

62719-413

10/26/2006

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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

OCT 26 2006

Mr. Rafael Herrera
Dow Agrosiences LLC
9330 Zionsville Road
Indianapolis, IN 46268-1054

Subject: Stam 80 EDF
EPA Registration Number 62719-413
Application dated August 31, 2006

Dear Mr. Herrera:

The labeling referred to above, submitted in connection with reregistration under the Federal Insecticide, Fungicide, and Rodenticide Act as amended is acceptable, provided you make the following changes before you release the product for shipment.

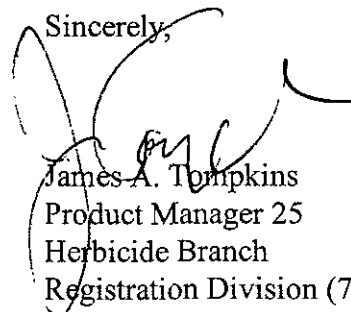
- 1) Add an appropriate EPA Establishment Number to the label.
- 2) In the section ENVIRONMENTAL HAZARDS, remove the statements "(2001 Mississippi Rice Growers Guide). Other guidance is located at <http://Agronomy>..... also provides information concerning levee protection." Also remove the headings "Groundwater Advisory" and "Surface Water Advisory"
- 3) On page 5, under Spray Drift Management (Aerial Application) revise statement #1 to "The distance of the outer most operating nozzles on the boom must not exceed $\frac{3}{4}$ the length of the wingspan or 90% of the rotor blade diameter." Also, under the subsection Boom Length, revise "rotor length" to "90% of the rotor blade diameter."
- 4) At the end of the Spray Drift Management Section on page 6, add a section entitled "General Spray Drift Restrictions for All States:" with the following information from the RED listed:
 - a. Apply Only when the wind speed is less than or equal to 10 mph at the application site
 - b. Apply as a medium or coarser spray (ASAE standard 572)
 - c. For ground applications: Apply using a nozzle height of no more than 4 feet above the ground or crop canopy
 - d. For aerial applications: Do not apply by air if drift can occur to sensitive nontarget crops or plants that are within 100 feet of the application site. Do not release spray at a height greater than 10 feet above the ground or crop canopy. The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter. Do not make any type of application into temperature inversions."

- 5) On page 6, in the section Restrictions, add the active ingredient equivalent in parentheses after the rate of lbs product is listed.
- 6) On page 7, in the section Restrictions, the statement "Water drained from treated rice fields must not be used to irrigate other crops or released within ½ mile upstream of a potable water intake in flowing water (e.g., river, stream, etc.) or within ½ mile of a potable water intake in a standing body of water, such as a lake, pond, or reservoir." should be revised to state "2 miles" instead of "½ mile."
- 7) On page 7, remove the word "Recommendations" from the heading "Timing and Dosage Recommendations". Also remove the word "recommended" from the following paragraph.
- 8) On page 10, after the heading "FOR USE ON RICE GROWN IN SOUTHERN UNITED STATES ONLY," define what states are included in the "Southern United States."
- 9) On page 11, remove the word "Recommendations" from the heading "Timing and Dosage Recommendations". Also remove the word "recommended" from the following paragraph.
- 10) On page 14, add "To the extent consistent with applicable law" before the statements "Dow Agrosiences makes no other express or implied warranty of merchantability or fitness for a particular purpose or any other express or implied warranty" and "All such risks shall be assumed by buyer." Also, revise "To the extent permitted by law" to "To the extent consistent with applicable law."

Please note that the PPE section will require additional changes by December 1, 2007 unless the Agency determines that submitted exposure data indicate that closed systems for dry flowables are not needed to achieve adequate margins of exposure.

Submit one (1) copy of final printed labeling incorporating the above changes before you release the product for shipment. Amended labeling will supercede all previously accepted ones. A stamped copy of labeling is enclosed for your records. If you have any questions, contact Hope Johnson at 703-305-5410.

