

228-607

7/10/2009

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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Ms. Lizbeth Rea
Product Registration
Nufarm Americas, Inc.,
150 Harvester Drive, Suite 200
Burr Ridge, IL 60527

JUL 10 2009

Subject: Notification for Label Revisions under PRN 98-10, and PRN 2007-4
Storage & Disposal and Primary Brand Name and Alternate Brand Name

Dear Registrant:

The Agency is in receipt of your Application(s) for Pesticide Notification under Pesticide Registration Notices (PRN) 98-10 and 2007-4 dated April 29 and June 3, 2009 for:

EPA Registration 228-607 "PBN "First Pick Cotton Harvest Aid/Defoliant" and ABN "Cotton Quick Cotton Harvest Defoliant"

The Registration Division (RD) has conducted a review of the request(s) for applicability under PRN 98-10, and PRN 2007-4 and finds that the label changes requested fall within the scope of PRN-98-10 and PRN-2007-4. 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 non-refillable 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 Owen F. Beeder of my staff at 703-308-8899.

Sincerely,

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



United States
Environmental Protection Agency
 Washington, DC 20460

Registration
 Amendment
 Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number 228-607	2. EPA Product Manager Tony Kish	3. Proposed Classification <input type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) FirstPick(TM) Cotton Harvest Aid/Defoliant	PM# 22	
5. Name and Address of Applicant (Include ZIP Code) Nufarm Americas, Inc. 105 Harvester Drive, Suite 200 Burr Ridge, IL 60527 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input 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 the addition of an alternate brand name (CottonQuik Cotton Harvest Aid/Defoliant) per PRN 98-10. This notification is consistent with the provisions of PRN 98-10 and EPA regulations at 40 CFR 152.46. 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 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the requirements of 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 FIFRA.

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
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		<input type="checkbox"/> Metal	<input checked="" type="checkbox"/> Plastic
* Certification must be submitted	If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt.	<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
				<input type="checkbox"/> Other (Specify) _____	
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container	4. Size(s) Retail Container 2.5 gal., 250 gal.	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"/> Paper glued <input type="checkbox"/> Stenciled		<input checked="" type="checkbox"/> Other crack and peel			

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Lizbeth Rea	Title Registration Manager	Telephone No. (Include Area Code)
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature 	3. Title Registration Manager	
4. Typed Name Lizbeth Rea	5. Date 06/03/2009	



3
22

Nufarm Americas, Inc.

Lizbeth Rea

Registration Manager

150 Harvester Drive, Suite 200

Burr Ridge, IL 60527

Phone: 919.655.0701 Fax: 919.342.5176

liz.rea@us.nufarm.com

June 3, 2009

COURIER DELIVERY

Owen Beeder (Team 22)
Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
U.S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202-4501

RE: FirstPick Cotton Harvest Aid/Defoliant (EPA Reg. No. 228-607)
Alternate Brand Name per PRN 98-10

Dear Mr. Beeder,

As you requested, attached is the revised Application for Pesticide Registration form (8570-1), which incorporates the necessary language for changes to the label per PR Notice 2007-4.

Please contact me at 919/655-0701 if you have questions and/or comments.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lizbeth Rea', with a long horizontal flourish extending to the right.

Lizbeth Rea
Regulatory Manager

FirstPick™ CottonQuik®

Cotton Harvest Aid/Defoliant

Active Ingredients *	By Weight
Urea sulfate**	58.6%
Ethephon (2-Chloroethylphosphonic acid)	18.3%
Inert Ingredients	23.1%
TOTAL	100.0%

*This Product Contains 2.28 Pounds of Ethephon Per Gallon Density in Pound Per Gallon @ 68°F ... 12.45

**Monocarbamide dihydrogen sulfate

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 the label, find someone to explain it to you in detail.)

