

08 APR 1993

John H. Cain, Jr.
 E. I. du Pont de Nemours & Company, Inc.
 Agricultural Products
 Walker's Mill, Barley Mill Plaza
 P.O. Box 80038
 Wilmington, DE 19880-0038

Dear Mr. Cain:

Subject: Label Changes for Use on Rice in California
 Londax Herbicide
 EPA Registration No. 352-506
 Your Submission Dated November 30, 1992

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable with the following provisions:

- 1) The heading Active Ingredients should be made singular.
- 2) Due to new EPA policy, part of the Environmental Hazards section has been changed. To comply, change the sentence "Do not apply to water or wetlands (swamps, bogs, marshes and potholes)" to read "Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark."
- 3) Add the appropriate Net Contents statement.
- 4) Add the statement "Do not apply this product through any type of irrigation system."
- 5) Under the section for Spray Mixture Preparation, delete the statement "Note: The only drift control agent approved by both EPA and Du Pont is 'Chemtrol'." This statement implies endorsement by the EPA.
- 6) At the end of the section for Sprayer Cleanout (before spraying crops other than rice), reinstate the caution warning against the simultaneous use of ammonia and chorine bleach.

| CONCURRENCES | | | | | | | |
|--------------|-----------|--|--|--|--|--|--|
| SYMBOL | W7505C | | | | | | |
| SURNAME | D. KENNIN | | | | | | |
| DATE | 4/7/93 | | | | | | |

A stamped copy is enclosed for your records. Please submit five (5) final printed copies for the referenced label, incorporating the above changes, before releasing the product for shipment.

Sincerely yours,

Joanne I. Miller
Product Manager (23)
Fungicide-Herbicide Branch
Registration Division (H7505C)

Enclosure

CONCURRENCES

| | | | | | | | |
|---------|--|--|--|--|--|--|--|
| SYMBOL | | | | | | | |
| SURNAME | | | | | | | |
| DATE | | | | | | | |

3 of 16

REGISTRATION CODE 0589-004
PACKAGE SIZE
8 - 16.6 OUNCE BOXES



LONDAX® HERBICIDE

FOR USE ON RICE IN THE STATE OF CALIFORNIA

DRY FLOWABLE

ACTIVE INGREDIENTS

Methyl 2-[[[(4,6-dimethoxypyrimidin-2-yl)amino]-
carbonyl]amino]sulfonyl]methyl]benzoate 60%

INERT INGREDIENTS 40%

TOTAL 100%

EPA Reg. No. 352-506

U.S. Pat. 4,420,925
ACCEPTED
with **COMMENTS**
in EPA Letter Dated

KEEP OUT OF REACH OF CHILDREN WARNING

08 APR 1993

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
352-506

WARNING ! CAUSES EYE IRRITATION.

Do not get in eyes, on skin or clothing. Wear goggles or face shield when handling. Avoid breathing spray mist. Harmful if swallowed.

Wash contaminated clothing before reuse.

STATEMENT OF PRACTICAL TREATMENT

- If in eyes, immediately flush with plenty of water. Get medical attention.
- If on skin, wash with plenty of soap and water. Get medical attention if irritation persists.
- If swallowed, call a physician or poison control center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with fingers.
- Do not induce vomiting or give anything by mouth to an unconscious person.
- For medical emergencies involving this product, call toll free: 1-800-441-3637.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or wetlands (swamps, bogs, marshes and potholes) except as specified on this label for use in rice. Do not contaminate water when disposing of equipment washwaters.

IMPORTANT

- Injury to or loss of desirable trees or vegetation may result from failure to observe the following:
 - Do not apply or 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.
 - Do not contaminate any body of water.
 - Keep from contact with fertilizers, insecticides, fungicides and seeds during storage.
- Injury to or loss of subsequently sprayed crops may result from failure to observe the following procedures:
 - "Londax" herbicide must be cleaned from application equipment prior to spraying crops other than rice, according to cleanup procedures described in the SPRAYER CLEANOUT section of this label.
- 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 to crops other than rice or land scheduled to be planted to crops other than rice because most crops other than rice are highly sensitive to "Londax".

GENERAL INFORMATION

Du Pont "Londax" herbicide is a dry flowable formulation for selective preemergence and postemergence weed control in rice. When applied according to the instructions on the label, it will control many broadleaf and sedge weeds. Best control will be achieved when "Londax" is applied to very young emerging and actively growing weeds (less than 3 leaves). Degree and duration of control may depend on: weed spectrum and infestation intensity, weed size at application time, growing conditions at and following time of treatment, soil pH, texture and organic matter, and water management.

BIOLOGICAL ACTIVITY

"Londax" rapidly inhibits growth of susceptible broadleaf weeds and sedges. Following preemergence to postemergence applications (to weeds), leaves of susceptible plants will appear chlorotic in 3 to 5 days and necrosis of the growing point will subsequently occur. Susceptible plants are controlled in 7 to 21 days, depending on species, as evidenced by complete necrosis of the leaf tissue and growing point. In some cases, affected plants will be stunted and remain green, but are not competitive with the crop.

The herbicidal action of "Londax" may be influenced by temperature. Expression of herbicide symptoms is accelerated at warmer temperatures and may be delayed when air or water temperatures are below 70 degrees F. Under cool conditions, the appearance of chlorosis and eventual necrosis in susceptible plants may be delayed beyond 5 days.

Occasional temporary chlorosis and/or growth retardation of rice may occur following "Londax" application. These symptoms are accentuated at high ambient temperatures and/or cold water temperatures. These symptoms are normally transient and disappear within 2 to 3 weeks after application.