Sincerely,



James A. Tompkins
Product Manager 25
Herbicide Branch
Registration Division (7505P)

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(Logo) Dow AgroSciences

Stam[®] 80 EDF

Herbicide

For postemergence weed control in rice

Active Ingredient	
propanil: 3', 4'-dichloropropionanilide	81%
Other Ingredients	19%
Total	100%

Contains 0.8 lb of active ingredient per 1 lb of product.

ACCEPTED
with COMMENTS
in EPA Letter Dated

OCT 26 2006

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.

62719-413

Keep Out of Reach of Children

CAUTION PRECAUCION

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.)

Precautionary Statements

Hazards to Humans and Domestic Animals

Harmful If Swallowed Or Absorbed Through Skin • Causes Moderate Eye Irritation

Avoid contact with skin, eyes or clothing.

Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are natural rubber \geq 14 mils. For more information, follow instructions in Supplement Three of PR Notice 93-7. If you want more options, follow the instructions for category A on an EPA chemical-resistance selection chart.

Mixers, loaders, and other handlers exposed to the concentrate must wear:

- Coveralls over long-sleeve shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear, if overhead exposure
- Chemical-resistant apron

Applicators and other handlers exposed to the dilute must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

See Engineering Controls for additional requirements and options.

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

Engineering Controls

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When handlers use closed systems in a manner that meet the requirements listed in the Worker Protection Standards (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. Pilots must use an enclosed cockpit that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(6)]. Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

User Safety Recommendations

Users should:

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

First Aid

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

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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

Environmental Hazards

This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water except as specified on this label. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

Groundwater Advisory: This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical prior to flooding may result in some shallow groundwater contamination due to cracks in the subsoil of the rice paddy.

Surface Water Advisory: This product may contaminate water through runoff following rainfall events and by seepage through levees. This product has a high potential for runoff. Runoff of this product will be reduced by avoiding application when rainfall is forecasted to occur within 48 hours. Levees should be constructed with adequate time prior to chemical application so that they are compacted to reduce seepage and to hold a 3- to 6-inch flood (2001 Mississippi Rice Growers Guide). Other guidance is located at <http://Agronomy.ucdavis.edu/uccerice/water/seep.htm> and from the document "Closed Rice Water Management Systems" from the National Resource Conservation Service of USDA. The University of Arkansas Rice Production Book (<http://www.uaex.edu/other-areas/publications/html>) also provides information concerning levee production.

Refer to back panel for Directions for Use including Storage and Disposal.

Notice: Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies elsewhere on the label. If terms are unacceptable, return at once unopened.**

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In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.
If you wish to obtain additional product information, visit our web site at www.dowagro.com.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-413

EPA Est. _____

®Trademark of Dow AgroSciences LLC
Dow AgroSciences LLC • Indianapolis, IN 46268 U.S.A.

Net Weight 50 lb

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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. Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Agricultural Use Requirements

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

Storage and Disposal

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

Pesticide Storage: Do not use, pour, spill or store near heat or open flame. If the entire contents are not used, protect remaining material from moisture and heat. Resealing by rolling top down and storage under roof are recommended.

Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Container Disposal: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Steps to be Taken in Case Material Is Released or Spilled: Sweep or shovel into containers for disposal or reworking. Keep dusting to a minimum. Flush contaminated area with a large amount of water to a chemical or sanitary sewer containing a settling pit.

General Information

Stam[®] 80 EDF herbicide for postemergence weed control in rice is formulated as an 80% active extruded dry flowable formulation. Stam 80 EDF is not a hormone-type herbicide, but kills susceptible weeds by direct contact action. For this reason, thorough coverage of emerged weeds is essential for best results. Stam 80 EDF has no preemergence or residual herbicidal activity. Only weeds that have emerged and are exposed at time of application will be controlled. Apply Stam 80 EDF only to fields that have been drained of floodwater. Stam 80 EDF is most effective if applied when susceptible grasses and broadleaf weeds are small and growing actively under favorable soil moisture and weather conditions. Early weed control removes weed competition from the rice crop, saves moisture, and generally contributes to increased yields.

Read Mixing and Equipment label instructions before application. When tank mixing, always read all individual manufacturers' labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.