SEE INSIDE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

For Chemical Spill, Leak, Fire, or Exposure Call CHEMTREC (800) 424-9300

For Medical Emergencies Only, Call (877) 325-1840

FIRST AID

IF IN EYES:	<ul style="list-style-type: none">• 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:	<ul style="list-style-type: none">• 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:	<ul style="list-style-type: none">• 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 the poison control center or doctor.• Do not give anything by mouth to an unconscious person.
IF INHALED:	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.• Call a poison control center or doctor for further treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-325-1840 for emergency medical treatment information.

NOTE TO PHYSICIAN: There is no specific antidote. Treat symptomatically. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Acid ingestion may cause gastroesophageal perforation. Perforation may occur within 72 hours, but along with abscess formation, may occur weeks later. Due to the corrosive property of this material, emesis is contraindicated. Probable mucosal damage may contraindicate the use of gastric lavage. The use of alkaline substances to neutralize the acid is contraindicated. Victims of severe overexposure by inhalation should be kept under medical observation for up to 72 hours for delayed onset of pulmonary edema.

EPA REG. NO. 228-607
EPA EST. NO. 34704-MS-001

NET CONTENTS:

000228-00607.20090429.EPA.NEW

MANUFACTURED FOR
NUFARM AMERICAS, INC.
150 HARVESTER DRIVE
BURR RIDGE, IL 60527

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

Corrosive. Causes irreversible eye damage. Do not get in eyes or on clothing. Harmful if swallowed, inhaled or absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist.

PERSONAL PROTECTIVE EQUIPMENT

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-resistant category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Shoes plus socks
- Protective eyewear

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/maintaining PPE. If no such instruction for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROL STATEMENTS: 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.

Important: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "Applicators and Other Handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS

USERS SHOULD: Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS

This product may be harmful to wildlife directly sprayed. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. Do not apply in any manner not specified on the label.

PHYSICAL OR CHEMICAL HAZARDS

Do not allow this product to be heated above 176°F, as the quality of the product may deteriorate. If this product is heated above 230°F, vigorous decomposition may occur. Do not weld equipment containing this product.

CLOTHING: This product can attack cotton, nylon and leather clothing. If this product contacts clothing of this type, flush with plenty of water to minimize damage.

DO NOT MIX with materials containing chlorates as this could result in the formation of hypochlorous acids which on heating will emit toxic chlorine fumes.

DO NOT APPLY this product through any type of irrigation system.

DO NOT PLANT another crop within 30 days after treatment.

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

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

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Follow all applicable directions, restrictions and precautions on the EPA-registered label. 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. This label must be in the possession of the user at the time of application.

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 protection of agricultural workers on farms, forests, nurseries, and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements in this labeling about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 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:

- Long-sleeved shirt and long pants - Chemical-resistant gloves
- Shoes plus socks
- Protective eyewear

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

SPRAY DRIFT MANAGEMENT

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

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

• Importance of Droplet Size

The most effective way to reduce drift potential is to apply large droplets (> 150 - 200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and past pressure may affect how an applicator balances drift control and coverage. **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** sections of this label.

• Controlling Droplet Size - General Techniques

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. **WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.**
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles.

• Controlling Droplet Size - Aircraft

- **Number of Nozzles** - Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations.
- **Nozzle Type** - Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.
- **Boom Length** - The boom length should not exceed 3/4 of the wing or rotor length - longer booms increase drift potential.
- **Application Height** - Application more than 10 ft above the canopy increases the potential for spray drift.

• Boom Height (Ground)

Setting the boom at the lowest labeled height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

• **Wind**

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. **AVOID GUSTY OR WINDLESS CONDITIONS.**

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 hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

• **Temperature Inversions**

Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature 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.

• **Shielded Sprayers**

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of product.

APPLICATION INFORMATION

This product, or a tank mix of this product and an approved partner, when applied as a foliar spray to cotton, provides fast, effective defoliation of cotton plants and increases the speed and efficacy of opening of mature bolls. This product may be applied alone to cotton that is very physiologically mature; however, under most conditions, most consistent defoliation and regrowth inhibition is achieved with tank mixes of this product and an approved defoliant. Typically, satisfactory defoliation is achieved in 7 to 10 days. Under adverse conditions, such as low temperatures and/or toughened foliage, up to 14 days may be required for satisfactory defoliation. This product provides limited control of cotton regrowth.

