

Londax[®]

Herbicide

Dry Flowable

ACTIVE INGREDIENT	By Weight
Bensulfuron methyl	
Methyl 2-[[[[(4,6-dimethoxypyrimidin-2-yl)amino]-carbonyl]amino]sulfonyl]methyl]benzoate	60%
OTHER INGREDIENTS	40%
TOTAL	100%

This product contains 0.6 lbs. of Bensulfuron methyl per pound of formulated product.

EPA Reg. No. 70506-372

EPA Est. No. 62171-MS-1

KEEP OUT OF REACH OF CHILDREN WARNING - AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand this label, find someone to explain it to you in detail.)

FIRST AID	
If Inhaled:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth if possible. • Call a poison control center or doctor for further treatment advice.
If on Skin:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 - 20 minutes. • Call a poison control center or doctor for treatment advice.
If in Eyes:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with clean water for 15 - 20 minutes. • Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If Swallowed:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have the 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.
<p>FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE, CALL Rocky Mountain Poison and Drug Safety: (866) 673-6671 FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC (800) 424-9300</p>	

See inside for complete Directions For Use, including Conditions of Sale and Warranty.

Manufactured for: UPL NA INC. • 630 Freedom Business Center, Suite 402 • King of Prussia, PA 19406 U.S.A. • 1-800-438-6071



Net Weight
1 LB, 4 OZ

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING

Causes substantial but temporary eye injury. Wear protective eyewear (goggles, safety glasses, or face shield). Harmful if swallowed or absorbed through skin. Avoid contact with eyes, skin or clothing.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as polyethylene, nitrile, neoprene or polyvinylchloride
- Shoes plus socks
- Protective eyewear

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

Engineering Control Statement: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

USERS SHOULD:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- 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.

Steps to take if material is released or spilled:

- Dike and contain any liquid spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

ENVIRONMENTAL HAZARDS

For terrestrial uses: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark, except as specified on this label for use in rice. Do not contaminate water when cleaning of equipment or disposing of equipment washwaters or rinsate.

IMPORTANT PRECAUTIONS:

Groundwater Advisory: Bensulfuron-methyl is known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

Surface Water Advisory: This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams and springs will reduce the potential loading of bensulfuron-methyl from runoff water and sediment. Runoff of this product will be greatly reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

Non-Target Organisms: This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of non-target organisms by minimizing spray drift. For further guidance and instructions on how to minimize spray drift, refer to the **Spray Drift Management** section of this label.

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.

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.

Observe all precautions and limitations in this label and the labels of products used in combination with LONDAX herbicide. The use of LONDAX herbicide not consistent with this label can result in injury to crops animals or persons. Keep containers closed to avoid spills and contamination.

LONDAX herbicide must only be used in accordance with directions on this label. UPL NA Inc. will not be responsible for losses or damages resulting from the use of this product in any manner not specifically directed by UPL NA Inc. User assumes all risks associated with such non-directed use.

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:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinylchloride
- Shoes plus socks
- Protective eyewear

ENVIRONMENTAL CONDITIONS AND BIOLOGICAL ACTIVITY

LONDAX herbicide rapidly inhibits the growth of susceptible broadleaf weeds and sedges. Three to five days after application to weeds, leaves of susceptible plants appear chlorotic, and the growing point subsequently dies. Susceptible plants are controlled in 7 to 21 days depending on the species. In some cases, affected plants remain green but are stunted and are not competitive with the crop.

The herbicidal action of LONDAX herbicide may be influenced by temperature. At warmer temperatures, expression of herbicide symptoms is accelerated; at cooler temperatures (when air or water temperatures are below 70°F), expression of herbicide symptoms may be delayed beyond 5 days.

Occasionally, treated rice may suffer temporary chlorosis and/or growth retardation after treatment with LONDAX herbicide. These symptoms, which intensify in cold water and at high ambient temperatures, are normally temporary and disappear within two to three weeks after application.

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 spray drift to desirable plants (refer to **Spray Drift Management** section of this label).

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 CLEANUP** section of this label.