INFORMATION ON RESISTANT WEEDS

Naturally occurring resistant biotypes* of certain weeds listed on this label may not be effectively controlled by "Londax".

If resistant biotypes of weeds listed on this label are not satisfactorily controlled by "Londax", you may consider respraying problem areas in a timely and effective manner using a postemergence broadleaf and/or sedge herbicide having a different mode of action**.

Prior to planting, you may also wish to consider the possible use of a preemergence herbicide, with a different mode of action than "Londax", that may help to control and delay the proliferation of these resistant weed biotypes.

Consult your Ag dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative herbicide recommendations available in your area.

* Biotypes are naturally occurring individuals of the species which have a slightly different genetic makeup. Resistant biotypes may look exactly the same as susceptible biotypes. Herbicide resistant biotypes are able to survive a use rate several times higher than needed to control susceptible biotypes. These resistant biotypes will not be controlled by "Londax" or other herbicides having the same mode of action.

** Mode of action is the chemical interaction that interrupts a biological process necessary for plant growth and development.

Because resistant biotypes are known to exist in California, accurate record keeping of pesticides applied to individual fields is advisable in order to help obtain information on the spread and dispersal of the resistant biotypes.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This labeling must be in possession of the user at the time of pesticide application.

"Londax" herbicide should only be used in accordance with recommendations on this label. Du Pont will not be responsible for losses or damages resulting from the use of this product in any manner not specifically recommended by Du Pont. User assumes all risks associated with such nonrecommended use.

SPRAY TANK PREPARATION

It is important that spray equipment is cleaned and free from deposits before using "Londax". Deposits in spray equipment may trap "Londax" and make it difficult to clean it out of the spray equipment after using. Therefore, before spraying "Londax" herbicide follow the cleanup procedures specified on the label of the product previously sprayed. Follow this cleanout procedure with the one described below for spray equipment, loading hoses, batch tanks, and any other equipment to be exposed to "Londax" herbicide.

- 1) Steam clean the tanks using a nonchlorine based detergent taking care to remove all physical residues.
- 2) Thoroughly rinse sprayer, tanks, boom, and hoses with clean water (free of sediment and agricultural chemicals).
- 3) Partially fill (1/2 full) the tank with clean water and add Nutra-sol[®] at a rate of 32 ounces per 100 gallons of water. Complete filling the tank with clean water. Flush through boom and hoses and then allow to sit for 15 minutes with agitation (and recirculation, if possible). Drain the equipment taking care to flush nozzles and hoses thoroughly.
- 4) Nozzles, screens, and strainers should be removed and cleaned separately.
- 5) Thoroughly rinse sprayer, tanks, boom, nozzles, and hoses with clear water to remove "Nutra-sol".
- 6) Follow label directions for the product previously sprayed for rinsate disposal.

SPRAY MIXTURE PREPARATION

Always mix "Londax" herbicide with clean water (free of sediment and agricultural chemicals), never obtain water from paddies.

"Londax" should be thoroughly mixed with water in a spray tank before adding an antidrift agent. A drift control agent may be used with "Londax". If a drift control agent is used, it must be approved by Du Pont and EPA (Note: The only drift control agent approved by both EPA and Du Pont is Chemtrol[®]). Do not use any other additives except as directed by this label.

Agitation is required for uniform mixing and application. Apply "Londax" spray preparations within 24 hours of product mixing or product degradation may occur. If not sprayed immediately thoroughly reagitiate before spraying.

Do not put "Londax" in nurse tanks or any other tanks used to store or transport clean water. One-way valves (anti-siphoning devices) should be placed on lines and hoses of mixing/loading equipment to prevent contamination of nurse tanks or other clean water sources.

All mixing and application equipment exposed to "Londax" spray preparations must be dedicated only to rice applications until cleanout procedures have been successfully completed according to the SPRAYER CLEANOUT section of this label.

APPLICATION RECOMMENDATION

- GALLONAGE

Use a minimum of 5 gallons of water per acre for aerial applications.

- DRIFT MANAGEMENT

Follow these practices to minimize drift.

Do not allow spray from aerial application equipment to drift onto adjacent crops or land, as even small amounts may result in injury to or loss of adjacent plants. When spraying near adjacent sensitive crops or plants, do everything possible to reduce spray drift. This includes:

- Stop spraying if wind speed becomes excessive. **DO NOT SPRAY IF WIND SPEED IS GREATER THAN 10 MPH.** Spray drift can occur at wind speeds less than 10 mph. If sensitive crops or plants are downwind, extreme caution must be used even in relatively low wind conditions! **DO NOT SPRAY IF WINDS ARE GUSTY.**
- If sensitive crops or plants are immediately adjacent and downwind from the treatment area leave an adequate buffer area to eliminate potential drift.
- High temperatures, drought and low relative humidity may increase the possibility of harmful spray drift. **EXTREME CAUTION MUST BE USED WHEN THESE CONDITIONS ARE PRESENT AND SENSITIVE CROPS OR PLANTS ARE NEARBY, REGARDLESS OF WIND SPEED.**
- Do not spray when a temperature inversion exists. An inversion is characterized by low air movement and an increase in air temperature with an increase in altitude. In humid regions, a fog or mist may form. An inversion may be detected by producing a smoke column and checking for a layering effect. Smoke-producing devices on aircraft are recommended. If not sure whether inversion conditions are present, consult with local weather services before making an application.
- Use large droplet size sprays to minimize drift. For aerial applications, orient nozzles straight back along the wind-stream using straight stream orifices (such as disk with no swirl plate).
- Use the lowest number of nozzles practical with the largest orifice size per nozzle to obtain minimum of 5 GPA.
- Application height should not exceed 1/2 length of wing span, to minimize drift potential.
- Boom length must not exceed 2/3 of wing span.

