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# DRAFT LABEL



"...... A Growing Partnership With Nature"

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# **STAPLE® PLUS HIGHLIGHTS**

STAPLE® PLUS is a bag in a bottle consisting of a water soluble packet and a 'liquid concentrate separated by a bottle insert. One container will treat 10 acres.

Use only on improved cotton varieties that are designated as cotton with the "Roundup Ready" gene.2

 Apply STAPLE® PLUS postemergent to young actively growing weeds.

• STAPLE® PLUS may be applied by ground or aerial (except Arizona) equipment.

Do not apply within 60 days of harvest.

Always read and follow the label. 

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# **<b>OUPOND** Staple<sup>®</sup> Plus

# herbicide

For Use on "Roundup Ready" Cotton in the States of AL, AR, AZ, FL, GA, KS, LA, MO, MS, NC, NM, OK, SC, TN, TX, & VA.

# Soluble Powder in Water Soluble Packet/Water Soluble Liquid

Active Ingredient	By Weight
Pyrithiobac sodium	
Sodium 2-chloro-6-[(4,6-dimethoxy	
pyrimidin- 2-yl)thio]benzoate	1.7%
Glyphosate	
N-(phosphonomethyl) glysine, in the form of	
its isopropylamine salt	40.2%
Inert Ingredients	58.1%
TOTAL	100%

EPA Reg. No. 352-606

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# KEEP OUT OF REACH OF CHILDRENWARNINGAVISO

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 eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

**IF SWALLOWED:** This product will cause gastrointestinal tract irritation. Call a doctor or get medical attention. Do not induce vomiting. Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink quantities of water. Avoid alcohol.

**IF INHALED:** Remove individual to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

**IF ON SKIN:** Wash with plenty of soap and water. Get medical attention.

For medical emergencies ipvolving this product, call toll free 1-800-441-3637.

# ACCEPTED

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Under the Federal Insocucida, Fungicida, and Rodenticide Aci, as amended, for the posticide redstered under RPA Reg. No 3-52-606

# PRECAUTIONARY STATEMENTS HAZARD TO HUMANS AND DOMESTIC ANIMALS

**WARNING!** Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Harmful if swallowed or inhaled. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing.

# PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear: Long-sleeved shirt and long pants. Waterproof gloves. Shoes plus socks. Protective eyewear.

Discard clothing or 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 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 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. Users should immediately remove clothing if pesticide gets inside. Then wash thoroughly and put on clean clothing.

# **ENVIRONMENTAL HAZARDS**

This product is highly toxic to nontarget plants adjacent to area of application. Do not apply this product or allow it to drift to areas where endangered or desired plant species exist.

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 cleaning equipment or disposing of equipment wash waters. DRAFT LABEI

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# IMPORTANT

Injury to or loss of desirable trees or vegetation may result , from failure to observe the following:

Do not apply, drain or flush equipment on or near desirable trees or other plants or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots.

Do not use on lawns, walks, driveways, tennis courts, or similar areas. Prevent drift of spray to desirable plants.

Injury to or loss of adjacent sensitive crops and vegetation may result from failure to observe the following:

Avoid all direct or indirect (such as spray drift) contact with crops other than cotton.

Carefully observe all sprayer cleanup instructions both prior to and after using this product, as spray tank residue may damage crops other than cotton.

# **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 in your State responsible for pesticide regulation.

# AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

Coveralls. Waterproof gloves. Shoes plus socks. Protective eyewear.

Do not apply this product through any type of irrigation system.

DuPont will not be responsible for losses or damages resulting from the use of this product in any manner not specifically recommended by DuPont.

# **APPLICATION INFORMATION**

# **GENERAL INFORMATION**

DuPont STAPLE® PLUS herbicide consists of a water soluble powder packet and a liquid in a bottle, separated by a plastic insert.

One container of DuPont STAPLE® PLUS herbicide is a unit package to treat 10 acres of "Roundup Ready" cotton.

