPLICATION HEIGHT

Applications should not be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

## SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and down edges of the field, the applicator should compensate for the displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with the increasing drift potential (higher wind, smaller drops, etc.).

#### WIND

Drift potential is lowest between winds speeds of 2 - 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

#### TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

#### TEMPERATURE INVERSIONS

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### SENSITIVE AREAS

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

# STORAGE AND DISPOSAL

# STORAGE

Do not contaminate water, food or feed by storage or disposal. If container is broken or contents have spilled, follow all precautions indicated above and clean up immediately. Before cleaning up, put on

full length trousers, long sleeved shirt, protective gloves, and goggles or face shield. Soak up spill with absorbent media such as sand, earth or other suitable material and dispose of waste at an approved waste disposal facility.

## PESTICIDE DISPOSAL

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

## 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 mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/2 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. Offer for recycling, if available, or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration or if allowed by state and local authorities, by burning. If container is burned, stay out of smoke.

#### GENERAL INFORMATION

### COTTON

A foliar spray of PLUCK COTTON BOLL OPENER will accelerate opening of mature unopened cotton bolls and enhance defoliation which can result in earlier harvest with an increased recoverable yield. PLUCK COTTON BOLL OPENER treatment allows increased efficiency from a once-over harvest.

#### TOBACCO (FLUE-CURED)

A foliar spray of PLUCK COTTON BOLL OPENER promotes early, uniform "yellowing" of mature tobacco. PLUCK COTTON BOLL OPENER reduces curing time, allowing more efficient use of curing barn space, and increased control over harvest schedules.

#### SPRAY PREPARATION

Add 1/2 to 3/4 of the required amount of water to the spray tank. Start agitation. Add the required amount of PLUCK COTTON BOLL OPENER, and the remaining amount of water. Prepare only as much spray solution as can be used on the day of mixing. Do not allow spray solution to stand overnight. Do not spill the concentrated product on spray equipment, or any airplane parts.

ANY SPILLS SHOULD BE RINSED IMMEDIATELY WITH PLENTY OF WATER.

Use of a nurse tank is highly recommended for avoiding possible spills

of concentrated formulation on spray equipment or any airplane parts.

# TANK MIXTURES WITH DEFOLIANTS AND INSECTICIDES

Follow all applicable use precautions and rate per acre recommendations on labels of products applied as tank mixtures or in sequence with PLUCK COTTON BOLL OPENER. In some cases slight reduction in boll opening response has been observed when tank mixes with defoliants were used.

Good agitation in the spray tank is essential and a tank mixture should not be allowed to stand without agitation for more than 5 to 10 minutes. Read and observe all appropriate label use directions and precautions for the defoliants and insecticides used.

DO NOT MIX WITH DESICCANTS IF COTTON IS TO BE SPINDLE HARVESTED.

DO NOT TANK MIX PLUCK COTTON BOLL OPENER WITH DEFOLIANTS CONTAINING SODIUM CHLORATE BECAUSE THIS RESULTS IN THE FORMATION OF HYPOCHLOROUS ACIDS WHICH UPON HEATING EMIT TOXIC CHLORINE FUMES.

#### EQUIPMENT CLEANING

Because of the acidic nature of this product, prolonged exposure to spray deposits will damage acrylic plastics, certain paints, and metals.

Rinse thoroughly with a detergent and water all exposed acrylic plastictype materials (e.g., aircraft windshields), and painted surfaces within an hour after exposure to spray deposits.

At the end of each day, rinse thoroughly with a detergent and water all the metal parts of the aircraft and the associated spray equipment exposed to the spray deposits.