- Carefully follow all sprayer cleanup instructions both prior to and after using this product, as spray tank residue may damage crops other than those included in this label.
- Most crops other than rice are highly sensitive to LONDAX herbicide. Avoid all direct or indirect (such as drift) contact with non-target crops (or land scheduled to be planted with crops), as injury may result.

USE RESTRICTIONS FOR ALL LOCATIONS

- Do not apply this product through any type of irrigation system.
- Do not make more than one application per year, with the maximum single application rate of 1 2/3 ozs. LONDAX herbicide.
- Do not apply more than 1 2/3 ozs. LONDAX (0.062 lb. a.i.) per acre per year.
- Do not apply LONDAX herbicide to rice under stress from abnormal weather or growing conditions, drought, disease, or 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 herbicide with any additives except as directed by this label.
- Do not use LONDAX herbicide on wild rice (*Zizania* spp.).
- Do not rotate to crops other than rice for 120 days following application.
- Do not harvest crayfish (crawfish) prior to harvesting the rice.
- Do not use a swath width greater than 60 feet when applying LONDAX herbicide dry (direct) by air.
- Apply LONDAX dry (direct) by air at a maximum of no greater than 1/2 the wing span of the aircraft.
- Do not apply LONDAX herbicide dry (direct) by air to dry rice fields.
- Do not apply LONDAX herbicide within 60 feet of sensitive crops.

In all States (excluding California):

- Do not graze treated fields or feed treated forage within 60 days of the last application.
- Do not apply LONDAX herbicide within 60 days of harvest.

In the state of California:

- Do not graze treated fields or feed treated forage within 80 days of the last application.
- Do not apply LONDAX herbicide within 80 days of harvest.

Product Information

LONDAX herbicide is a dry flowable formulation that is used for selective pre-emergent and post-emergent weed control in rice. When applied according to label directions, it effectively controls many annual and perennial broadleaf weeds and sedges. The best control is achieved when LONDAX herbicide is applied to very young emerging and actively growing weeds (fewer than three leaves). The degree and duration of control may depend on the following:

- weed spectrum and infestation intensity
- weed size at application
- growing conditions at and following treatment
- soil pH, texture, and organic matter content
- water management

WEED RESISTANCE MANAGEMENT

LONDAX herbicide is a Group 2 herbicide, or ALS herbicide which inhibits acetolactate synthase (ALS), also called acetohydroxyacid synthase (AHAS), a key enzyme in the biosynthesis of the branched-chain amino acids isoleucine, leucine, and valine. Plant death results from events occurring in response to ALS inhibition and low branched-chain amino acid production, but the actual sequence of phytotoxic processes is unclear.

For resistance management, LONDAX herbicide is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to LONDAX herbicide and other Group 2 herbicides. The resistant biotypes may dominate the weed population if Group 2 herbicides are used repeatedly in the same field. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance take one or more of the following steps:

- Rotate the use of LONDAX herbicide or other Group 2 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product and switch to another management strategy or herbicide with a different mode of action (MOA) if available.
- Contact your local extension specialist, certified crop advisor and/or manufacturer for additional herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes. Report any incidence of non-performance of this product against a particular weed species to your retailer or UPL NA Inc. representative.

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds.
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.

INTEGRATED PEST MANAGEMENT

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

APPLICATION INFORMATION

USE RATE

RESTRICTIONS

- Do not make more than one application per year, with the maximum single application rate of 1 2/3 ozs. LONDAX herbicide.
- Do not apply more than 1 2/3 ozs. LONDAX (0.062 lb. a.i.) per acre per year.

GALLONAGE (WET SPRAYS)

Use a minimum of 5 gals. of water per acre for aerial application and a minimum of 10 gals. of water per acre for ground application.

APPLICATION TIMING

For best results, LONDAX herbicide should be applied to submerged weeds from pre-emergence to early post-emergence and to rice at the 1 to 3 leaf stage. The best control is achieved when LONDAX herbicide is applied to very young emerging and actively growing weeds (fewer than three leaves).

LONDAX herbicide can be applied to rice beyond the 3 leaf stage, but late applications should target the pre-emergent to early post-emergent stage of weeds.