STAPLE® PLUS may be applied postemergence or postdirected to "Roundup Ready" cotton by ground application equipment.

STAPLE® PLUS may also be applied postemergence to "Roundup Ready" cotton and weeds by aerial equipment (except in Arizona).

When applied alone or in combination with DuPont STAPLE® herbicide, the total application of pyrithiobac sodium must not exceed 2.0 oz active ingredient per acre per year. This product when applied as directed contains 0.5 oz pyrithiobac sodium active ingredient per acre.

Do not add adjuvants.

## **BIOLOGICAL INFORMATION**

STAPLE® PLUS is for use only over-the-top or post-directed in improved cotton varieties that are designated as cotton with the "Roundup Ready" gene. Severe injury or death of cotton will result if any cotton varieties not properly designated as having the "Roundup Ready" gene are sprayed with this product. Avoid contact of herbicide with foliage, green stems, or fruit of crops, or any desirable plants and trees, other than crops with the "Roundup Ready" gene, since severe injury or destruction will result.

"Roundup Ready" cotton varieties must be purchased from an authorized licensed seed supplier. The designation, "Roundup Ready", indicates the cotton variety contains a patented proprietary trait.

STAPLE® PLUS is absorbed by weed foliage following postemergence application. Thorough coverage of target weed species, including the weed terminals or growing points, is required to obtain best results. When using a banded spray application, the band spray area should be of sufficient width to ensure thorough coverage of target weeds.

Growth of susceptible weeds is rapidly inhibited. Growing points and leaves of susceptible weeds appear yellow in 5-10 days. Death of leaf tissue and growing points will follow in some species, while others remain green but stunted and noncompetitive. Susceptible weeds are controlled in 14-28 days.

Do not apply STAPLE® PLUS on any crops other than "Roundup Ready" cotton. Most crops other than "Roundup Ready" cotton are sensitive to STAPLE® PLUS. All direct and indirect contact (such as drift) to crops other than "Roundup Ready" cotton or land not scheduled to be planted to cotton in the current growing season should be avoided.

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### INTEGRATED PEST MANAGEMENT

This product should be used as part of an Integrated Pest Management (IPM) program which can include biological, cultural, and genetic practices aimed at preventing economic pest damage. Application of this product should be based on IPM principles and practices including field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

# POSTEMERGENCE/POST-DIRECTED USE

Application should be made postemergence (over-the-top) to "Roundup Ready" cotton from the first true leaf stage until the four leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). Over-the-top applications made after the four leaf (node) stage of development may result in boll loss, delayed maturity, and/or yield loss. This product may be applied using precision post-directed or hooded sprayers to "Roundup Ready" cotton through layby. When making postdirected applications, be especially careful to minimize contact of the spray with cotton leaves. Any single broadcast application should not exceed one container per 10 acres. No more than two broadcast applications may be made from the first true leaf through the four leaf (node) stage of development. No more than two post-directed applications may be made from the fifth leaf stage through layby. All applications of this product must be at least 10 days apart and cotton must have at least two nodes of incremental growth between applications. The degree of control and duration of effect are dependent on sensitivity and size of target weed and environmental conditions at time of and following application.

#### NOTE:

DuPont STAPLE®PLUS may cause temporary leaf yellowing, bronzing and/or leaf crinkling when applied as a postemergence application. Plant stresses from seedling diseases, insects (thrips injury), blowing sand (sand blasting), hail injury, cool soil or air temperatures (60 Deg. F or less), extreme temperature variations and lack of or excessive soil moisture just prior to or soon after treatment may increase the sensitivity of cotton to injury from STAPLE® PLUS treatments. To reduce the potential for increased cotton sensitivity, allow cotton plants to recover from stress conditions prior to postemergence applications of STAPLE® PLUS.

#### APPLICATION RATES

Apply STAPLE® PLUS at one container per 10 acres for control of the weeds listed in "Weeds Controlled" section.