APPLICATION TIMING

- WATER SEEDED

For best results, "Londax" should be applied preemergence to early postemergence to submerged weeds and postemergence to rice from the 1 to 3 leaf stage. Best control will be achieved when "Londax" is applied to very young emerging and actively growing weeds (less than 3 leaves).

"Londax" can be applied to rice beyond the 3 leaf stage, but late applications should be targeted to the preemergence to early postemergence stage of weeds.

WATER MANAGEMENT DURING AND FOLLOWING APPLICATION

Water level at the time of application and within 5 days of application should be high enough so that the soil is completely covered with water (preferably at least 3 inches with no exposed soil). Product performance will be reduced in areas where soil is not covered with water. Foliage of target weeds must remain covered with water at time of application and during the water holding period for best weed control.

At the time of application and for the following 5 days, water on the field should be held static. Holding water static on the field for more than 5 days will enhance product performance. Failure to hold water for the 5-day minimum will decrease product performance. Rainfall sufficient to cause water flow off the field may reduce performance if it occurs within 5 days of application. Water may be introduced into the field to maintain flood level, but this may result in reduced control.

Note: Static water is defined as not allowing water to exit individual paddies.

WEEDS CONTROLLED

"Londax" effectively controls the following weeds when used according to instructions on the label:

- Blunt Spikerush: *Eleocharis obtusa*
- + California Arrowhead: *Sagittaria montevidensis calycina*
- Ducksalad: *Heteranthera limosa*
- Eisen waterhyssop: *Bacopa eisenii*
- Roundleaf waterhyssop: *Bacopa rotundifolia*
- Purple ammannia: *Ammannia coccinea*
- Redstem: *Ammannia auriculata*
- Roughseed beirush: *Scirpus mucronatus*
- Southern naiad: *Najas guadalupensis*
- + Smallflower umbrellaplant: *Cyperus difformis*
- Water plantain (seedling) *Alisma* spp.
- Waterwort: *Elatine* spp.
- + Naturally occurring biotypes of these weeds are known to exist in California and "Londax" will not control resistant biotypes.

Sequential treatments of "Londax" and "Ordram" or "Bolero" will add control of barnyardgrass and watergrass, in addition to the above listed weeds. Applications of "Londax" should be made on the same day as "Ordram" or "Bolero" applications, if possible, or as soon as possible prior to or after application of these herbicides.

Note: Observe all applicable directions, restrictions (including water holding requirements) and precautions on the "Ordram" and "Bolero" labels.

USE RATE:

Use 1-2/3 oz "Londax" per acre.

**SPRAYER CLEANOUT
AT THE END OF THE DAY**

DURING an extended period where the airplane or mixing equipment will be used to apply multiple loads of "Londax" herbicide, at the end of each day of spraying partially fill(1/2 full) the tanks and flush boom and hoses with clean water(free of sediment and agricultural chemicals) and allow to sit overnight.

**AFTER SPRAYING "LONDAX" AND BEFORE
SPRAYING CROPS OTHER THAN RICE**

AFTER using "Londax" herbicide and prior to spraying crops other than rice, use the following procedure to clean the sprayer and any other equipment (loading hoses, batch tanks, ect.) exposed to "Londax":

- 1) Steam cleanout tank using a nonchlorine based detergent taking care to remove all physical residues.
- 2) Thoroughly rinse sprayer, tanks, boom, and hoses with clean water(free of sediment and agricultural chemicals).
- 3) Partially fill(1/2 full) tank with clean water and then add "Nutra-sol" at a rate of 32 ounces of product per 100 gallons of water. Complete filling the tank with clean water. Flush through nozzles, boom, and hoses, then allow to sit for 15 minutes with agitation (and recirculation, if possible). Drain the solution from the equipment making sure to flush boom and hoses thoroughly.
- 4) Rinse tanks, hoses and nozzles with clean water to remove "Nutra-sol".
- 5) Partially fill(1/2 full) tank with clean water, then add 1 gallon of 21% ammonia or 7 gallons of 3% ammonia per 100 gallons of water. Complete filling the tank with clean water. Flush through boom, nozzles and hoses, and allow to sit for 10 minutes with agitation (and recirculation if possible), then drain.
- 6) Nozzles, screens, and strainers should be removed and cleaned separately.
- 7) Rinse tanks, booms, and hoses with clean water.
- 8) Repeat steps 5 and 7 a total of four times.
- 9) Rinse tanks, booms, and hoses to remove all traces of ammonia.
- 10) The rinseate may be disposed of on site or at an approved waste disposal facility.

Perform cleanout procedures on batch tanks and any other mixing equipment separately from aircraft hoppers. Take care to clean loading hoses and any other equipment or surfaces exposed to "Londax".

RESTRICTIONS

Do not apply more than 1 2/3 oz. "Londax" per acre per year.

Do not graze treated fields or feed treated forage within 80 days of last application.

Do not apply "Londax" within 80 days of harvest.

Do not apply "Londax" to rice under stress from abnormal weather or growing conditions, drought, disease, insect or prior herbicide injury, as crop injury may occur. Severe stress, drought, disease or insect damage following application may also result in crop injury.

Water drained directly treated fields must not be used to irrigate other crops.

Do not mix "Londax" with any additives except as directed by this label.

Do not use "Londax" on wild rice (Zizania spp.).

Do not rotate to crops other than rice for 120 days following application.