USE INFORMATION - CALIFORNIA ONLY

DIRECTED STREAM APPLICATION (DSA)

LONDAX herbicide may be applied as a low volume slurry application (diluted in water) using the Directed Stream Application method by air (helicopter) or ground application equipment in rice. Using the DSA method requires attaching drop-tubes to the spray boom to allow placement of the slurry directly into or just above the surface of the water of the rice paddy.

Use sufficient spray volume to allow proper dispersion and/or suspension in the spray tank. Also, the boom pressure should be sufficient to provide a solid (unbroken) stream of the slurry mixture into the rice paddy.

For best results, apply LONDAX herbicide to submerged weeds from pre-emergence to early post-emergence and to rice at the 1 to 3 leaf stage of growth.

CALIFORNIA:

WEEDS CONTROLLED

LONDAX herbicide effectively controls the following weeds when used according to label directions:

Common Name	Scientific Name
Blunt Spikerush	<i>Eleocharis obtuse</i>
California Arrowhead*	<i>Sagittaria monte vidensis calycina</i>
Ducksalad	<i>Heteranthera limosa</i>
Eisen waterhyssop	<i>Bacopa eisenii</i>
Roundleaf waterhyssop	<i>Bacopa rotundifolia</i>
Purple ammannia*	<i>Ammannia coccinea</i>
Redstem*	<i>Ammannia auriculata</i>
Ricefield bulrush*	<i>Scirpus mucronatus</i>
Southern naiad	<i>Najas guadalupensis</i>
Smallflower umbrellaplant*	<i>Cyperus difformis</i>
Water plantain (seedling)	<i>Alisma</i> spp.
Waterwort	<i>Elatine</i> spp.

* Naturally occurring resistant biotypes of this weed are known to exist in California. LONDAX herbicide alone will not control these biotypes.

In addition to controlling the weeds listed above, LONDAX herbicide controls barnyardgrass and watergrass if applied sequentially with thiobencarb. Apply LONDAX herbicide on the same day as, or as soon as possible prior to or after, application of these pesticides.

USE INFORMATION - ALL STATES (EXCLUDING CALIFORNIA)

PREPLANT APPLICATIONS

A tank mixture of LONDAX herbicide (0.5 oz. product/acre - 0.02 lb. a.i.) plus glyphosate may be applied as a pre-plant treatment for improved control of emerged yellow nutsedge, Pennsylvania smartweed, hemp sesbania and morningglory species.

Refer to the glyphosate label for information on weed sizes, application conditions, use rates and use restrictions. Follow the label guidelines that are the most restrictive.

For best control of yellow nutsedge, an in-season application of LONDAX plus propanil (STAM) will be required. See the **PRE-FLOOD/PRE-FLOOD SEQUENTIAL APPLICATIONS** section of this label for further information.

DRY FERTILIZER IMPREGNATION

In addition to its application as a water-mixed spray, LONDAX herbicide may also be applied as LONDAX herbicide impregnated on fertilizer granules.

Preparation

Fertilizer may be impregnated with LONDAX herbicide only by properly equipped commercial fertilizer or chemical dealerships whose primary crop business is rice.

NOTE: Failure to thoroughly clean all traces of LONDAX herbicide from equipment used to mix or apply dry fertilizer for use on crops other than rice may result in crop injury.

Impregnate no more than 1 2/3 ozs. LONDAX herbicide on a minimum of 150 lbs. of dry fertilizer per acre.

To impregnate dry fertilizer with LONDAX herbicide, follow these steps:

- Prepare a slurry using 1 2/3 ozs. LONDAX herbicide per pt. of water, and not exceeding a slurry volume of 1 pt. per 150 lbs. of fertilizer. Continuously agitate the mixture to keep LONDAX herbicide in suspension.
- Mix the dry fertilizer and the LONDAX herbicide/water slurry in a closed rotary drum-type mixer, allowing sufficient time to ensure uniform coverage.
- Place the delivery nozzle(s) inside the mixer, positioning them to provide uniform spray coverage of the tumbling fertilizer. Use LONDAX herbicide-impregnated dry fertilizer as soon as possible after blending.