APPLICATION TIMING

Apply this product when sufficient, mature, unopened bolls have developed to produce the desired cotton yield (approximately 65% opened bolls in most cases). Consult University recommendations in your area for testing of boll maturity. Treatment with this product before the appropriate number of bolls have reached maturity may result in reduction of yield and lint quality.

APPLICATION RATES

FirstPickCottonQuik Tank Mixes

Apply this product at 1.5 to 2 quarts per acre, in tank mix with a defoliant for defoliation and boll opening (see Table below). Under less than optimum conditions, and with rank cotton, higher rates of the defoliant are required.

Defoliant Rates for

Defoliant	FirstPickCottonQuik tank mixes
Aim EC	0.5-1.0 fl oz/A
Def 6/Folex 6EC	4.0-12 fl oz/A*
FREEFALL™ SC/Dropp SC	0.8-3.2 fl oz/A
ET	1.0-2.0 fl oz/A
Ginstar EC	3.0-8.0 fl oz/A
Harvade 5F	4.0-6.4 fl oz/A
Resource	3.0-6.0 fl oz/A

*Under extreme cool, wet conditions, the rate of Def 6/ Folex may be increased to 24 fl oz.

For most consistent regrowth inhibition, this product should be applied in a tank mix with a defoliant that contains the active ingredient thidiazuron; such as FREEFALL SC.

This product may also be applied in tank mixes with any approved desiccants/herbicides, including Gramoxone Inteon, and Roundup (and other labeled glyphosate products).

Refer to product labels for rates and additional product information. Tank mixes must be made in accordance with the more restrictive of label limitations and precautions. No label dosage rate should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing.

Defoliation Enhancement. This product may be applied at 0.4 quarts per acre in tank mixes with Def 6/Folex or Dropp SC/FREEFALL SC for defoliation enhancement. Refer to the Def 6/Folex and Dropp SC/FREEFALL SC labels for rates of application. Application of this product at 0.4 quarts per acre in tank mixes for defoliation enhancement is not sufficient to provide substantial boll opening.

Planned Two-Pass Defoliation. This product may be used in a planned two-pass defoliation program. Apply this product at 0.4 to 1.5 quarts per acre in a tank mix with any of the defoliant in the table above. Make the second application at 4 to 7 days after the initial application using this product at 1.5 to 2.5 quarts per acre in a tank mix with any of the defoliant in the table above. Consult your agricultural advisor, University contact or Extension Service for recommended defoliation practices for your area.

First Pick Cotton Quik Alone

Apply 3.0 to 3.5 quarts of this product per acre for effective defoliation and boll opening of very mature cotton under optimum conditions, i.e., relatively dry with average temperatures of 80°F and above.

SPRAY VOLUMES

To ensure optimum activity, thorough and uniform spray coverage is required. It is essential that cotton leaves and unopened bolls are contacted in order to achieve satisfactory results. Apply as a dilute spray in 10 to 30 gallons of water per acre by ground application or 3 to 10 gallons of water per acre by aerial application.

SPRAY ADDITIVES

The use of adjuvants with this product is required only where necessary for optimum performance of the tank mix partner. To reduce the potential for desiccation of cotton foliage, minimum rates of nonionic surfactant should be used.

USE LIMITATIONS

Two applications of this product are allowed per year, but do not exceed a maximum of 3.5 quarts of this product per acre per year (equivalent to 2.0 pounds ethephon active ingredient per acre per year).

The maximum amount of ethephon active ingredient that can be applied to cotton per acre per year from all sources of ethephon is 2.0 pounds.

Do not harvest cotton sooner than 7 days after treatment with this product.

MIXING PROCEDURE

Add 1/2 to 3/4 of the required amount of water to the spray tank and begin agitation. Add any dry formulations first. Then add this product. Next add any other liquid formulations. Add adjuvants last before adding the remaining amount of water. Prepare only as much spray solution as can be used on the day of mixing. Do not allow the spray solution to stand overnight. Do not permit undiluted this product to contact painted surfaces, spray equipment or any airplane parts. All spills should be rinsed immediately with plenty of water.