Do not apply more than four applications of STAPLE® PLUS per acre per year.

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New Mexico and W. Texas where cotton may be a rotated crop (broadly defined as West of Highway 83): Do not apply more than two applications per acre per year.

Note: In the areas of West Texas where continuous cotton is grown, a maximum of three applications per acre per year may be applied

Note: On sand or loamy sand soil types with less than 1% OM, confine in-season applications of STAPLE® PLUS to a band of no more than one-third the row width. If replanting back to cotton is necessary, replant outside the original treated band.

#### TIMING

STAPLE® PLUS may be used as a postemergence application to young, actively growing weeds.

### APPLICATION RECOMMENDATIONS

Application should be made by ground or aerial equipment (except Arizona) only. In Arizona, apply STAPLE® PLUS by ground equipment only.

Postemergence applications should be made to young, actively growing weeds. Control may be reduced if application is made to weeds under stress due to severe environmental conditions such as drought, excessive soil moisture or cool soil or air temperatures (60 Deg. F or less).

Foliar absorption is the primary means of uptake from postemergence applications of STAPLE® PLUS. Therefore, select a spray volume, delivery system and uniform spray pattern that will insure thorough coverage of the target weed species (including the growing point) to obtain best results. Increase spray volume as weed density and size increases. Avoid overlapping, and shut off spray booms while starting, turning, slowing or stopping, or injury to the crop may result.

#### Sequential Applications

Annual broadleaf weeds may have more than one flush of emerging seedlings. Also, regrowth of treated annual weeds may occur due to application being made to weeds under stress from adverse growing conditions. To control weeds under these conditions, a sequential application of STAPLE® PLUS may be necessary.

If a respray of treated annual weeds is necessary, allow the weeds to begin to regrow prior to making a second application of STAPLE® PLUS.

When using STAPLE® PLUS in a sequential treatment program, allow a minimum of 10 days between applications. Do not make more than four applications of STAPLE® PLUS per acre per year.

## SPRAY EQUIPMENT - VOLUMES

**Ground Application** - Apply uniformly by ground with a properly calibrated low pressure (20-40 psi) boom or cultivator mounted sprayer equipped with flat fan nozzles. Use a minimum of 10 gal water per acre. Under heavy weed pressure or dense crop foliage, increase minimum spray volume to 20-40 gal per acre

Aerial Application (except Arizona) - Use orifice discs, cores and nozzle types and arrangements that will provide for optimum spray distribution and maximum coverage at a minimum of 3 GPA. Do not apply during inversion conditions, when winds are gusty, or when other conditions will favor poor coverage and/or drift.

Chemigation: Do not apply this product through any type of irrigation system.

**Post-directed or hooded applications:** Post-directed equipment should be used which directs the spray to the base of the cotton plants. Place nozzles in a low position directing a horizontal spray pattern under the cotton leaves to contact weeds in the row. For best results, make applications while weeds are small (less than 3 inches). Minimize spray drift onto the leaves of the cotton plants by maintaining low spray pressure (less than 30 PSI). Applications that contact the cotton leaves may result in boll loss, delayed maturity and/or yield loss. Any single post-directed application should not exceed one container per 10 acres of this product. No more than two applications should be made from the fifth leaf through layby. Sequential in-crop applications of this product must be at least 10 days apart and cotton must have at least two nodes of incremental growth between applications.

## ENVIRONMENTAL CONDITIONS FOR OPTIMUM PERFORMANCE

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WEATHER: Conditions which are conducive to healthy, actively growing weeds optimize DuPont STAPLE®PLUS postemergence weed control performance. Ideal conditions include warm soil temperatures (70 Deg. F or more) and adequate soil moisture before, during and immediately after application.

Rainfastness: Rainfall immediately after treatment may wash STAPLE® PLUS off the weed foliage and result in reduced weed control. A minimum of 6 hours are needed to allow STAPLE® PLUS to be absorbed by weed foliage.