STORAGE AND DISPOSAL

STORAGE: Store product in original container only, away from other pesticides, fertilizer, food or feed. Not for use or storage in or around the home. Keep container closed.

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

CONTAINER DISPOSAL: Emptied paper (or cardboard) containers may be burned if allowed by state and local authorities. If burned, stay out of smoke.

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

NOTICE OF WARRANTY

Du Pont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Du Pont. In no case shall Du Pont be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the buyer. **DU PONT MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.**

- 1 Nutra-Sol is a product of Thomas G. Kilfoil Company, Inc., San Bruno, CA
- 2 Chemtrol is a product of Loveland Industries, Inc., Loveland, CO
- 3 Registered trademark of ICI America, Inc., Wilmington, Delaware.
- 4 Registered trademark of Valent USA Corp., Walnut Creek, CA

AG-5318 9020/9112 5/17/89

08 APR 1993

John H. Cain, Jr.
 E. I. du Pont de Nemours & Company, Inc.
 Agricultural Products
 Walker's Mill, Barley Mill Plaza
 P.O. Box 80038
 Wilmington, DE 19880-0038

Dear Mr. Cain:

Subject: Revised Label Text
 Londax Herbicide
 EPA Registration No. 352-506
 Your Submission Dated March 10, 1993

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable with the following provisions:

- 1) The heading Active Ingredients should be made singular.
- 2) Due to new EPA policy, part of the Environmental Hazards section has been changed. To comply, change the sentence "Do not apply to water or wetlands (swamps, bogs, marshes and potholes)" to read "Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark."
- 3) Add the appropriate Net Contents statement.
- 4) Add the statement "Do not apply this product through any type of irrigation system."
- 5) According to the front panel, this product is intended for use in the states of Arkansas, Louisiana, Mississippi, Missouri, and Texas. Therefore, references to California should be removed from the text. They occur at the end of the section for Information on Resistant Weeds and at the end of the section for Weeds Controlled.
- 6) Under the section for Spray Mixture Preparation, delete the statement "Note: The only drift control agent approved by both EPA and Du Pont is 'Chemtrol'." This statement implies endorsement by the EPA.

| CONCURRENCES | | | | | | | |
|--------------|----------|--|--|--|--|--|--|
| SYMBOL | NH7505C | | | | | | |
| SURNAME | N. KENNY | | | | | | |
| DATE | 4/7/93 | | | | | | |

7) At the end of the section for Sprayer Cleanout (before spraying crops other than rice), reinstate the caution warning against the simultaneous use of ammonia and chlorine bleach.

A stamped copy is enclosed for your records. Please submit five (5) final printed copies for the referenced label, incorporating the above changes, before releasing the product for shipment.

Sincerely yours,

Joanne I. Miller
Product Manager (23)
Fungicide-Herbicide Branch
Registration Division (H7505C)

Enclosure

| CONCURRENCES | | | | | | | |
|--------------|--|--|--|--|--|--|--|
| SYMBOL | | | | | | | |
| SURNAME | | | | | | | |
| DATE | | | | | | | |

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REGISTRATION CODE 0000-000
PACKAGE SIZE
8 - 20 OUNCE BOTTLES/CARTON



LONDAX®

HERBICIDE

FOR USE ON RICE IN THE STATES OF ARKANSAS, LOUISIANA, MISSISSIPPI, MISSOURI AND TEXAS

DRY FLOWABLE

ACTIVE INGREDIENTS

BY WEIGHT

Methyl 2-[[[(4,6-dimethoxypyrimidin-2-yl)amino]-
carbonyl]amino]sulfonyl]methyl]benzoate 60%

INERT INGREDIENTS 40%

TOTAL 100%

EPA Reg. No. 352-506

U.S. Pat. 4,420,325

KEEP OUT OF REACH OF CHILDREN

WARNING

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING ! CAUSES EYE IRRITATION.

Do not get in eyes, on skin or clothing. Wear goggles or face shield when handling. Avoid breathing if swallowed.

Wash contaminated clothing before reuse.

STATEMENT OF PRACTICAL TREATMENT

If in eyes, immediately flush with plenty of water. Get medical attention.

If on skin, wash with plenty of soap and water. Get medical attention if irritation persists.

If swallowed, call a physician or poison control center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with fingers.

Do not induce vomiting or give anything by mouth to an unconscious person.

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

ENVIRONMENTAL HAZARDS

Do not apply directly to water or wetlands (swamps, bogs, marshes and potholes) except as specified on this label for use in rice. Do not contaminate water when disposing of equipment washwaters.

ACCEPTED
with COMMENTS
in EPA Letter Docket

08 APR 1993

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended for the pesticide registered under EPA Reg. No. 352-506

IMPORTANT

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

Do not apply or 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.

Keep from contact with fertilizers, insecticides, fungicides and seeds during storage.

Injury to or loss of subsequently sprayed crops may result from failure to observe the following procedures:

"Londax" herbicide must be cleaned from application equipment prior to spraying crops other than rice, according to cleanup procedures described in the EQUIPMENT CLEANOUT section of this label.

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 to crops other than rice or land scheduled to be planted to crops other than rice because most crops other than rice are highly sensitive to "Londax".

GENERAL INFORMATION

Du Pont "Londax" herbicide is a dry flowable formulation for selective preemergence and postemergence weed control in rice. When applied according to the instructions on the label, it will control many broadleaf and sedge weeds. Best control will be achieved when "Londax" is applied to very young and actively growing weeds. Degree and duration of control may depend on: use rate, weed spectrum and infestation intensity, weed size at application time, growing conditions at and following time of treatment, soil pH, texture and organic matter, and water management.