EQUIPMENT CLEANING

This product is entirely water soluble. Rinse equipment inside and out at the end of each day with ample quantity of water. Rinse the empty tank with fresh water and spray rinsate over the labeled crop. Rinse the exterior well with water and flush the liquid spray system with water. Run the pump long enough to clear the lines and nozzles of product residues. If spraying is interrupted, close the bottom tank valve and flush the liquid spray system with fresh water.

EQUIPMENT GUIDANCE

This product, like all ethephon-containing products, produces an acidic solution in the spray tank. Before using these products, check all equipment for durable components and change out suspect parts for acid resistant parts. Stainless steel, polypropylene, polyethylene, 6061 and 7075 aluminum, EPDM, Viton, Teflon, Kynar, nylon nozzle bodies, ceramic, and glass filled poly are preferred materials. Avoid galvanized, unpainted mild steel, 2024 aluminum, cast iron, nylon impellers, polyacetal, acrylic plastic, leather seals, and cardboard gaskets. Check with a reputable equipment supplier if you have questions.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Material crystallizes below 32°F. Do not heat above 176°F. Materials recommended for use with this product include polyethylene, polypropylene, PVC, CPVC, fiberglass made with reinforced resins such as polyesters and epoxides, most rubbers and 316 stainless steel.

Do not expose mild steel, leather, nylon, or acid sensitive resins such as delrin and celcon to undiluted product.

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 Containers 5 Gallons or Less: 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 1/4 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. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

Nonrefillable containers larger than 5 gallons: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple-rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable containers larger than 5 gallons: Refillable container. Refill this container with 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 a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Or

Refillable Container: Refill this container with pesticide only. Do not reuse this container for any other purpose. Close all openings and replace all caps. Contact Nufarm's Customer Service Department at 1-800-345-3330 to arrange for return of the empty refillable container.

WARRANTY DISCLAIMER

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE

PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

LIMITATION OF LIABILITY

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL MANUFACTURER OR SELLER BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR FOR DAMAGES IN THEIR NATURE OF PENALTIES RELATING TO THE GOODS SOLD, INCLUDING USE, APPLICATION, HANDLING, AND DISPOSAL. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, MANUFACTURER OR SELLER SHALL NOT BE LIABLE TO BUYER OR USER BY WAY OF INDEMNIFICATION TO BUYER OR TO CUSTOMERS OF BUYER, IF ANY, OR FOR ANY DAMAGES OR SUMS OF MONEY, CLAIMS OR DEMANDS WHATSOEVER, RESULTING FROM OR BY REASON OF, OR ARISING OUT OF THE MISUSE, OR FAILURE TO FOLLOW LABEL WARNINGS OR INSTRUCTIONS FOR USE, OF THE GOODS SOLD BY MANUFACTURER OR SELLER TO BUYER. ALL SUCH RISKS SHALL BE ASSUMED BY THE BUYER, USER, OR ITS CUSTOMERS. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S OR USER'S EXCLUSIVE REMEDY, AND MANUFACTURER'S OR SELLER'S TOTAL LIABILITY SHALL BE FOR DAMAGES NOT EXCEEDING THE COST OF THE PRODUCT.

If you do not agree with or do not accept any of directions for use, the warranty disclaimers, or limitations on liability, do not use the product, and return it unopened to the Seller, and the purchase price will be refunded.

Gramoxone Inteon is a registered trademark of Syngenta.
Def, Dropp and Ginstar are registered trademarks of Bayer.
Folex is a registered trademark of AmVac Chemical Corporation.
Harvade is a registered trademark of Crompton Corporation.
Roundup is a registered trademark of Monsanto Technology LLC.
Aim is a trademark of FMC.
ET is a trademark of Nichino America, Inc.
Resource is a trademark of Valent USA Corporation.