# BROADLEAF WEEDS CONTROLLED

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Height or

		Diameter
Common Name	Scientific Name	(inches)
Buttercup	Ranunculus spp.	12
Chickweed, common	Stellaria media	6
Chickweed, mouseear	Cerastium vulgatum	6
Citronmelon	Citrullus lanatus	1-4
Cocklebur, common	Xanthium strumarium	1-4
Connee senna	Cassia occidentalis	1-4
Davflower	Commeling communis	1-4
Devils claw	Prohoscidea louisianica	1-5
Dock carly	Rumer crispus	1-4
Florida beggarweed	Desmodium tortuosum	1-4
Goundsel, common	Sennecio vulgaris	6
Goosefoot, nettleleaf	Chenopodium murale	1-2
Groundcherry, wright	Physalis wrightii	1-2
Henbit	Lamium amplexicaule	6
Horseweed/Marestail	Conyza canadensis	6
Jimsonweed	Datura stramonium	1-4
Knotweed, suversheath	Polygonum drgyrocoleon	1-2
Ladysinumo	Changedium album	1-4
Morningglory	Спепороанит аюит	0
cypressvine	Inomoea avamoclit	1-4
entireleaf	Inomoea hederacea	1-4
ivyleaf	Ípomoea hederacea	1-4
pitted	Ipomoea lacunosa	1-3
purple	Ípomoea turbinata	1-4
red/scarlet	Ipomoea coccinea	1-3
sharppod/cotton (seedling	) Ipomoea trichocarpa	1-3
smallflower	Jacquemontia tamnifolia	1-4
threelobe	Ipomoea triloba	1-3
woolly	Ipomoea hirsutula	1-5
Mustaru, black	Brassica higrum	1-2
black	Solanum nierum	1-2
hairy	Solanum sarrachoides	1-2
Pennycress, field	Thaiaspi arvense	6
Pigweed	• • • • • •	
palmer	Amaranthus palmeri	1-2
redroot	Amaranthus retroflexus	1-2
smooth	Amaranthus hybridus	1-2
spiny	Amaranthus spinosus	1-2
Deduced	Amaranthus albus	1-2
Redweed Booket London	Meiochia corchorijolia	1-4
Sage lanceleaf	Sabia raflara	0.25-0.5
Seshania hemn	Sesbania exaltata	1-4
Shephend's-purse	Cansella bursa-pastoris	1-2
Sicklepod	Cassia obtusifolia	3-4
Sida, prickly	Sida spinosa	0.25-1
Smartweed, Pennsylvania	Polygonum pensylvanicum	1-4
Smellmelon	Cucumis melo	I-3
Spiderflower, spiny	Cleome spinosa	1-4
Spurge, annual	Euphorbia spp.	0
Spurred anoda	Anoda cristala	1-4
Sunflower	Acaninospermum hispiaum	1-2
commion	Helianthus annuus	1-4
prairie	Helianthus petiolaris	1-3
Thistle, Russian	Salsola iberica	1-2
Velvetleaf	Abutilon theophrasti	1-4
Waterhemp, common	Amaranthus tamariscinus	1-4
Watermelon (volunteer)	Citrullus vulgaris	1-2
Wild poinsettia	Euphorbia heterophylla	1-2
Wild radish	Kaphanus raphanistrum	1-2