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

Spray Drift Management (Aerial Application)

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

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

1. The distance of the outer most operating nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

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

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

Aerial Drift Reduction Advisory

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

Controlling Droplet Size:

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - 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 higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

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

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

Swath Adjustment: When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for

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this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.).

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

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

Temperature Inversions: Applications should not occur during a local, low level temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. 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 the smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

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

For Use on Rice Grown in California Only

Restrictions

- **Preharvest Interval:** Do not apply this product within 60 days of rice harvest.
- **Chemigation:** Do not apply this product through any type of irrigation system.
- **Do not** apply more than a maximum of 7.5 lb of Stam 80 EDF per acre in a single application or exceed 10 lb of Stam 80 EDF per acre total dosage per season.
- **In California:** Use Stam 80 EDF only where rice fields are completely drained or a minimal amount of water remains. If high water level is desired, re-flood field after 12 hours and before 7 days after treatment. This will discourage new weed infestations.
- **Do not** apply this product to any crop other than rice. Stam 80 EDF will cause injury to most crops except cereal grains and perennial grasses.
- **Do not** apply this product (directly or indirectly) to wild rice (*Zizania* spp.).
- Avoid drift or accidental application from turning aircraft on beans, cotton, cucurbits, soybeans, corn, safflower, seedling legumes, vegetables, orchards, vineyards, gardens, shrubs and ornamentals. Once applied, Stam 80 EDF does not release fumes hazardous to nearby crops.
- **Do not** apply to fields nor drain water from treated field into areas where commercial catfish or crayfish (crawfish) farming is practiced.
- **Do not** graze treated fields or feed treated forage within 60 days of the last application.
- **Do not** rotate treated land to other crops or transplant to crops other than rice for 60 days following treatment of this product.
- **Do not** apply this product within 14 days before or after carbamate or organophosphate insecticide applications. Otherwise, serious injuries to rice may occur.

- Water drained from treated rice fields must not be used to irrigate other crops or released within 1/2 mile upstream of a potable water intake in flowing water (e.g., river, stream, etc.) or within 1/2 mile of a potable water intake in a standing body of water, such as a lake, pond or reservoir.

Emergency Release Provision:

Do not discharge water from treated rice paddies in California following treatment, unless excessive rainfall completely submerges the rice crop and forces premature release, for:

- 7 days in dry seeded rice in California
- 7 days for water-seeded rice in California

Weeds Controlled

Stam 80 EDF provides selective postemergence control of the following weeds in rice:

Common Name	Scientific Name
annual sedges	<i>Cyperus</i> spp.
barnyardgrass [†]	<i>Echinochloa crus-galli</i>
crabgrass species	<i>Digitaria</i> spp.
early watergrass ^{†,††}	<i>Echinochloa oryzoides</i>
junglerice [†]	<i>E. colonum</i>
late watergrass ^{†,††}	<i>Echinochloa phyllopogon</i>
ricefield bulrush	<i>Scirpus mucronatus</i>
rice flatsedge	<i>Cyperus iria</i>
smallflower umbrella plant	<i>Cyperus difformis</i>

[†] In isolated instances, biotypes of barnyardgrass/watergrass may develop that cannot be effectively controlled by propanil alone. Where these biotypes are known or suspected to be present, and are found in a mixed weed population in which Stam 80 EDF is effective, tank mix Stam 80 EDF at labeled rate with other rice herbicides that are recommended for control of barnyardgrass/watergrass (up to the 3 leaf stage).

^{††} Applications to early and late watergrass made past the 4 leaf stage will result in partial control.

Timing and Dosage Recommendations

Early Timing and Rates

Apply Stam 80 EDF when a satisfactory stand of rice has been established that will tolerate flooding. The amount of Stam 80 EDF to apply depends upon the growth stage and condition of the target weeds. Stam 80 EDF is most effective if applied when susceptible grasses and broadleaf weeds are small and actively growing under favorable soil moisture and weather conditions. Use a higher rate in the recommended rate range for heavy weed infestations, weeds in advanced stages of growth, or when growing conditions are less than optimum. Emergency treatments made to weeds in advanced growth stages, such as when grass weeds are tillering, must occur at least 60 days before harvest.