BIOLOGICAL ACTIVITY

"Londax" rapidly inhibits growth of susceptible broadleaf weeds and sedges. Following preemergence to postemergence applications (to weeds), leaves of susceptible plants will appear chlorotic in 3 to 5 days and necrosis of the growing point will subsequently occur. Susceptible plants are controlled in 7 to 21 days, depending on species, as evidenced by complete necrosis of the leaf tissue and growing point. In some cases, affected plants will be stunted and remain green, but are not competitive with the crop.

The herbicidal action of "Londax" may be influenced by temperature. Expression of herbicide symptoms is accelerated at warmer temperatures and may be delayed when air or water temperatures are below 70 degrees F. Under cool conditions, the appearance of chlorosis and eventual necrosis in susceptible plants may be delayed beyond 5 days.

Occasional temporary chlorosis and/or growth retardation of rice may occur following "Londax" application. These symptoms are accentuated at high ambient temperatures and/or cold water temperatures. These symptoms are normally transient and disappear within 2 to 3 weeks after application.

INFORMATION ON RESISTANT WEEDS

Naturally occurring resistant biotypes* of certain weeds listed on this label may not be effectively controlled by "Londax".

If resistant biotypes of weeds listed on this label are not satisfactorily controlled by "Londax", you may consider respraying problem areas in a timely and effective manner using a postemergence broadleaf and/or sedge herbicide having a different mode of action**.

Prior to planting, you may also wish to consider the possible use of a preemergence herbicide, with a different mode of action than "Londax", that may help to control and delay the proliferation of these resistant weed biotypes.

Consult your Ag dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative herbicide recommendations available in your area.

* Biotypes are naturally occurring individuals of the species which have a slightly different genetic makeup. Resistant biotypes may look exactly the same as susceptible biotypes. Herbicide resistant biotypes are able to survive a use rate several times higher than needed to control susceptible biotypes. These resistant biotypes will not be controlled by "Londax" or other herbicides having the same mode of action.

** Mode of action is the chemical interaction that interrupts a biological process necessary for plant growth and development.

Because resistant biotypes are known to exist in California, accurate record keeping of pesticides applied to individual fields is advisable in order to help obtain information on the spread and dispersal of the resistant biotypes.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This labeling must be in possession of the user at the time of pesticide application.

"Londax" herbicide should only be used in accordance with recommendations on this label. Du Pont will not be responsible for losses or damages resulting from the use of this product in any manner not specifically recommended by Du Pont. User assumes all risks associated with such nonrecommended use.

APPLICATION METHOD

"Londax" may be applied as a water mixed spray to water seeded or dry seeded rice or "Londax" may be applied impregnated on fertilizer granules to water seeded rice.

SPRAY TANK PREPARATION

It is important that spray equipment is cleaned and free from deposits before using "Londax". Deposits in spray equipment may trap "Londax" and make it difficult to clean it out of the spray equipment after using. Therefore, before spraying "Londax" herbicide follow the cleanup procedures specified on the label of the product previously sprayed.

SPRAY MIXTURE PREPARATION

"Londax" should be thoroughly mixed with water in a spray tank before adding any other material (i.e., anti drift agent such as Chemtrol). A drift control agent may be used with "Londax". If a drift control agent is used, it must be approved by Du Pont and EPA (Note: The only drift control agent approved by both EPA and Du Pont is "Chemtrol"). Do not use any other additives except as directed by this label.

Agitation is required for uniform mixing and application. Apply "Londax" spray preparations within 24 hours of product mixing or product degradation may occur. If not sprayed immediately thoroughly reagitrate before spraying.

Do not put "Londax" in nurse tanks or any other tanks used to store or transport clean water (free of sediment and agricultural chemicals). One-way valves (anti-siphoning devices) should be placed on lines and hoses of mixing/loading equipment to prevent contamination of nurse tanks or other clean water sources.

All mixing and application equipment exposed to "Londax" spray preparations must be dedicated only to rice applications until cleanout procedures have been successfully completed according to the SPRAYER CLEANOUT section of this label.

APPLICATION RECOMMENDATION

- GALLONAGE(Aerial or Ground Applied)

Post flood applications for pre and postemergent control of weeds submerged below the water surface require a minimum of 5 gallons of water per acre.

Post flood applications for pre and postemergent control of weeds emerged above the water surface require a minimum of 10 gallons of water per acre, to assist penetration of the spray mixture through the rice canopy. Control of weeds emerged above the water may not be successful unless sufficient spray contact the emerged surface of the weeds.

APPLICATION TIMING

-WEEDS SUBMERGED BELOW THE WATER SURFACE

"Londax" may be applied to control certain weeds that are submerged below the surface of the water. For this use, apply "Londax" at a rate of 1 to 1 2/3 oz per acre. Use a minimum spray volume of 5 gallons of water per acre. The rice should be at the 1 full leaf stage of growth or larger.

For best results, "Londax" should be applied preemergence to early postemergence to the weeds. With the exception of Ducksalad (Heteranthera limosa) in dry seeded rice, best control will be achieved when "Londax" is applied to very young emerging and actively growing weeds of less than 3 leaves, after establishment of the permanent flood. For optimum control of Ducksalad in dry seeded rice, application should be made to weeds no larger than 1 true leaf.