Thoroughly clean blending and/or application equipment to remove all traces of LONDAX herbicide and LONDAX herbicide-impregnated fertilizer before using the equipment to mix or apply fertilizer to crops other than rice. See **SPRAYER CLEANUP** for more information.

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

Application

For best results, apply LONDAX herbicide-impregnated dry fertilizer at the same timing as water-mixed sprays: at pre-emergence to early post-emergence of submerged weeds. Rice should be at the 1 full leaf stage of growth or larger. See **APPLICATION INFORMATION - APPLICATION TIMING** for more information.

Spread the LONDAX herbicide-impregnated dry fertilizer uniformly by air with properly calibrated equipment.

NOTE: Correct water management during and after application is as important for LONDAX herbicide-impregnated dry fertilizer as for the water-mixed spray. See **POST FLOOD APPLICATIONS - Water Management** for more information.

TANK MIXTURES

LONDAX herbicide may be applied in tank mixtures with other herbicides and/or adjuvants registered for use in rice.

Refer to the companion herbicide label(s) for all applicable use directions, restrictions (including any water-holding requirements), and precautions. The most restrictive use directions must apply.

PREFLOOD/PREFLOOD SEQUENTIAL APPLICATIONS

LONDAX herbicide Plus Propanil-containing Herbicides

For both pre-flood and pre-flood sequential applications of LONDAX herbicide/propanil combinations, use at least 10 gals. of water per acre.

LONDAX herbicide may be applied as a tank mix with labeled propanil-containing rice herbicides to provide improved control of certain broadleaf weeds and sedges when used as pre-flood or pre-flood sequential post-emergence applications. For information on preparing the spray tank for application, see **SPRAY EQUIPMENT PREPARATION**.

Observe all applicable directions, restrictions (including water-holding requirements and the use of spray adjuvants), and precautions on the propanil-containing herbicide labels. Follow the most restrictive directions from either the LONDAX herbicide label or the tank mix partner. Weed control may be reduced if rainfall occurs within 4 hours of application of a LONDAX herbicide/propanil tank mix.

Note: When tank mixing LONDAX herbicide with dry flowable formulations of propanil, the use of a nonionic surfactant (minimum 80% active ingredient) at 0.25% v/v (1 qt. per 100 gals.), or a crop oil concentrate at 1% v/v (1 gal. per 100 gals.) is recommended, unless otherwise specified on the propanil label.

APPLICATION TIMING

Pre-flood Application

Apply LONDAX herbicide (0.75 to 1.0 oz. per acre) in combination with propanil (3.75 - 5 lbs. of Stam 80 EDF or 3 - 4 quarts of Stam liquid formulations) 1 - 7 days prior to establishment of the permanent flood. Use a minimum spray volume of 10 gals. of water per acre to ensure thorough coverage of the weeds. Weeds should be actively growing at the time of application.

Pre-flood Sequential Applications

In the event of severe weed infestations or less than optimal conditions (such as cool, dry weather, poor crop establishment, or slow crop growth), make sequential applications of LONDAX herbicide (0.50 to 0.75 oz. per acre) in combination with propanil (3.75 - 5 lbs. of Stam 80 EDF or 3 - 4 quarts of Stam liquid formulations). Make the first application when broadleaf weeds are in the cotyledon to 4 leaf stage and the sedges are 3" to 6" tall. Make the second application, if needed, 1 to 7 days prior to establishment of the permanent flood.

NOTE: To avoid crop injury, refer to the propanil label for further restrictions and the proper timing of the first application.

Water Management

For the best weed control, establish the permanent flood as soon as possible (within 7 days of application) after the last application of LONDAX herbicide/propanil combinations. If flooding is necessary prior to establishment of the permanent flood, apply LONDAX herbicide/propanil combinations after the flush but prior to the establishment of the permanent flood.

Loss of the permanent flood following applications of LONDAX herbicide/propanil combinations may result in poor performance due to re-growth of treated plants or re-infestation by newly germinated weeds.

Runoff caused by rainfall, overflow, levee breach, seepage, or introduction of new water soon after treatment may reduce product performance.

POST FLOOD APPLICATIONS

Spray Gallonage (Aerial or Ground Applied)

For submerged weeds, use at least 5 gallons of water per acre.