# **GRASS WEEDS CONTROLLED**

		Diameter
Common Name	Scientific Name	(inches)
Barley	Hordeum vulgarie	12
Barnyardgrass	Echínochola crus-galli	6
Bluegrass, annual	Poa annua	6
Brome, downy	Bromus tectorium	6
Cheat	Bromus secalinus	6
Com	Zea mavs	6
Crabgrass	Digitaria spp.	12
Goatgrass, jointed	Aegilops cylindrica	6
Foxtail	Setaria spp.	12
Foxtail, Carolina	Alopecurus carolinisanus	12
Johnsongrass, seedling	Sorghum halepense	12
Oats, wild	Avena fatua	12
Panicum, fall	Panicum dichotomiflorum	12
Panicum, Texas	Panicum texarum	12
Ryegrass, Italian	Lolium multiflorum	6
Rye	Secalle cereale	12
Signalgrass, broadleaf	Brachiaria platyphvila	4
Witchgrass	Panicum capillare	12
Wheat	Triticum aestivum	18

### WEEDS SUPPRESSED

		Diameter	
Common Name	Scientific Name	(inches)	
Puncturevine	Tribulus terrestris	1-2	
Yellow nutsedge	Cyperus esculentus	2-4	
Purple nutsedge	Cyperus rotundus	2-4	

Height or

#### DuPont STAPLE®PLUS plus Insecticides:

STAPLE® PLUS may be tank mixed with most insecticides that are approved for use on cotton.

Refer to companion insecticide label and follow the use directions which are most restrictive.

Note: Do not tank mix STAPLE® PLUS with Malathion containing insecticides (such as "Cythion" RTU or "Cythion" ULV) that are approved for use on cotton, as crop injury may result.

To avoid crop injury, apply Malathion containing insecticides at least 24 Hours before or after the application of STAPLE® PLUS.

# ROTATIONAL CROP RESTRICTIONS

Height or, These crops may be planted after treatment with STAPLE® PLUS:

CROP† I	NTERVAL (MONTHS)
Cotton*	Anytime
Winter/spring, wheat	4
Peanuts	10
Rice	9
Soybeans	10
Corn, field #	9_
Corn, field ##	10
Corn, field IR (imidazilinone resist	tant) 9
Sorghum, grain	ŧ
Tobacco (transplant)	10
All other crops**	Field Bioassay

Arizona only - (all crops listed in the main table above plus)

10 Field corn, cantaloupe Watermelon, grain sorghum 10 Note: When rotating to either cantaloupe or watermelon in the spring season following cotton, do not exceed 3 applications of STAPLE® PLUS at a rate of one container per 10 acres.

Note: Where "drip irrigated" cotton is grown, rotate only to cotton.

Southeast US - (NC, SC, GA, N. FL, S. AL) only (all crops listed in the main table above plus)

Cabbage	12
Turnips	12
Collards	12
Watermelon	12
Cantaloupe	12
Sweet corn	12
Pepper	12
Tomato	12
Onions	++

++ Do not rotate to Onions in the fall or spring crop season following a STAPLE® PLUS application.

If initial seeding fails to produce a stand, cotton may be replanted into the treated area. Wherever possible, avoid disturbing original bed. If necessary to rework soil before replanting, use shallow cultivation. Do not rebed nor move soil into the original drill area.

Note: New Mexico and W. Texas (broadly defined as west of highway 83) - On sand or loamy sand soils with less than 1% OM replant cotton outside the original treated band.

- \*\* A minimum rotational interval of 10 months is required for all crops not listed above. Field bioassay results may require that this interval be extended. A successful field bioassay means growing to maturity a test strip of the crop(s) intended for production the following year. The test strip should cross the entire field including knolls and low areas.
- † In AZ, KS, NM, OK, and TX the rotational crops listed may be planted at the indicated intervals provided the fields are deep plowed prior to planting the rotational crop.

Field corn, corn grown for grain or silage, may be planted at # the indicated interval provided STAPLE® PLUS is applied on a band (not to exceed 50% of the row width) and the fields have had a thorough soil mixing, for example, two diskings or a deep plowing, prior to planting. Otherwise, do not rotate to field corn in the season following a DuPont STAPLE®PLUS application.

Note: New Mexico and W. Texas (broadly defined as West of Highway 83) do not rotate to field corn the season following a STAPLE® PLUS application.