For best results, apply Stam 80 EDF at the rate of 3.75 to 5 lb (3 to 4 lb active ingredient) per acre when the grasses are actively growing in the 1 to early 4 leaf stage. This rate will also control many seedling broadleaf and aquatic weeds. Generally, this will be 15 to 25 days after planting.

Mid-Timing and Rates

Stam 80 EDF can be applied at the rate of 5 to 7.5 lb (4 to 6 lb active ingredient) per acre to actively growing grasses in the 4 to 6 leaf and early tillering stage, or when they are in the 2 to 4 leaf stage but stressed under dry soil conditions. Generally, this will be 20 to 30 days after planting.

Use of Surfactants: The addition of a crop oil concentrate at 1 to 2 pints per acre, or other 80% active nonionic surfactant at a rate of 1 to 2 pints per 100 gallons of spray mixture, is recommended.

Rescue Timing and Rates

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Apply Stam 80 EDF at the rate of 6.25 to 7.5 lb (5 to 6 lb active ingredient) in 12 to 15 gallons of spray per acre for emergency control of older tillering grass. Generally, this will be 30 to 40 days after planting. If the field is already flooded, the water should be lowered or drained before spraying to expose more of the grass and weeds. Emergency treatment should be considered as a salvage operation only and cannot be relied upon for total control of grass and weeds.

Mixing Directions

Stam 80 EDF will disperse more quickly if water temperature is 50°F or warmer. Use only clean water for spraying. With the pump and agitator running, slowly add the recommended amount of Stam 80 EDF into a partially filled mix tank. The jet or tank agitators must be positioned to create a rippling or rolling action on the liquid surface and to provide complete agitation at the bottom of the tank, preventing dead spots where the material can accumulate. A centrifugal pump is suggested to provide additional propeller shear action for dispersing and mixing this product. To avoid foaming, keep filling and bypass lines below the liquid surface. Stam 80 EDF must be completely dispersed and mixed prior to application.

If a tank mixture is to be applied, always conduct a compatibility test prior to use by mixing proportional amounts of all spray ingredients in a test vessel (jar). The order of addition to water should be dry flowables or wettable powders first, flowables second, liquid formulations third, and crop oil concentrate last. Allow for each material to go into solution prior to the addition of the next material. Shake the mixture vigorously and allow it to stand for 15 minutes. Rapid precipitation of the ingredients and failure to re-suspend when shaken indicates that the mixture is incompatible and should not be applied.

As each material is added to the spray mixture, always allow for complete mixing before adding the next ingredient. Add crop oil concentrate last and continue agitation while filling the mixing tank to the desired spray volume.

Do not add Stam 80 EDF directly to the spray tank of aircraft. Once properly dispersed in mix tank, pump spray mixture to aircraft spray tank (include rinsate from mix tank). To ensure uniformity of sprays, maintain good agitation throughout application.

Application Equipment

Aircraft

Fixed wing aircraft or helicopters should have well-designed spray systems that produce a uniform pattern of medium-fine spray droplets. Apply Stam 80 EDF in no less than 10 gallons of total spray per acre with boom-nozzle sprayers. Increase volume to 12 to 15 gallons per acre for larger or denser stands of grass or during periods of low humidity.

The optimum effective spray swath width depends upon operating conditions and type of aircraft being used. For uniform spray coverage with fixed-wing aircraft or helicopter, spray swath width should not exceed the width of wing span or rotor plus 10%. Measure the swaths accurately for flagging.

Ground Sprayers

Use standard low-pressure herbicide boom sprayers equipped with flat fan nozzles. Use nozzle sizes that deliver a medium-fine droplet in 15 to 20 gallons total spray per acre at 40 to 50 psi and at ground speeds not in excess of 3 to 4 mph. Adjust boom height so nozzle spray patterns meet uniformity. Avoid raising boom too high.