PDF Create! 5.11.15
www.nuance.com

11/22

**NOT TO BE PART OF THE PRINTED LABEL
FOR INTERNAL REGULATORY USE ONLY**

| 04/08/2009

Document created from DuPont™ FirstPick CottonQuik™ cotton harvest aid/defoliant label transferred from DuPont to Nufarm for EPA review.

PDF Create! 5 Trial
www.nuance.com



United States
Environmental Protection Agency
Washington, DC 20460

<input type="checkbox"/>	Registration
<input type="checkbox"/>	Amendment
<input checked="" type="checkbox"/>	Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number 228-607	2. EPA Product Manager Tony Kish	3. Proposed Classification <input type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) DuPont™ ETK-2201 cotton harvest aid/defoliant	PM# 22	
5. Name and Address of Applicant (Include ZIP Code) Nufarm Americas, Inc. 105 Harvester Drive, Suite 200 Burr Ridge, IL 60527 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(ii), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input 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 a label change in primary brand name and minor label changes per PRN 98-10 and in Container Disposal statement per PRN 2007-4. This notification is consistent with the provisions of PRN 98-10, PRN 2007-4 and EPA regulations at 40 CFR 152.46, 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 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the requirements of 40 CFR 152.46, 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 FIFRA.

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
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		<input type="checkbox"/> Metal	<input checked="" type="checkbox"/> Plastic
* Certification must be submitted	If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt	<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
				Other (Specify) _____	
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container	4. Size(s) Retail Container 2.5 gal, 250 gal.	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"/> Paper, glued <input type="checkbox"/> Stenciled			<input checked="" type="checkbox"/> Other crack and peel		

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)					
Name Lizbeth Rea		Title Registration Manager		Telephone No. (Include Area Code)	
<p align="center">Certification</p> <p>I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.</p>					6. Date Application Received (Stamped)
2. Signature 			3. Title Registration Manager		
4. Typed Name Lizbeth Rea		5. Date 06/02/2009			



13
22

Nufarm Americas, Inc.

Lizbeth Rea

Registration Manager

150 Harvester Drive, Suite 200

Burr Ridge, IL 60527

Phone: 919.655.0701 Fax: 919.342.5176

liz.rea@us.nufarm.com

June 2, 2009

COURIER DELIVERY

Owen Beeder (Team 22)
Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
U.S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202-4501

RE: DuPont™ ETK-2201 cotton harvest aid/defoliant (EPA Reg. No. 228-607)
Label Changes and Primary Brand Name per PRN 98-10

Dear Mr. Beeder,

As you requested, attached is the revised Application for Pesticide Registration form (8570-1), which incorporates the necessary language for changes to the label per PR Notice 2007-4.

Please contact me at 919/655-0701 if you have questions and/or comments.

Sincerely,

A handwritten signature in black ink that reads 'Lizbeth Rea'.

Lizbeth Rea
Regulatory Manager

14/22



United States
Environmental Protection Agency
Washington, DC 20460

<input type="checkbox"/>	Registration
<input type="checkbox"/>	Amendment
<input checked="" type="checkbox"/>	Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number 228-607	2. EPA Product Manager Tony Kish	3. Proposed Classification <input type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) DuPont™ ETK-2201cotton harvest aid/defoliant	PM# 22	
5. Name and Address of Applicant (Include ZIP Code) Nufarm Americas, Inc. 105 Harvester Drive, Suite 200 Burr Ridge, IL 60527 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input 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 a change in primary brand name and minor label changes per PRN 98-10. This notification is consistent with the provisions of PRN 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 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PRN 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 FIFRA.

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	2. Type of Container <input type="checkbox"/> Metal <input 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 type="checkbox"/> Label <input type="checkbox"/> Container	4. Size(s) Retail Container	5. Location of Label Directions <input 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"/> Paper glued <input type="checkbox"/> Stenciled		<input type="checkbox"/> Other _____

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)

Name Lizbeth Rea	Title Registration Manager	Telephone No. (Include Area Code)
---------------------	-------------------------------	-----------------------------------

Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature 	3. Title Registration Manager	
4. Typed Name Lizbeth Rea	5. Date 04/29/2009	



15
/ 22
Nufarm Americas, Inc.