Weeds Controlled

- + Annual arrowhead : Sagittaria spp.
- Blunt spikerush: Eleocharis obtusa
- Dayflower: Commelina communis
- Ducksalad: Heteranthera limosa
- Eclipta: Eclipta alba
- Eisen waterhyssop: Bacopa eisenii
- Falsepimpernel: Lindernia spp.
- Gooseweed: Sphenoclea zeylanica
- Mexicanweed: Caperonia castanaefolia
- Pickernelweed: Pontederia cordata
- Purple ammannia: Ammannia coccinea
- Redstem: Ammannia auriculata
- Rice flatsedge: Cyperus iria
- Roughseed bulrush: Scirpus mucronatus
- + Smallflower umbrellaplant: Cyperus difformis
- Southern naiad: Najas guadalupensis
- Texasweed: Caperonia palustris
- Water plantain (seedling): Alisma spp.
- Waterwort: Elatine spp.
- Yellow nutsedge: Cyperus esculentus

+ Naturally occurring resistant biotypes of California Arrowhead: (Sagittaria montevidensis calycina) and Smallflower umbrellaplant: (Cyperus difformis) are known to exist in California. "Londax" will not control these resistant biotypes.

"Londax" will result in marked reduction in growth and vigor (stunting) of:

- Alligatorweed: Alternanthera philoxeroides

-WEEDS EMERGED ABOVE THE WATER SURFACE

"Londax" may be applied after the establishment of the permanent flood to control certain weeds that are emerged above the water surface. For this use apply "Londax" at 1 to 1 2/3 oz per acre as a water mixed spray in combination with a nonionic surfactant (minimum 80% active ingredient) at 0.25% v/v (1 qt/100 gallons), or a crop oil concentrate at 1% v/v (1 gallon /100 gallons). Use a minimum spray volume of 10 gallons of water per acre (See "Application Recommendation-Gallonage).

For best results the timing of this application should be based on the size of the weeds present. Weeds should have 3-4 leaves or extend 3-4 inches above the water surface at the time of application. Do not apply "Londax" to control weeds emerged above the water surface if rainfall is expected within 4 hours after application. Refer to the "Weeds Controlled" table below for species and maximum weed size controlled.

| Weeds Controlled | Weed Height (inches) |
|--|----------------------|
| Yellow Nutsedge: Cyperus esculentus | 5-8 |
| Rice Flatsedge: Cyperus iria | 5-8 |
| Eclipta: Eclipta alba | 4-7 |
| Redstem: Ammannia auriculata | 4-8 |
| + Annual arrowhead spp.: Sagittaria spp. | 4-10 |
| Gooseweed: Sphenoclea zeylanica | 4-8 |
| Mexicanweed: Caperonia castanaefolia | 4-6 |
| Pickernelweed: Pontederia cordata | 4-8 |
| Texasweed: Caperonia palustris | 4-6 |

+ Naturally occurring resistant biotypes of California Arrowhead: (Sagittaria montevidensis calycina) are known to exist in California. "Londax" will not control this resistant biotype.

WATER MANAGEMENT

Water level at the time of application and within 7 days of application should be high enough so that the soil is completely covered with water (at least 3 inches with no exposed soil). Weed control may be reduced in exposed or shallow areas of the field.

Good water management at the time of "Londax" application and for at least 7 days following application will ensure maximum product performance. Hold flood water static on the field for a minimum of seven days after application. Holding water on the field for more than 7 days will enhance product performance. Failure to hold water for the 7 day minimum will decrease product performance.

Note: Static water is defined as not allowing water to exit the field.

For best results in water seeded rice, "Londax" should be applied when the flood is to be held for a minimum of 2 to 3 weeks or after the establishment of the permanent flood.

Loss of flood water due to overflow, levee breach or seepage within the 7 day minimum will decrease product performance. Water may be introduced into the field after application to maintain flood level, but this may also result in reduced control.

When application is targeted to control submerged weeds (below the surface of the water) the weed foliage must remain submerged from time of application until the end of the holding period.

DRY FERTILIZER IMPREGNATION

PREPARATION OF "LONDAX" IMPREGNATED DRY FERTILIZER

The herbicide/fertilizer impregnation process must be done at commercial fertilizer or chemical dealerships that are properly equipped for this procedure.

NOTE: The practice of impregnating "Londax" on dry fertilizer is recommended only for dealers whose primary crop business is rice. Failure to thoroughly clean all traces of "Londax" from equipment used to mix or apply dry fertilizer for use on other crops may result in crop injury.

No more than 1 2/3 ounce "Londax" should be impregnated on a minimum of 150 lbs of dry fertilizer per acre.

Slurry the "Londax" in water using 1 2/3 ounce to a pint of water. Do not exceed slurry volume of 1 pint per 150 lbs of fertilizer. Continuous agitation (mechanical or recirculating) is required to keep "Londax" in suspension during the impregnation process.

To impregnate, mix and blend the dry fertilizer and herbicide in a closed rotary drum-type mixer allowing sufficient time to ensure uniform coverage. The delivery nozzle(s) must be placed inside the mixer and positioned to provide uniform spray coverage of the tumbling fertilizer. Use "Londax" impregnated dry fertilizer as soon as possible after blending.

Before using blending and/or application equipment to subsequently mix or apply fertilizer to crops other than rice, thoroughly clean all traces of "Londax" and "Londax" impregnated fertilizer from equipment.

NOTE: All state regulations relating to dry bulk fertilizer blending, registration, labeling and application are the responsibility of the individual and/or company selling the fertilizer/herbicide mixture.

APPLICATION OF "LONDAX" IMPREGNATED DRY FERTILIZER

For best results apply "Londax" impregnated dry fertilizer at the same timing as for all water mixed sprays; that is, at preemergence to early postemergence of submerged weeds. Rice should be at the 1 full leaf stage of growth or larger. See APPLICATION TIMING section of this label for more information.

Spread the herbicide treated fertilizer uniformly by air with a properly calibrated equipment.