Flush all equipment with clear water after each day's use. Clean all equipment, including nurse tanks, used for Stam 80 EDF, with detergent wash followed by a water rinse, **before and after** spraying other pesticides or other crops.

Crop Tolerance and Growing Conditions

All leading commercial varieties of rice are exceptionally tolerant to Stam 80 EDF. A temporary yellowing or tip burn of rice may be noted after treatment, but new growth is normal. Severe leaf burn and partial

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killing of rice may occur if the product is applied when rice is under stress and in a weakened growth condition due to disease or insect infestations, excessive soil salts, overwatering, or prolonged drought and extremely hot weather. Growers are cautioned not to spray under such conditions and/or when maximum daily temperatures have been or are expected to exceed 100°F.

Effect of Climatic Conditions and Cultural Practices on Weed Control

Field and Seedbed Preparation

Fields should be accurately leveled and contoured and have well-prepared seedbeds free of clods. Such conditions encourage uniform and rapid emergence of rice, grass and broadleaf weeds, allowing more accurate timing and coverage of sprays of Stam 80 EDF for optimum weed control.

Water Management

Before application of Stam 80 EDF, drained or dry planted fields should be flushed as often as necessary to prevent drying and crusting. Flushing encourages uniform emergence and vigorous growth of grass, broadleaf weeds and rice, which is essential for optimum weed control. Flushing of fields should occur when weeds and rice are actively growing at time of treatment. Make sure the field is drained prior to treatment so that grasses and broadleaf weeds are fully exposed. Weeds that are partially submerged in standing water at time of application will not be satisfactorily controlled.

Treated fields should be flooded before a second infestation of grass develops. To prevent additional grass weed seed from germinating, rice fields should be flooded within 24 hours after spraying, or as soon as possible after 24 hours.

Temperature

The temperature a few days before and after applying Stam 80 EDF has an important effect on the weed-killing activity. The activity increases as daily maximum temperatures increase above 75°F and decreases as the daily maximum temperatures decline below 75°F. Do not apply Stam 80 EDF when maximum temperatures have been or are expected to stay below 65°F or exceed 100°F. Less than optimum temperature at time of application is not critical so long as the temperature exceeds 75°F during the day.

Relative Humidity and Rain

Grasses and weeds are more responsive to Stam 80 EDF during periods of high humidity when the foliage is moist or covered by dew. When the humidity is very low, spray tends to evaporate before reaching weed foliage. For best results under low relative humidity conditions, increase spray volume to 12 to 15 gallons per acre. **Do not** spray if rain is expected within 8 hours to avoid loss of deposited spray and herbicide adsorption by the weeds.

Wind

Do not apply when the wind speed exceeds 10 mph to avoid drift hazard to sensitive crops and the possibility of uneven (streaked) applications.

Compatibility With Other Chemicals

Tank mix applications of Stam 80 EDF with other herbicides, insecticides, spray adjuvants, or liquid fertilizers may reduce crop tolerance and/or weed control or impair mixing properties. Use of these products in tank mix applications with Stam 80 EDF is done at the user's risk.

Adverse Reaction to Insecticides

Rice plants may be severely injured or killed if Stam 80 EDF is applied in tank mix combinations or sequentially before or after certain insecticides. Do not tank mix Stam 80 EDF with carbamate insecticides such as carbaryl, etc., or organophosphorus insecticides (such as malathion and methyl parathion, etc). Do not apply any of the carbamate or organophosphorus insecticides to rice fields within 14 days before or after applying Stam 80 EDF.

Do not apply Stam 80 EDF to rice fields planted with rice seed treated with bird repellents containing methiocarb. Consult local Extension specialist for current recommendations of approved insecticides on rice.