- Itimited Geography-Field corn grown for grain or silage, only in the States of AL, AR, GA, LA, MO, MS, NC, SC, TN, and VA, may be planted at the indicated interval provided all the STAPLE® PLUS and STAPLE® applications made in cotton do not exceed a total of 1.5 ources of active ingredient pyrithiobac sodium broadcast per acre per season. No additional soil mixing (disking or plowing) will be required beyond that which is normally done with the various production systems, e.g. conventional tillage, minimum till, no-till, ridge till, etc.
- Do not rotate to grain sorghum in the season following a STAPLE® PLUS application.

For Southeast Texas, in an area broadly defined as east of route I-35 and south of route US 90, to include Uvalde, Medina and Bexar counties; grain sorghum may be planted after a 10 month interval provided that in the above outlined area has received a minimum of 25 inches of rainfall following a STAPLE® PLUS application and the fields have had a thorough soil mixing, for example two diskings or a deep plowing prior to planting.

For the Rio Grande Valley of Texas, do not rotate to corn or grain sorghum in the fall crop season following a STAPLE® PLUS application.

# **COTTON CROP FAILURE**

In the event of a cotton crop failure where seasonal constraints do not allow replanting to cotton, STAPLE® PLUS tolerant soybeans, such as DuPont STS\* soybeans may be used as a replant crop. Soybeans tolerant to STAPLE® PLUS may be planted 30 days following the last STAPLE® PLUS application to the failed cotton crop.

Where other herbicides have been used with or in conjunction with STAPLE® PLUS, refer to the other herbicide label(s) for any information or restrictions prior to replanting with STS<sup>\*</sup> soybeans.

# SOLUBLE PACKET HANDLING PRECAUTIONS

Exposure to moisture or excessive handling of the soluble packet can cause it to break open.

Do not handle the soluble packet with wet hands or place on wet surfaces.

## SPRAYER PREPARATION

It is important that spray equipment is clean and free of existing pesticide deposits before using STAPLE® PLUS. Follow the cleanup procedures specified on the label of the product(s) previously used. If no cleanout procedure is provided, follow this cleanout procedure for all application equipment before using STAPLE® PLUS:

- 1. Thoroughly rinse sprayer, tanks, boom and hoses with clean water.
- 2. Partially fill tank with water and add ammonia (1 gal. of ammonia per 100 gal. of tank volume) or a tank cleaner. Complete filling the tank and flush the cleaning solution through the boom hoses. Let solution stand for 15 minutes while agitating/recirculating, and then drain the tank by flushing the hoses, booms and nozzles.

- 3. Thoroughly rinse the sprayer, tanks, boom and hoses with clean water.
- 4. Follow label directions on product(s) previously sprayed for disposal.

Remove cap from container. Remove water soluble powder packet and place into the necessary volume of water (see Spray Equipment-Volumes) in the spray tank with the agitator running. Do not attempt to open or divide the contents of the water soluble packet. Do not tip or invert the bottle to remove the water soluble packet. Doing so could dump the insert into the spray tank and spill the liquid. Remove insert from bottle, rinse thoroughly and discard. Pour the entire contents of the bottle containing the soluble liquid into spray tank. Continuous agitation is required for a uniform suspension and application.

Use spray preparation of STAPLE® PLUS within 7 days or product degradation may occur. If spray preparation is left standing without agitation, thoroughly agitate before using.