For emerged weeds, use at least 10 gallons of water per acre to assist penetration of the spray mixture through the rice canopy. Control of emerged weeds may not be successful unless sufficient spray contacts the emerged surface of the weeds.

LONDAX herbicide APPLIED ALONE

To control both submerged and emerged weeds, apply LONDAX herbicide at 1 to 1 2/3 ozs. per acre. For applications to emerged weeds, combine LONDAX herbicide with a nonionic surfactant (minimum 80% active ingredient) at 0.25% v/v (1 qt. per 100 gals.), or a crop oil concentrate at 1% v/v (1 gal. per 100 gals.).

For both submerged and emerged weeds, use the higher specified rate where weed density is high.

NOTE: Alligatorweed (runners under 12") shows a marked reduction in growth and vigor when LONDAX herbicide is applied at a rate of 1 2/3 ozs. per acre.

Submerged Weeds

For best results, LONDAX herbicide should be applied to submerged weeds from pre-emergence to early post-emergence and to rice at the 1 to 3 leaf stage. The best control is achieved when LONDAX herbicide is applied to very young emerging and actively growing weeds (fewer than 3 leaves).

NOTE: For optimum control of Ducksalad (*Heteranthera limosa*) in dry-seeded rice, apply LONDAX herbicide to weeds no larger than 1 true leaf.

Emerged Weeds

LONDAX herbicide may be applied to emerged weeds after the establishment of the permanent flood. For best results, application timing should be based on the size of the weeds present. Weeds should have 3 to 4 leaves or extend 3" to 4" above the water surface at application. Refer to the **WEEDS CONTROLLED - WEEDS EMERGED ABOVE THE WATER SURFACE** table for species and maximum weed size controlled.

NOTE: Product effectiveness will be reduced if LONDAX herbicide is applied to control emerged weeds if rainfall is expected within 4 hours after application.

SUBMERGED WEEDS

LONDAX herbicide may be applied to control certain weeds that are submerged below the water surface.

LONDAX herbicide effectively controls the following submerged weeds when used according to label directions:

Common Name	Scientific Name
Annual arrowhead spp.*	<i>Sagittaria</i> spp.
Blunt Spikerush	<i>Eleocharis obtusa</i>
Dayflower	<i>Commelina communis</i>
Ducksalad	<i>Heteranthera limosa</i>
Eclipta	<i>Eclipta alba</i>
Eisen waterhyssop	<i>Bacopa eisenii</i>
False pimpernel	<i>Lindernia</i> spp.
Gooseweed	<i>Sphenoclea zeylanica</i>
Mexicanweed	<i>Cyperonia castanaefolia</i>
Pickernelweed	<i>Pontederia cordata</i>
Purple ammannia*	<i>Ammannia coccinea</i>
Redstem*	<i>Ammannia auriculata</i>
Rice flatsedge*	<i>Cyperus iria</i>
Roughseed bulrush*	<i>Scirpus mucronatus</i>
Smallflower umbrellaplant*	<i>Cyperus difformis</i>
Southern naiad	<i>Najas guadalupensis</i>
Texasweed	<i>Cyperonia palustris</i>
Water plantain (seedling)	<i>Alisma</i> spp.
Waterwort	<i>Elatine</i> spp.
Yellow nutsedge*	<i>Cyperus esculentus</i>

* Naturally occurring resistant biotypes of this weed are known to exist. LONDAX herbicide alone will not control these resistant biotypes.

NOTE: LONDAX herbicide will result in marked reduction in growth and vigor (stunting) of Alligatorweed (*Alternanthera philoxeroides*).

WEEDS EMERGED ABOVE THE WATER SURFACE

LONDAX herbicide may be applied to control certain weeds that are emerged above the water surface. See **POST-FLOOD APPLICATIONS - Emerged Weeds** for more information.