Lizbeth Rea
Registration Manager
150 Harvester Drive, Suite 200
Burr Ridge, IL 60527
Phone: 919.655.0701 Fax: 919.342.5176
liz.rea@us.nufarm.com

April 29, 2009

COURIER DELIVERY

Tony Kish (PM 22)
Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
U.S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202-4501

RE: DuPont™ ETK-2201 cotton harvest aid/defoliant (EPA Reg. No. 228-607)
Label Changes and Primary Brand Name per PRN 98-10

Dear Mr. Kish,

DuPont™ ETK-2201 cotton harvest aid/defoliant was transferred from DuPont to Nufarm on January 16, 2009. As you can expect, the format of the label and primary brand name is not consistent with Nufarm labels. The primary name is to be changed from DuPont™ ETK-2201 cotton harvest aid/defoliant to FirstPick™ Cotton Harvest Aid/Defoliant. In addition, the information in the label has been reformatted to be consistent with all other Nufarm labels. The information has not been changed just the order in which it appears.

The following documents are included with this letter in support of our request to add an alternate brand name and make minor changes to the label under PR Notice 98-10.

- Completed Application for Registration (EPA Form 8570-1)
- One (1) copy of the DuPont™ ETK-2201 cotton harvest aid/defoliant labeling with the changes tracked.
- Five (5) copies of the FirstPick™ Cotton Harvest Aid/Defoliant label with changes incorporated.

Please contact me at 919/655-0701 if you have questions and/or comments.

Sincerely,

A handwritten signature in black ink that reads 'Lizbeth Rea'.

Lizbeth Rea
Registration Manager

16
22

FirstPick™

Cotton Harvest Aid/Defoliant

Active Ingredients *	By Weight
Urea sulfate**	58.6%
Ethephon (2-Chloroethylphosphonic acid)	18.3%
Inert Ingredients	23.1%
TOTAL	100.0%

*This Product Contains 2.28 Pounds of Ethephon Per Gallon Density in Pound Per Gallon @ 68°F ... 12.45
 **Monocarbamide dihydrogen sulfate

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 the label, find someone to explain it to you in detail.)

SEE INSIDE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300
 For Medical Emergencies Only, Call (877) 325-1840

FIRST AID

IF IN EYES:	<ul style="list-style-type: none"> • 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:	<ul style="list-style-type: none"> • 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:	<ul style="list-style-type: none"> • 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 the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF INHALED:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-325-1840 for emergency medical treatment information.

NOTE TO PHYSICIAN: There is no specific antidote. Treat symptomatically. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Acid ingestion may cause gastroesophageal perforation. Perforation may occur within 72 hours, but along with abscess formation, may occur weeks later. Due to the corrosive property of this material, emesis is contraindicated. Probable mucosal damage may contraindicate the use of gastric lavage. The use of alkaline substances to neutralize the acid is contraindicated. Victims of severe overexposure by inhalation should be kept under medical observation for up to 72 hours for delayed onset of pulmonary edema.

EPA REG. NO. 228-607
 EPA EST. NO. 34704-MS-001

MANUFACTURED FOR
 NUFARM AMERICAS, INC.
 150 HARVESTER DRIVE
 BURR RIDGE, IL 60527

NET CONTENTS:

000228-00607.20090429.EPA.NEW

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

Corrosive. Causes irreversible eye damage. Do not get in eyes or on clothing. Harmful if swallowed, inhaled or absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist.

PERSONAL PROTECTIVE EQUIPMENT

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-resistant category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Shoes plus socks
- Protective eyewear

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/maintaining PPE. If no such instruction for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROL STATEMENTS: 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.

Important: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "Applicators and Other Handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS

USERS SHOULD: Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS

This product may be harmful to wildlife directly sprayed. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. Do not apply in any manner not specified on the label.

PHYSICAL OR CHEMICAL HAZARDS

Do not allow this product to be heated above 176°F, as the quality of the product may deteriorate. If this product is heated above 230°F, vigorous decomposition may occur. Do not weld equipment containing this product.