**PRECAUTION:** Do not use chlorine bleach with ammonia. See Sprayer Cleanup Section for more information.

# SPRAYER CLEANUP

Spray equipment must be clean and free of previous pesticide deposits before applying STAPLE® PLUS and properly cleaned out after applying STAPLE® PLUS. Using the cleanup procedures specified on the label of the previously used product, clean all application equipment before applying STAPLE® PLUS. If no cleanup procedure is provided, use the procedure that follows. Immediately following applications of STAPLE® PLUS thoroughly clean all mixing and spray equipment according to the following instructions:

- 1. Drain Tank: Thoroughly hose down the interior surfaces of the tank; then flush tank, boom and hoses with clean water for a minimum of 5 minutes. Loosen and physically remove any visible deposits.
- 2. Fill the tank with clean water and add one gal. of household ammonia\* (3% active) for every 100 gal. of water. Flush the cleaning solution through the boom, hoses and nozzles. Add more water to completely fill the tank and allow to agitate/recirculate for at least 15 minutes. Again, flush the boom, hoses and nozzles with the cleaning solution, then drain the tank.
- 3. Remove the nozzles and screens and clean separately in a bucket containing the cleaning agent and water.
- 4. Repeat step 2.
- 5. Thoroughly rinse the tank with clean water for a minimum of 5 minutes, flushing the water through the hoses and boom.
- 6. Dispose of the rinsate on site or at an approved waste disposal facility.
- \* Equivalent amounts of an alternate-strength ammonia solution or DuPont approved cleaner can be used in the cleanout procedure. Carefully read and follow the individual cleaner instruction.

#### PRECAUTION

Do not use chlorine bleach with ammonia when cleaning out spray tanks. All traces of liquid fertilizer containing ammonia, ammonia nitrate or ammonium sulphate must be rinsed with water from the mixing and application equipment before adding any chlorine bleach solution. Failure to do so will release a gas with a musty chlorine odor which can cause eye, nose, throat and lung irritation.

Do not clean equipment in an enclosed area.

## 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 ENVIRON-MENTAL 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 lowdrift nozzles.

#### **Controlling Droplet Size - Aircraft**

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- 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**

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.

#### INFORMATION ON RESISTANT WEEDS

When herbicides with the same mode of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant weed biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. These resistant weed biotypes may not be adequately controlled. Cultural practices such as tillage, preventing weed escapes from going to seed, and using herbicides with different modes of action within and between crop seasons can aid in delaying the proliferation and possible dominance of herbicide resistant weed biotypes.

# IMPORTANT PRECAUTIONS

- Do not apply to irrigated land where tail water will be , used to irrigate crops other than cotton.
- Do not exceed 1 container per 10 acres in a single application.
- Do not exceed 4 applications/A per year or a total of 2.0 oz active ingredient per acre per year of pyrithiobac sodium when DuPont STAPLE®PLUS is used alone or in combination with DuPont STAPLE® herbicide except in New Mexico and West Texas.
- Do not exceed more than 2 applications/A per year or a total of 1.25 oz active ingredient per acre per year of pyrithiobac sodium when STAPLE® PLUS is used in combination with DuPont STAPLE® herbicide in New Mexico and West Texas where cotton may be rotated (broadly defined as West of Highway 83).
- Do not exceed more than 3 applications/A per year or a total of 1.5 oz active ingredient per acre per year of pyrithiobac sodium when STAPLE® PLUS is used alone or in combination with DuPont STAPLE® herbicide in areas of West Texas where continuous cotton is grown.
- Do not exceed 3 applications per acre per year in Arizona when rotating to either cantaloupe or watermelon in the spring season following cotton or 1.5 oz active ingredient per acre per year of pyrithiobac sodium when STAPLE® PLUS is used alone or in combination with DuPont STAPLE® herbicide.
- Do not feed cotton gin by-products (trash) to livestock.
- Do not apply within 60 days of harvest.
- · Do not add adjuvants.

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 Do not tank mix STAPLE® PLUS with any other pesticide products not specifically recommended on this label or by supplemental labeling.

# STORAGE AND DISPOSAL

**Storage:** Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage.

**Product Disposal:** Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Do not reuse the outer box.

**NOTICE TO BUYER:** Purchase of this material does not confer any rights under patents of countries outside of the United States.

#### Registered trademark of:

- (1) American Cyanamid Company
- (2) Monsanto Co.

NET WEIGHT: \_\_\_\_\_

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