LONDAX herbicide effectively controls the following emerged weeds when used according to label directions:

Common Name	Scientific Name	Weed Height (inches)
Annual arrowhead spp.*	<i>Sagittaria</i> spp.	4 - 10
Eclipta	<i>Eclipta alba</i>	4 - 7
Gooseweed	<i>Sphenoclea zeylanica</i>	4 - 8
Mexicanweed	<i>Caperonia castanaefolia</i>	4 - 6
Pickereelweed	<i>Pontederia cordata</i>	4 - 8
Redstem*	<i>Ammannia auriculata</i>	4 - 8
Rice flatsedge*	<i>Cyperus iria</i>	5 - 8
Texasweed	<i>Caperonia palustris</i>	4 - 6
Yellow nutsedge*	<i>Cyperus esculentus</i>	5 - 8

* Naturally occurring resistant biotypes of this weed are known to exist. LONDAX herbicide alone will not control these resistant biotypes.

Weeds Suppressed* (above the water surface)

Common Name	Scientific Name	Weed Height (inches)
Hemp sesbania	<i>Sesbania exaltata</i>	4 - 10
Northern jointvetch	<i>Aeschynomene virginica</i>	4 - 10

For best results, use a minimum of 1.25 ounces per acre.

* Weed suppression is a visual reduction in weed competition (reduced population and/or vigor) as compared to an untreated check. The degree of control will vary with the rate used, size of weeds treated, crop competition, and environmental conditions following treatment.

PRE-FLOOD WEEDS

LONDAX herbicide may be applied as a tank mix with propanil-containing rice herbicides **such as STAM**. See **PRE-FLOOD/PRE-FLOOD SEQUENTIAL APPLICATIONS - LONDAX herbicide Plus Propanil-containing Herbicides** - for more information. The combination of LONDAX herbicide and propanil-containing rice herbicides used in pre-flood and pre-flood post-emergence sequential applications effectively controls the following weeds when used according to label directions:

Common Name	Scientific Name	Weed Height (inches)
Cocklebur	<i>Xanthium spinosum</i>	2 - 6
Eclipta	<i>Eclipta alba</i>	2 - 8
Gooseweed	<i>Sphenoclea zeylanica</i>	2 - 10
Hemp sesbania (coffee bean)	<i>Sesbania exaltata</i>	2 - 8
Mexicanweed	<i>Caperonia castanaefolia</i>	2 - 6
Morningglory (annual) Entireleaf	<i>Ipomea hederacea</i> [†]	2 - 7
Ivyleaf	<i>Ipomea hederacea</i>	2 - 7
Palmleaf	<i>Ipomea wrightii</i>	2 - 7
Pitted	<i>Ipomea lacunosa</i>	2 - 7
Northern jointvetch (curly indigo)	<i>Aeschynomene virginica</i>	2 - 4
Pennsylvania smartweed	<i>Polygonum pensylvanicum</i>	2 - 5
Redstem*	<i>Ammannia auriculata</i>	2 - 8
Rice flatsedge*	<i>Cyperus iria</i>	3 - 10
Texasweed	<i>Caperonia palustris</i>	2 - 6
Yellow nutsedge*	<i>Cyperus esculentus</i>	3 - 10

[†] intergriuscula variety

* Naturally occurring resistant biotypes of this weed are known to exist. LONDAX herbicide alone will not control these resistant biotypes.

TANK MIXTURES

LONDAX herbicide may be applied in tank mixtures with other herbicides and/or adjuvants registered for use in rice.

Refer to the companion herbicide label(s) for all applicable use directions, restrictions (including any water-holding requirements), and precautions.

LONDAX herbicide + Permit®

A tank mix of 0.75 to 1.0 ounce per acre of LONDAX herbicide plus 0.125 to 0.25 ounce per acre Permit® may be applied for improved control of broadleaf weeds and sedges in rice using pre-flood application methods. Apply in a minimum of 10 gallons of spray volume per acre.

When tank mixing LONDAX herbicide and Permit® the use of a nonionic surfactant (minimum 80% active ingredient) at 0.25% v/v (1 quart per 100 gallons), or a crop oil concentrate at 1% v/v (1 gallon per 100 gallons) is recommended.

The tank mix of LONDAX herbicide plus Permit® may also be applied in combination with labeled propanil-containing rice herbicides (such as STAM). Refer to the LONDAX herbicide, Permit®, and propanil-containing herbicide labels for any additional use directions (e.g. water management), restrictions or precautions.