For Use on Rice Grown in Southern United States Only

Restrictions

- **Preharvest Interval:** Do not apply this product within 60 days of rice harvest.
- **Chemigation:** Do not apply this product through any type of irrigation system.
- **Do not** apply more than a maximum of 7.5 lb of Stam 80 EDF per acre in a single application or exceed 10 lb of Stam 80 EDF per acre total dosage per season.
- **Do not** apply this product to any crop other than rice. Stam 80 EDF will cause injury to most crops except cereal grains and perennial grasses.
- **Do not** apply this product (directly or indirectly) to wild rice (*Zizania* spp.).
- Avoid drift or accidental application from turning aircraft on beans, cotton, cucurbits, soybeans, corn, safflower, seedling legumes, vegetables, orchards, vineyards, gardens, shrubs and ornamentals. Once applied, Stam 80 EDF does not release fumes hazardous to nearby crops.
- **Do not** apply to fields nor drain water from treated field into areas where commercial catfish or crayfish (crawfish) farming is practiced.
- **Do not** graze treated fields or feed treated forage within 60 days of the last application.
- **Do not** rotate treated land to other crops or transplant to crops other than rice for 60 days following treatment of this product.
- **Do not** apply this product within 14 days before or after carbamate or organophosphate insecticide applications. Otherwise, serious injuries to rice may occur.
- Water drained from treated rice fields must not be used to irrigate other crops or released within 1/2 mile upstream of a potable water intake in flowing water (e.g., river, stream, etc.) or within 1/2 mile of a potable water intake in a standing body of water, such as a lake, pond or reservoir.

Emergency Release Provision:

Water holding (discharge) intervals for flood water from treated rice paddies following treatment in the southern United States:

- For delayed flood (water-seeded) rice grown south of Interstate Highway 10 from the Texas/Louisiana border to Houston and east of State Highway 35 from Houston to Port Lavaca – Flood water must be held for 10 days after application unless excessive rainfall completely submerges the rice crop and forces premature release. For Texas rice grown in areas north or west of these boundaries, the water holding interval is 7 days.
- For delayed flood (water-seeded) rice in southern Louisiana south of Highway 14 – Flood water must be held for 15 days after propanil application unless excessive rainfall completely submerges the rice crop and forces premature release. For delayed flood (water-seeded) rice in Louisiana, north of the Highway 14 boundary, the water holding interval is 7 days.
- For rice in all other parts of the southern United States not mentioned above – Flood water must be held for 7 days after application unless excessive rainfall completely submerges the rice crop and forces premature release.

Weeds Controlled

Stam 80 EDF provides selective postemergence control of the following weeds in rice:

Common Name	Scientific Name
annual sedges	<i>Cyperus</i> spp.
barnyardgrass†	<i>Echinochloa crus-galli</i>
beakrush (spearhead)	<i>Rhynchospora corniculata</i>
broadleaf signalgrass	<i>Bracharia platyphylla</i>
crabgrass species	<i>Digitaria</i> spp.

curly dock	<i>Rumex crispus</i>
foxtail species	<i>Setaria</i> spp.
goosegrass	<i>Eleusine indica</i>
gulf cockspur	<i>Echinochloa crus-pavonis</i>
hemp sesbania (coffeebean)	<i>Sesbania exaltata</i>
hoorahgrass	<i>Fimbristylis miliaceae</i>
junglerice [†]	<i>E. colonum</i>
Mexicanweed	<i>Caperonia castanaiifolia</i>
paragrass	<i>Panicum purpurascens</i>
redroot pigweed	<i>Amaranthus retroflexus</i>
redweed	<i>Melochia corchorifolia</i>
rice flatsedge	<i>Cyperus iria</i>
smallflower umbrella plant	<i>Cyperus difformis</i>
spikerush (wiregrass)	<i>Eleocharis</i> spp.
Texas panicum	<i>Panicum texanum</i>
watergrass [†]	<i>Echinochloa</i> spp.
woolly croton	<i>Croton capitatus</i>

[†] In isolated instances, biotypes of barnyardgrass/watergrass may develop that cannot be effectively controlled by propanil alone. Where these biotypes are known or suspected to be present, and are found in a mixed weed population in which Stam 80 EDF is effective, tank mix Stam 80 EDF at labeled rate with other rice herbicides that are recommended for control of barnyardgrass/watergrass (up to the 3 leaf stage).