Correct water management during and after application is as important for "Londax" impregnated fertilizer as for the water mixed spray. Water level at the time of application and within 7 days of application should be high enough so that the soil is completely covered with water (preferable at least 3 inches with no exposed soil). See WATER MANAGEMENT section of this label for more information.

USE RATE

A maximum of 1 2/3 oz "Londax" per acre per year is permitted.

A recommended rate range is 1 to 1 2/3 oz "Londax" per acre. For best results "Londax" should be applied to static water immediately after establishment of the permanent flood.

For Alligatorweed (runners under 12 inches) 1 2/3 oz "Londax" per acre will result in marked reduction in growth and vigor (stunting).

For all other weeds on the label, 1 to 1 2/3 oz "Londax" per acre will provide control if the labeled application and water management recommendations are followed. Use the higher rate where weed density is high.

If two applications of "Londax" are made per year, the total amount of "Londax" cannot exceed 1 2/3 oz per acre.

COMBINATION RECOMMENDATIONS

"Londax" may be used in conjunction with rice herbicides used for grass control, such as Ordram², Bolero³ and propanil.

Observe all applicable directions, restrictions (including, water holding requirements) and precautions on the "Ordram", "Bolero" and propanil labels.

Hold water in "Londax" treated fields for a minimum of 7 days.

EQUIPMENT CLEANOUT

AT THE END OF THE DAY

Where the airplane or mixing equipment will be used to apply "Londax" herbicide over a consecutive period of days, partially fill (1/2 full) the tanks and flush boom and hoses with clean water (free of sediment and agricultural chemicals) at the end of each day and allow to sit overnight.

AFTER SPRAYING "LONDAX" AND BEFORE SPRAYING CROPS OTHER THAN RICE

After using "Londax" herbicide and prior to spraying crops other than rice, use the following procedure to clean the sprayer and any other equipment (loading hoses, batch tanks, etc.) exposed to "Londax":

1. Drain tank; thoroughly rinse spray tanks, boom and hoses with clean water. Loosen and physically remove any visible deposits.
2. Fill the tank with clean water and several gallons household ammonia* (contains 3% active) for every 100 gallons of water. Flush the hoses, boom and nozzles with the cleaning solution then add more water to completely fill the tank. Circulate the cleaning solution through the tank and hoses for at least 15 minutes. Again flush the hoses, boom and nozzles with the cleaning solution and then drain the tank.
3. Remove the nozzles and screens and clean separately in a bucket containing the cleaning solution and water.
4. Repeat Step 2.
5. Rinse the tank, boom and hoses with clean water.
6. The rinsate may be disposed of on site or at an approved waste disposal facility.

* Equivalent amounts of alternate strength ammonia solution or Du Pont approved cleaner (see Du Pont Bulletin: Information on Cleaning Agents for Sprayer Cleanout of Du Pont Sulfonylurea Herbicides) can be used in the cleanout procedure. Carefully read and follow the individual cleaner instructions.

Perform cleanout procedures on batch tanks and any other mixing equipment separately from aircraft hoppers. Take care to clean loading hoses and any other equipment or surfaces exposed to "Londax".

AFTER APPLYING "LONDAX" IMPREGNATED ON FERTILIZER

Mixing and loading equipment, and aircraft should be cleaned of "Londax" impregnated fertilizer using the same cleaning solutions as described above for cleaning out water mixed sprays (See AFTER SPRAYING "LONDAX" AND BEFORE SPRAYING CROPS OTHER THAN RICE section of this label.)

RESTRICTIONS

Do not apply more than 1 2/3 oz "Londax" per acre per year.

Do not graze treated fields or feed treated forage within 80 days of last application.

Do not apply "Londax" within 80 days of harvest.

Do not apply "Londax" to rice under stress from abnormal weather or growing conditions, drought, disease, insect or prior herbicide injury, as crop injury may occur. Severe stress, drought, disease or insect damage following application may also result in crop injury.

Water drained directly from treated fields must not be used to irrigate other crops.

Do not mix "Londax" with any additives except as directed by this label.

Do not use "Londax" on wild rice (*Zizania* spp.).

Do not rotate to crops other than rice for 120 days following application.

Do not farm crayfish(crawfish) in treated fields.

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

NOTICE OF WARRANTY

Du Pont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Du Pont. In no case shall Du Pont be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the buyer. **DU PONT MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.**

¹ Chemtrol is a product of Loveland Industries, Inc., Loveland, CO

² Registered trademark of ICI Americas, Inc., Wilmington, Delaware.

³ Registered trademark of Valent USA Corp., Walnut Creek, CA

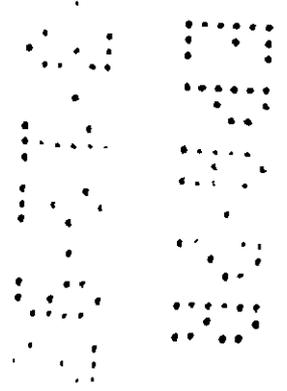
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STORAGE AND DISPOSAL

STORAGE: Store product in original container only, away from other pesticides, fertilizer, food or feed. Not for use or storage in or around the home. Keep container closed.

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

CONTAINER DISPOSAL: Triple-rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.



08 APR 1993

John H. Cain, Jr.
E. I. du Pont de Nemours & Company, Inc.
Agricultural Products
Walker's Mill, Barley Mill Plaza
P.O. Box 80038
Wilmington, DE 19880-0038

Dear Mr. Cain:

Subject: Supplemental Labeling - Add Tank Mixes With Propanil
Londax Herbicide
EPA Registration No. 352-506
Your Submission Dated March 10, 1993

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable. A stamped copy is enclosed for your records. Please submit three (3) final printed copies for the above mentioned label before releasing the product for shipment.