CLOTHING: This product can attack cotton, nylon and leather clothing. If this product contacts clothing of this type, flush with plenty of water to minimize damage.

DO NOT MIX with materials containing chlorates as this could result in the formation of hypochlorous acids which on heating will emit toxic chlorine fumes.

DO NOT APPLY this product through any type of irrigation system.

DO NOT PLANT another crop within 30 days after treatment.

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

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

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Follow all applicable directions, restrictions and precautions on the EPA- registered label. 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. This label must be in the possession of the user at the time of application.

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 protection of agricultural workers on farms, forests, nurseries, and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements in this labeling about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 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:

- Long-sleeved shirt and long pants – Chemical-resistant gloves
- Shoes plus socks
- Protective eyewear

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

SPRAY DRIFT MANAGEMENT

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

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

• Importance of Droplet Size

The most effective way to reduce drift potential is to apply large droplets (>150 - 200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. 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** sections of this label.

• Controlling Droplet Size - General Techniques

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles.

• Controlling Droplet Size - Aircraft

- **Number of Nozzles** - Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations.
- **Nozzle Type** - Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.
- **Boom Length** - The boom length should not exceed 3/4 of the wing or rotor length - longer booms increase drift potential.
- **Application Height** - Application more than 10 ft above the canopy increases the potential for spray drift.

• Boom Height (Ground)

Setting the boom at the lowest labeled height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

• **Wind**

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. AVOID GUSTY OR WINDLESS CONDITIONS.

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 hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

• **Temperature Inversions**

Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature 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.

• **Shielded Sprayers**

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of product.

APPLICATION INFORMATION

This product, or a tank mix of this product and an approved partner, when applied as a foliar spray to cotton, provides fast, effective defoliation of cotton plants and increases the speed and efficacy of opening of mature bolls. This product may be applied alone to cotton that is very physiologically mature; however, under most conditions, most consistent defoliation and regrowth inhibition is achieved with tank mixes of this product and an approved defoliant. Typically, satisfactory defoliation is achieved in 7 to 10 days. Under adverse conditions, such as low temperatures and/or toughened foliage, up to 14 days may be required for satisfactory defoliation. This product provides limited control of cotton regrowth.

APPLICATION TIMING

Apply this product when sufficient, mature, unopened bolls have developed to produce the desired cotton yield (approximately 65% opened bolls in most cases). Consult University recommendations in your area for testing of boll maturity. Treatment with this product before the appropriate number of bolls have reached maturity may result in reduction of yield and lint quality.

APPLICATION RATES

FirstPick Tank Mixes

Apply this product at 1.5 to 2 quarts per acre, in tank mix with a defoliant for defoliation and boll opening (see Table below). Under less than optimum conditions and with rank cotton, higher rates of the defoliant are required.

Defoliant	Defoliant Rates for FirstPick tank mixes
Aim EC	0.5-1.0 fl oz/A
Def 6/Folex 6EC	4.0-12 fl oz/A*
FREEFALL™ SC/Dropp SC	0.8-3.2 fl oz/A
ET	1.0-2.0 fl oz/A
Ginstar EC	3.0-8.0 fl oz/A
Harvade 5F	4.0-6.4 fl oz/A
Resource	3.0-6.0 fl oz/A

*Under extreme cool, wet conditions, the rate of Def 6/ Folex may be increased to 24 fl oz.

For most consistent regrowth inhibition, this product should be applied in a tank mix with a defoliant that contains the active ingredient thidiazuron, such as FREEFALL SC.

This product may also be applied in tank mixes with any approved desiccants/herbicides, including Gramoxone Inteon, and Roundup (and other labeled glyphosate products).

Refer to product labels for rates and additional product information. Tank mixes must be made in accordance with the more restrictive of label limitations and precautions. No label dosage rate should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing.

Defoliation Enhancement. This product may be applied at 0.4 quarts per acre in tank mixes with Def 6/Folex or Dropp SC/FREEFALL SC for defoliation enhancement. Refer to the Def 6/Folex and Dropp SC/FREEFALL SC labels for rates of application. Application of this product at 0.4 quarts per acre in tank mixes for defoliation enhancement is not sufficient to provide substantial boll opening.

