

352-691

07/29/2005

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ACCEPTED
JUL 29 2005
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 1812-361

Trace # 352-691

Super Boll®

plant regulator

Active Ingredients *	By Weight
Ethephon (2-Chloroethyl) phosphonic acid	55.4%
Inert Ingredients	44.6%
TOTAL	100.0%

*This Product Contains 6 Pounds Ethephon Per Gallon

EPA Reg. No. 1812-361

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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.)

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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF INHALED: 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.

NOTE TO PHYSICIAN: There is no specific antidote. All treatment should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred. Victims of severe overexposure, by inhalation, should be kept under medical observation for up to 72 hours for delayed onset of pulmonary edema. Probable mucosal damage may contraindicate the use of gastric lavage. This material is an acid, but use of alkaline substances to neutralize it is contraindicated

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies involving this product, call toll free 1-800-441-3637. See Label for Additional Precautions and Directions for Use.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER! Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed or absorbed through skin. Do not get in eyes, on skin or on clothing. Keep away from domestic animals. Wear goggles or face shield. Wear protective clothing and rubber gloves. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical resistance category selection sheet.

- Applicators and other handlers must wear:
- Coveralls over short-sleeved shirt and short pants
 - Chemical-resistant gloves made of any waterproof material, such as polyvinyl chloride, nitrile rubber, or butyl rubber
 - Chemical-resistant footwear plus socks
 - Protective eyewear
 - Chemical-resistant headgear for overhead exposure
 - Chemical-resistant apron when 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 the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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.

USER SAFETY RECOMMENDATIONS

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

ENVIRONMENTAL HAZARDS

Do not apply directly to water, 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 contaminate water used for irrigation or domestic purposes.

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DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for protection of agricultural workers on farms, forests, nurseries, and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry 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
- Chemical-resistant gloves made of any waterproof material, such as polyvinyl chloride, nitrile rubber, or butyl rubber
- Chemical-resistant shoes plus socks
- Protective eyewear
- 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.

GENERAL INFORMATION

COTTON

A foliar spray of SUPER BOLL® brand ethephon will accelerate opening of mature unopened cotton bolls and enhance defoliation which can result in earlier harvest with an increased recoverable yield. SUPER BOLL® treatment on cotton allows increased efficiency from a once over harvest.

TOBACCO (Flue-Cured)

A foliar spray of SUPER BOLL® promotes early, uniform yellowing of mature tobacco. SUPER BOLL® 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 SUPER BOLL® 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

SUPER BOLL® is compatible with "Def", "Folex", "Dropp", "Harvage", methyl parathion, "Guthion", and malathion. SUPER BOLL® may be applied in sequence or as a tank mixture (DO NOT TANK MIX WITH DESICCANTS IF COTTON IS TO BE SPINDLE HARVESTED). Follow all applicable use precautions and rate per acre recommendations on labels of products applied as tank mixtures or in sequence with SUPER BOLL®. 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.

NOTE: Under certain conditions, tank mixtures of SUPER BOLL® with desiccants containing sodium chlorate could result in the formation of hypochlorous acids which on heating will emit toxic chloride fumes.

EQUIPMENT CLEANING

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

Rinse thoroughly with a detergent and water all exposed acrylic plastic type 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.

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 cone 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**

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 the product.

USE PRECAUTIONS

Do not apply SUPER BOLL® through any type of irrigation system.

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

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 solution to stand overnight.

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COTTON

USE	Expected Conditions	SUPER BOLL® Rate		One Gallon SUPER BOLL® Treats	Spray Volume (Gals./A)		Application Timing
		Pts./A	Lbs. A.I.		Ground	Air **	
SUPER BOLL® Boll Opener*	Hot and dry 80°F or higher	1 1/3	1.0	6			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	15 - 50	2 - 5	
	Cool but above 65°F or Rank cotton	2 2/3	2.0	3			
SUPER BOLL® + Foliar Defoliant Tank Mix	High soil moisture or High fertility level or Rank cotton.	1/3	0.25	24	15 - 50	5 - 10	Apply 4 to 7 days prior to SUPER BOLL® boll opening application. To be used as a sequential treatment with, not in place of SUPER BOLL® boll opening treatment.
SUPER BOLL® - Dropp Defoliant Tank Mix	High soil moisture or High fertility level or Rank Cotton.	1/3	0.25	24	10 - 50	3 - 10	Apply 4 to 7 days prior to SUPER BOLL® boll opening application. To be used as a sequential treatment with, not in place of SUPER BOLL® boll opening treatment.
Pre-Conditioner for Defoliation	Hot, dry, above 80°F	2/3	0.5	12			Apply 4 to 7 days prior to defoliant. Enhances top crop defoliation reducing deterioration of bottom crop and allows for earlier harvest.
	Cool, above 65°F or Rank cotton.	1/3	1.0	6	15 - 50	2 - 5	

*Pretreatment with defoliants prior to SUPER BOLL® boll opening treatment.

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

**In California and Arizona use a volume of not 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 sharp knife and when the seed coat becomes light brown in color.

USE LIMITATIONS

Do not exceed a maximum of 2.0 pounds A.I./A for combined uses of ethephon per acre per year.

Boll Opening: Do not tank mix SUPER BOLL® with a desiccant if the cotton is to be spindle harvested.

Pre-Condition for Defoliation: Do not tank mix SUPER BOLL® with desiccant 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 COTTON

Do not harvest cotton sooner than 7 days after a treatment with SUPER BOLL®.

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.

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**TOBACCO
(Flue-Cured Only)**

Method of Use	SUPER BOLL® PL/A	Spray Volume Gals/A	Specific Directions
Directed Spray Application	1 1/3	50 - 60	Use drop nozzles. Choose TG or OC spray tips designed to apply 50 to 60 gpa at 35 to 40 psi and at tractor speed of 2 to 3 mph. Use two 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 "Proper Time of Treatment" section. 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 SUPER BOLL®. Apply over-the-top SUPER BOLL® 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 SUPER BOLL® 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 SUPER BOLL®, 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 SUPER BOLL® if rain is expected within 4 hours.

APPLICATION TIMING

Successful results with SUPER BOLL® 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 SUPER BOLL® 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 1 teaspoon of SUPER BOLL® in 1 quart of water. Spray each test plant with about 1 ounce of this mixture, covering all leaves with a fine mist. SUPER BOLL® will not color immature sprayed leaves.

WHEN TO HARVEST

All mature, sprayed leaves will begin to color within 24 to 72 hours after SUPER BOLL® 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. Harvest can commence 48 hours after SUPER BOLL® application. To determine harvest timing and avoid quality loss or leaf drop, closely monitor treated crop and weather conditions.

CURING SUPER BOLL® 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. SUPER BOLL® treated tobacco will have started its 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 SUPER BOLL® treated leaves cure faster, treated and untreated leaves should not be cured together in the same barn.

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STORAGE AND DISPOSAL
 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: Triple rinse (or equivalent) the empty containers. Then offer for recycling 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 burned, stay out of smoke.

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Griffin LLC
 Valdosta, GA 31601

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It is impossible to eliminate all risks associated with the use of this product. Such risks arise from weather conditions, soil factors, off target movement, unconventional farming techniques, presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of Griffin LLC. These risks can cause: ineffectiveness of the product, crop injury, or injury to non-target crops or plants

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