#### COTTON

USE	EXPECTED CONDITIONS	PLUCK COTTON BOLL OPENER	ONE GALLON PLUCK COTTON BOLL OPENER	SPRAY	VOLUME	APPLICATION TIMING
		RATE	TREATS	:		,

1	Ī			<del></del>	, <u>.</u>	,	PR NOTICE 2007-4
		PINT/A	LBS AI	ACRES	GROUND.	AIR**	
PLUCK COTTON BOLL OPENER*	Hot and dry 80°F or higher	1 1/3	1.0	6	15 - 50	2 - 5	Apply when the number of mature unopened bolls is sufficient to produce the desired crop. See below for test of boll maturity. Treatment uniformly opens bolls 7 to 14 days earlier.
	Dry and 75 F to 80 F	2	1.5	4			
	Cool but above 65 F	2 2/3	2	3			
	or Rank	·					
	cotton		·		·		
PLUCK COTTON BOLL OPENER + FOLEX Defo liant Tank Mix	High soil moisture or High fertility level or	1/3	.25	24	15 - 50	5 - 10	Apply 4 to 7 days prior to PLUCK COTTON BOLL OPENER boll opening application. To be used as a sequential treatment with, not in place of PLUCK COTTON BOLL OPENER boll opening treatment.
	Rank cotton						
PLUCK COTTON BOLL OPENER + DROPP Defo- liant Tank Mix	High soil moisture  or  High fertility level  or	1/3	.25	24	10 - 50	3 - 10	Apply 4 to 7 days prior to PLUCK COTTON BOLL OPENER boll opening application. To be used as a sequential treatment with, not in place of PLUCK COTTON BOLL OPENER boll opening treatment.
	Rank cotton						
Pre- Conditio ner for Defoliat ion	Hot, dry, above 80 F	2/3	.5	12	15-50	2-5	Apply 4 to 7 days prior to defoliant.  Enhances top crop defoliation reducing deterioration of hottom crop and allows for earlier

USE	EXPECTED CONDITIONS	PLUCK COTTON BOLL OPENER RATE		ONE GALLON PLUCK COTTON BOLL OPENER TREATS	SPRAY	VOLUME	APPLICATION TIMING
		PINT/A	LBS AI	ACRES	GROUND	AIR**	
							harvest.
	Cool, above 65°F	1 1/3	1.0	6			
	Rank cotton						

\*Pretreatment With Defoliants Prior to PLUCK COTTON BOLL OPENER Treatment If the cotton is overly rank or laying down in the middles and good spray

If the cotton is overly rank or laying down in the middles and good spray coverage of the bolls with PLUCK COTTON BOLL OPENER is difficult, a pretreatment with defoliants will be useful to improve boll coverage with PLUCK COTTON BOLL OPENER. Use dosage rates of PLUCK COTTON BOLL OPENER recommended for boll opening. Read and observe all appropriate label use directions and precautions for the defoliant used.

 $\mbox{**NOTE:}$  For California and Arizona use a volume of no less than 5 gallons per acre for aerial applications.

#### Boll Maturity

A boll is mature when it is too hard to be dented when squeezed between thumb and fingers, too hard to be sliced with a sharp knife, and when the seed coat becomes light brown in color.

#### Use Limitations

- Do not exceed a maximum of 2.0 lb. ai/A for combined uses of PLUCK COTTON BOLL OPENER per acre per year.
- Boll Opening: Do not tank mix PLUCK COTTON BOLL OPENER with a desiccant if the cotton is to be spindle harvested.
- Pre-Condition for Defoliation: Do not tank mix PLUCK COTTON BOLL OPENER with desiccants unless plant desiccation is required. Do not use a defoliant before there is sufficient mature unopened bolls to produce the desired yield (see General Information section on how to test for boll maturity).

When to Harvest: Do not harvest cotton sooner than 7 days after a treatment with PLUCK COTTON BOLL OPENER. Observe the treated crop and harvest when optimum boll opening has been reached. Too early harvest might reduce the full advantage of the treatment and too late a harvest may result in reduced quality and loss of lint which will drop from the plant.