Planned Two-Pass Defoliation. This product may be used in a planned two-pass defoliation program. Apply this product at 0.4 to 1.5 quarts per acre in a tank mix with any of the defoliant in the table above. Make the second application at 4 to 7 days after the initial application using this product at 1.5 to 2.5 quarts per acre in a tank mix with any of the defoliant in the table above. Consult your agricultural advisor, University contact or Extension Service for recommended defoliation practices for your area.

FirstPick Alone

Apply 3.0 to 3.5 quarts of this product per acre for effective defoliation and boll opening of very mature cotton under optimum conditions, i.e., relatively dry with average temperatures of 80°F and above.

SPRAY VOLUMES

To ensure optimum activity, thorough and uniform spray coverage is required. It is essential that cotton leaves and unopened bolls are contacted in order to achieve satisfactory results. Apply as a dilute spray in 10 to 30 gallons of water per acre by ground application or 3 to 10 gallons of water per acre by aerial application.

SPRAY ADDITIVES

The use of adjuvants with this product is required only where necessary for optimum performance of the tank mix partner. To reduce the potential for dessication of cotton foliage, minimum rates of nonionic surfactant should be used.

USE LIMITATIONS

Two applications of this product are allowed per year, but do not exceed a maximum of 3.5 quarts of this product per acre per year (equivalent to 2.0 pounds ethephon active ingredient per acre per year).

The maximum amount of ethephon active ingredient that can be applied to cotton per acre per year from all sources of ethephon is 2.0 pounds.

Do not harvest cotton sooner than 7 days after treatment with this product.

MIXING PROCEDURE

Add 1/2 to 3/4 of the required amount of water to the spray tank and begin agitation. Add any dry formulations first. Then add this product. Next add any other liquid formulations. Add adjuvants last before adding the remaining amount of water. Prepare only as much spray solution as can be used on the day of mixing. Do not allow the spray solution to stand overnight. Do not permit undiluted this product to contact painted surfaces, spray equipment or any airplane parts. All spills should be rinsed immediately with plenty of water.

EQUIPMENT CLEANING

This product is entirely water soluble. Rinse equipment inside and out at the end of each day with ample quantity of water. Rinse the empty tank with fresh water and spray rinsate over the labeled crop. Rinse the exterior well with water and flush the liquid spray system with water. Run the pump long enough to clear the lines and nozzles of product residues. If spraying is interrupted, close the bottom tank valve and flush the liquid spray system with fresh water.

EQUIPMENT GUIDANCE

This product, like all ethephon-containing products, produces an acidic solution in the spray tank. Before using these products, check all equipment for durable components and change out suspect parts for acid resistant parts. Stainless steel, polypropylene, polyethylene, 6061 and 7075 aluminum, EPDM, Viton, Teflon, Kynar, nylon nozzle bodies, ceramic, and glass filled poly are preferred materials. Avoid galvanized, unpainted mild steel, 2024 aluminum, cast iron, nylon impellers, polyacetal, acrylic plastic, leather seals, and cardboard gaskets. Check with a reputable equipment supplier if you have questions.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Material crystallizes below 32°F. Do not heat above 176°F. Materials recommended for use with this product include polyethylene, polypropylene, PVC, CPVC, fiberglass made with reinforced resins such as polyesters and epoxides, most rubbers and 316 stainless steel.

Do not expose mild steel, leather, nylon, or acid sensitive resins such as delrin and celcon to undiluted product.

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 Containers 5 Gallons or Less: 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 1/4 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. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

Nonrefillable containers larger than 5 gallons: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable containers larger than 5 gallons: Refillable container. Refill this container with 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 a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Or

Refillable Container: Refill this container with pesticide only. Do not reuse this container for any other purpose. Close all openings and replace all caps. Contact Nufarm's Customer Service Department at 1-800-345-3330 to arrange for return of the empty refillable container.

WARRANTY DISCLAIMER

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE

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