Timing and Dosage Recommendations

Early Timing and Rates

Apply Stam 80 EDF when a satisfactory stand of rice has been established that will tolerate flooding. The amount of Stam 80 EDF to apply depends upon the growth stage and condition of the target weeds. Stam 80 EDF is most effective if applied when susceptible grasses and broadleaf weeds are small and actively growing under favorable soil moisture and weather conditions. Use a higher rate in the recommended rate range for heavy weed infestations, weeds in advanced stages of growth, or when growing conditions are less than optimum. Emergency treatments made to weeds in advanced growth stages, such as when grass weeds are tillering, must occur at least 60 days before harvest.

For best results, apply Stam 80 EDF at the rate of 3.75 to 5 lb (3 to 4 lb active ingredient) per acre when the grasses are actively growing in the 1 to early 4 leaf stage. This rate will also control many seedling broadleaf and aquatic weeds. Generally, this will be 15 to 25 days after planting.

Mid-Timing and Rates

Apply Stam 80 EDF at the rate of 5 to 7.5 lb (4 to 6 lb active ingredient) per acre to actively growing grasses in the 4 to 6 leaf and early tillering stage, or when they are in the 2 to 4 leaf stage but stressed under dry soil conditions. Generally, this will be 20 to 30 days after planting.

Use of Surfactants: The addition of a crop oil concentrate at 1 to 2 pints per acre, or other 80% active nonionic surfactant at a rate of 1 to 2 pints per 100 gallons of spray mixture, is recommended.

Rescue Timing and Rates

Apply Stam 80 EDF at the rate of 6.25 to 7.5 lb (5 to 6 lb active ingredient) in 12 to 15 gallons of spray per acre for emergency control of older tillering grass. Generally, this will be 30 to 40 days after planting. If the field is already flooded, the water should be lowered or drained before spraying to expose more of the grass and weeds. Emergency treatment should be considered as a salvage operation only and cannot be relied upon for total control of grass and weeds.

Mixing Directions

Stam 80 EDF will disperse more quickly if water temperature is 50°F or warmer. Use only clean water for spraying. With the pump and agitator running, slowly add the recommended amount of Stam 80 EDF into a partially filled mix tank. The jet or tank agitators must be positioned to create a rippling or rolling action on the liquid surface and to provide complete agitation at the bottom of the tank, preventing dead spots where the material can accumulate. A centrifugal pump is suggested to provide additional propeller shear action for dispersing and mixing this product. To avoid foaming, keep filling and bypass lines below the liquid surface. Stam 80 EDF must be completely dispersed and mixed prior to application.

If a tank mixture is to be applied, always conduct a compatibility test prior to use by mixing proportional amounts of all spray ingredients in a test vessel (jar). The order of addition to water should be dry flowables or wettable powders first, flowables second, liquid formulations third, and crop oil concentrate last. Allow for each material to go into solution prior to the addition of the next material. Shake the mixture vigorously and allow it to stand for 15 minutes. Rapid precipitation of the ingredients and failure to re-suspend when shaken indicates that the mixture is incompatible and should not be applied.

As each material is added to the spray mixture, always allow for complete mixing before adding the next ingredient. Add crop oil concentrate last and continue agitation while filling the mixing tank to the desired spray volume.

Do not add Stam 80 EDF directly to the spray tank of aircraft. Once properly dispersed in mix tank, pump spray mixture to aircraft spray tank (include rinsate from mix tank). To ensure uniformity of sprays, maintain good agitation throughout application.

Application Equipment

Aircraft

Fixed wing aircraft or helicopters should have well-designed spray systems that produce a uniform pattern of medium-fine spray droplets. Apply Stam 80 EDF in no less than 10 gallons of total spray per acre with boom-nozzle sprayers. Increase volume to 12 to 15 gallons per acre for larger or denser stands of grass or during periods of low humidity.

The optimum effective spray swath width depends upon operating conditions and type of aircraft being used. For uniform spray coverage with fixed-wing aircraft or helicopter, spray swath width should not exceed the width of wingspan or rotor plus 10%. Measure the swaths accurately for flagging.