# TOBACCO (Flue-Cured Only)

CROP	PLUCK COTTON	SPRAY VOLUME	SPECIFIC DIRECTIONS	
SITUATION	BOLL OPENER	GALLONS/ACRE		•
1	PINTS/ACRE		•	e

Directed Spray Application	1 1/3	50-60	Use drop nozzles. Choose TG or OC spray tips designed to apply 50-60 gpa at 35-40 psi and at tractor speed of 2-3 mph. Use 2 nozzles per row; one on each side of the row dropped low enough to direct the spray to the leaves to be ripened and harvested. Thorough spray coverage is essential. With a directed spray, be sure to harvest all leaves with 20% or more yellowing.
Over-The-Top Application	1 1/3-2 2/3	40-60	Treat only when leaves remaining on the stalk are mature. To ensure remaining leaves are mature, test spray several tobacco plants as described under the section "Application Timing." Use the lower rate in a normally mature crop when experience indicates that minimum ripening inducement is required. Use the higher rate when the crop is heavy and has a tendency to be more rank or when temperatures are lower than normal. Always test spray to determine if the tobacco is mature enough to respond to treatment with PLUCK COTTON BOLL OPENER.  Apply over-the-top PLUCK COTTON BOLL OPENER spray as a fine mist using three nozzles (one nozzle tip over the center of the plant, and one on each side) so all leaves are covered thoroughly, similar to the application pattern of systemic sucker control agents. Use a spray pressure of 40 to 60 psi.

## USE LIMITATIONS

- Do not apply PLUCK COTTON BOLL OPENER to immature leaves as this can result in unsatisfactory coloring, weight loss and reduced leaf quality.
- Do not allow the crop to over ripen in the field after using PLUCK COTTON BOLL OPENER, since this may cause some reduction in yield and quality.
- Do not treat before anticipated major storm which could prevent harvest and result in crop loss.
- Do not apply PLUCK COTTON BOLL OPENER if rain is expected within 4 hours.
- \* Do not harvest tobacco treated with PLUCK COTTON BOLL OPENER sooner than 24 days after last application.

# APPLICATION TIMING

Successful results with PLUCK COTTON BOLL OPENER call for treatment when leaves are mature, not overly rank green when sprayed. To easily determine the proper treatment timing and the number of leaves per

stalk ready for harvest, test spray several plants in more than one location in each field and observe the response. Mature leaves will begin to yellow in 24 to 72 hours. Test leaves that fail to yellow in 72 hours are not mature and are not ready for PLUCK COTTON BOLL OPENER treatment. Wait a few days to permit further natural maturing, then make another test spray or "maturity" check.

When you have confirmed the number of leaves per plant that will color, you can determine the number of acres to treat in order to fill the barn.

Prepare your test spray by mixing one teaspoon of PLUCK COTTON BOLL OPENER in 1 quart of water. Spray each test plant with about 1 oz of this mixture, covering all leaves with a fine mist. PLUCK COTTON BOLL OPENER will not color immature sprayed leaves.

## WHEN TO HARVEST

All mature, sprayed leaves will begin to color within 24 to 72 hours after PLUCK COTTON BOLL OPENER application. The yellowing process is weather dependent; cool weather will delay, while hot, sunny weather can speed up the process. Harvest treated tobacco when leaves have reached the desired color intensity.

Do not allow tobacco to become over ripe before starting harvest. Leaf drop can occur when tobacco is over ripe and left on the stalk. If a number of the bottom leaves have yellowed at the time of treatment, they should be harvested prior to spraying with PLUCK COTTON BOLL OPENER.

With an over-the-top application, harvesting can commence 24 hours after PLUCK COTTON BOLL OPENER application depending on weather conditions or to avoid over ripe tobacco. Tobacco harvested 24 hours after treatment will require more time in the coloring phase of the curing process.

# CURING PLUCK COTTON BOLL OPENER TREATED TOBACCO

Curing procedures are as much an art as a science and each cure must be judged on the basis of tobacco condition, interval between treatment and harvest, weather and type of curing facility before prescription temperature and ventilation schedules can be established. To obtain maximum quality, care must be taken to observe and control the curing process closely, especially during the late "coloring" and early "drying" stages of the leaf.

PLUCK COTTON BOLL OPENER treated tobacco will have started the coloring process when harvested, reducing the time required in the coloring phase of curing. Treated tobacco should be dried faster. If tobacco leaves are green or contain some green when harvested, it may be

necessary to color them for a few hours. If the leaves are completely yellow, temperature and ventilation must be adjusted in a manner to dry the tobacco as fast as possible without scalding. Once the leaf is dried (3/4 dry), you should follow normal procedures for curing. Since PLUCK COTTON BOLL OPENER treated leaves cure faster, treated and untreated leaves should not be cured together in the same barn.

# **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. To the extent consistent with applicable law, 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.

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NOTIFICATION
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