Sincerely yours,

Joanne I. Miller
Product Manager (23)
Fungicide-Herbicide Branch
Registration Division (H7505C)

Enclosure

CONCURRENCES

| | | | | | | | |
|---------|----------|--|--|--|--|--|--|
| SYMBOL | H7505C | | | | | | |
| SURNAME | D. KEENE | | | | | | |
| DATE | 4/8/93 | | | | | | |

ACCEPTED

08 APR 1993

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 352-506

AGRICULTURAL PRODUCTS

..... A Growing Partnership With Nature

**LONDAX® HERBICIDE
 Plus Propanil Herbicide for
 Preflood and Preflood Sequential
 Weed Control in Rice**

LONDAX® HERBICIDE

EPA REG. NO. 352-506

**"LONDAX" AND PROPANIL HERBICIDES FOR PREFLOOD AND PREFLOOD SEQUENTIAL
 POSTEMERGENCE WEED CONTROL IN RICE
 IN THE STATES OF ARKANSAS, LOUISIANA, MISSISSIPPI, MISSOURI AND TEXAS**

DIRECTIONS FOR USE

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

Du Pont "Londax" Herbicide may be applied as a tankmix with herbicides containing propanil that are registered for use on rice for improved control of broadleaf weeds and sedges in rice using preflood or preflood sequential post-emergence application methods. Observe all applicable directions, restrictions, (including water holding requirements and the use of spray adjuvants) and precautions on the propanil herbicide labels. Follow the most restrictive directions from either the "Londax" label or the tank mix partner. Weed control may be reduced if rainfall occurs within 4 hours after a "Londax" + propanil tankmix application.

WEEDS CONTROLLED

"Londax" + Propanil: Preflood and Preflood Sequential:

| | Inches |
|------------------------------------|--------|
| Cocklebur | 2-8 |
| Eclipta | 2-8 |
| Gooseweed | 2-10 |
| Hemp sesbania (coffee bean) | 2-8 |
| Mexicanweed | 2-6 |
| Morningglory (annual) | |
| Entireleaf | 2-7 |
| Iny'leaf | 2-7 |
| Palmeto' | 2-7 |
| Pitted | 2-7 |
| Northern jointvetch (curly indigo) | 2-4 |
| Pennsylvania smartweed | 2-7 |
| Redstem | 2-8 |
| Rice flatsedge | 3-10 |
| Texasweed | 2-6 |
| Yellow nutsedge | 3-10 |

SPRAY PREPARATION

"Londax" should be thoroughly mixed with water in the spray tank before adding any other material (i.e., tankmix partner, antidrift agent). To ensure tank mix compatibility, test the desired mixture prior to use. Agitation is required for uniform mixing and application. Apply "Londax" spray preparations within 24 hours of product mixing or product degradation may occur. Thoroughly retest before using.

We recommend the use of a nonionic surfactant (at least 80% active ingredients) at 1/4% v/v, or crop oil concentrate at 1% v/v, when tankmixing "Londax" with dry flowable formulations of propanil, unless otherwise specified on the propanil label. Refer to the "Londax" and/or propanil labels for more restrictive information.

SPRAY GALLONAGE: Use a minimum of 10 gallons water per acre, aerial or ground applied.

APPLICATION

Control Option 1: Preflood Application

Apply "Londax" (0.75 to 1.0 oz. per acre) in combination with propanil or Arrosol® (3 to 4 qts. per acre) for control of many broadleaf and sedge weeds in rice. This application should be made 1 to 7 days prior to the establishment of the permanent flood. A minimum spray volume of 10 gallons of water per acre should be used to insure thorough coverage of the weeds. Weeds should be actively growing at the time of application.

Control Option 2: Preflood Sequential Applications

If severe weed infestations or less than optimum conditions exist (cool dry weather; poor crop establishment; slow crop growth, etc.), sequential applications of "Londax" (0.50 to 0.75 oz. per acre) in combination with propanil or Arrosol® (3 to 4 qts. per acre) may be used. The first application should be made when broadleaf weeds are in the cotyledon to 4-leaf stage and the sedges are 3 to 6 inches tall. The second application, if needed, should be made 1 to 7 days prior to establishing the permanent flood.

To prevent rice injury, refer to the propanil label for further restrictions and the proper timing of the first application.

WATER MANAGEMENT

For optimum weed control, the permanent flood should be established as soon as possible after the last "Londax" + propanil application, within 1-7 days after treatment. If flushing is necessary prior to establishment of the permanent flood, "Londax" applications should be made after the flush but prior to the establishment of the permanent flood.

Loss of the permanent flood following applications of "Londax" + propanil may result in poor performance due to regrowth of treated plants or reinfestation by newly germinated weeds. Rainfall significant for overflow, water loss due to levee seepage, levee breach, or introduction of new water soon after treatment could reduce product performance.

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IMPORTANT - BEFORE USING "LONDAX" HERBICIDE, OR "LONDAX" TANKMIXES, READ AND CAREFULLY OF THE CAUTIONARY STATEMENTS AND ALL OTHER INFORMATION APPEARING ON ALL PRODUCT LABELS. FOLLOW THE MOST RESTRICTIVE DIRECTIONS FROM EITHER THE "LONDAX" LABEL OR THE TANK MIX PARTNER.

This bulletin contains new or supplemental instructions for use of this product which may not appear on the package label. Follow the instructions carefully.

This labeling must be in the possession of the user at the time of pesticide application.

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