Ground Sprayers

Use standard low-pressure herbicide boom sprayers equipped with flat fan nozzles. Use nozzle sizes that deliver a medium-fine droplet in 15 to 20 gallons total spray per acre at 40 to 50 psi and at ground speeds not in excess of 3 to 4 mph. Adjust boom height so nozzle spray patterns meet uniformity. Avoid raising boom too high.

Flush all equipment with clear water after each day's use. Clean all equipment, including nurse tanks, used for Stam 80 EDF, with detergent wash followed by a water rinse, **before and after** spraying other pesticides or other crops.

Crop Tolerance and Growing Conditions

All leading commercial varieties of rice are exceptionally tolerant to Stam 80 EDF. A temporary yellowing or tip burn of rice may be noted after treatment, but new growth is normal. Severe leaf burn and partial killing of rice may occur if the product is applied when rice is under stress and in a weakened growth condition due to disease or insect infestations, excessive soil salts, overwatering, or prolonged drought and extremely hot weather. Growers are cautioned not to spray under such conditions and/or when maximum daily temperatures have been or are expected to exceed 100°F.

Effect of Climatic Conditions and Cultural Practices on Weed Control

Field and Seedbed Preparation

Fields should be accurately leveled and contoured and have well-prepared seedbeds free of clods. Such conditions encourage uniform and rapid emergence of rice, grass and broadleaf weeds, allowing more accurate timing and coverage of sprays of Stam 80 EDF for optimum weed control.

Water Management

Before application of Stam 80 EDF, drained or dry planted fields should be flushed as often as necessary to prevent drying and crusting. Flushing encourages uniform emergence and vigorous growth of grass, broadleaf weeds and rice, which is essential for optimum weed control. Flushing of fields should occur when weeds and rice are actively growing at time of treatment. Make sure the field is drained prior to treatment so that grasses and broadleaf weeds are fully exposed. Weeds that are partially submerged in standing water at time of application will not be satisfactorily controlled.

Treated fields should be flooded before a second infestation of grass develops. To prevent additional grass weed seed from germinating, rice fields should be flooded within 24 hours after spraying or as soon as possible after 24 hours.

Temperature

The temperature a few days before and after applying Stam 80 EDF has an important effect on the weed-killing activity. The activity increases as daily maximum temperatures increase above 75°F and decreases as the daily maximum temperatures decline below 75°F. Do not apply Stam 80 EDF when maximum temperatures have been or are expected to stay below 65°F or exceed 100°F. Less than optimum temperature at time of application is not critical so long as the temperature exceeds 75°F during the day.

Relative Humidity and Rain

Grasses and weeds are more responsive to Stam 80 EDF during periods of high humidity when the foliage is moist or covered by dew. When the humidity is very low, spray tends to evaporate before reaching weed foliage. For best results under low relative humidity conditions, increase spray volume to 12 to 15 gallons per acre. Do not spray if rain is expected within 8 hours to avoid loss of deposited spray and herbicide adsorption by the weeds.

Wind

Do not apply when the wind speed exceeds 10 mph to avoid drift hazard to sensitive crops and the possibility of uneven (streaked) applications.

Compatibility With Other Chemicals

Tank mix applications of Stam 80 EDF with other herbicides, insecticides, spray adjuvants, or liquid fertilizers may reduce crop tolerance and/or weed control or impair mixing properties. Use of these products in tank mix applications with Stam 80 EDF is done at the user's risk.

Adverse Reaction to Insecticides

Rice plants may be severely injured or killed if Stam 80 EDF is applied in tank mix combinations or sequentially before or after certain insecticides. Do not tank mix Stam 80 EDF with carbamate insecticides such as carbaryl, etc., or organophosphorus insecticides (such as malathion and methyl parathion, etc). Do not apply any of the carbamate or organophosphorus insecticides to rice fields within 14 days before or after applying Stam 80 EDF.

Do not apply Stam 80 EDF to rice fields planted with rice seed treated with bird repellents containing methiocarb. Consult local extension specialist for current recommendations of approved insecticides on rice.

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