WEEDS CONTROLLED

Common Name	Scientific Name	Weed Height (inches)
Dayflower	<i>Commelina communis</i>	1 - 3
Flatsedge	<i>Cyperus iria</i>	3 - 10
Jointvetch, northern (Curly Indigo)	<i>Aeschynomene virginica</i>	2 - 4
Morningglory, entireleaf	<i>Ipomoea hederacea</i>	2 - 4
Morningglory, ivyleaf	<i>Ipomoea hederacea</i>	2 - 4
Morningglory, palmleaf	<i>Ipomoea wrightii</i>	2 - 4
Morningglory, pitted	<i>Ipomoea lacunosa</i>	2 - 4
Nutsedge, yellow	<i>Cyperus esculentus</i>	3 - 10
Redstem	<i>Ammannia auriculata</i>	2 - 6
Sesbania, hemp (Coffeebean)	<i>Sesbania exaltata</i>	2 - 6

USE INFORMATION - ALL STATES

AERIAL APPLICATION OF LONDAX herbicide DRY (DIRECT) APPLICATIONS

LONDAX herbicide may be applied as a dry application (without dilution in a liquid carrier) by air in rice. When applied according to the instructions on this label, dry aerial applications of LONDAX herbicide will effectively control the broadleaf and sedge weeds listed in the **WEEDS CONTROLLED** section of this label. However, special equipment is required for this method of application. See the **APPLICATION TIMING** section on page 4 for more information.

Note the following precautions when applying LONDAX herbicide dry by air:

- Follow the loading, application, and equipment calibration instructions provided by the equipment manufacturer.
- Apply using only equipment approved by the Federal Aviation Administration (FAA).
- Only certified applicators may apply LONDAX herbicide dry by air.
- Most crops other than rice are highly sensitive to LONDAX herbicide. Avoid all direct or indirect (such as drift) contact with non-target crops (or land scheduled to be planted with crops), as injury may result.

USE RESTRICTIONS

- Do not apply LONDAX herbicide dry (direct) by air to dry rice fields.
- Do not mix LONDAX herbicide with any liquid carrier (such as water or oil).
- Do not mix with any surfactant or crop oil.
- Do not use equipment designed to apply LONDAX herbicide dry by air to rice to apply any product to any crop other than rice, as injury may result.

RUNOFF PREVENTION ADVISORY STATEMENT:

To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

WINDBLOWN SOIL PARTICLES:

LONDAX herbicide has the potential to move off-site due to wind erosion. Soils that are subject to wind erosion usually have a high silt and/or fine to very fine sand fractions and low organic matter content. Other factors which can affect the movement of windblown soil include the intensity and direction of prevailing winds, vegetative cover, site slope, rainfall, and drainage patterns. Avoid applying Londax if prevailing local conditions may be expected to result in off-site movement.

Before applying LONDAX herbicide the user must read and understand all label directions, precautions and restrictions completely, including these requirements for a site specific evaluation. If you do not understand any of the instructions or precautions on the label, or are unable to make a site specific evaluation yourself, consult your local agricultural dealer, cooperative extension service, land managers, professional consultants, or other qualified authorities familiar with the area to be treated. If you still have questions regarding the need for site specific considerations please call your retailer or your representative.

SPRAY DRIFT

Aerial Applications:

- Do not release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use 1/2 swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds are below 3 miles per hour or exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

Ground Boom Applications:

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds are below 3 miles per hour or exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE - An effective way to reduce drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size - Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size - Aircraft

- Adjust Nozzle - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with airflow in flight.

BOOM HEIGHT - Ground Boom

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

RELEASE HEIGHT - Aircraft

Higher release heights increase the potential for spray drift. When applying aerially to crops, do not release spray at a height greater than 10 feet above the crop canopy, unless a greater application height is necessary for pilot safety.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and how they affect spray drift.

SPRAY EQUIPMENT PREPARATION

Spray equipment must be clean and free of deposits before using LONDAX herbicide. Deposits in spray equipment can trap LONDAX herbicide and inhibit cleanup of the spray equipment after use.

Therefore, before spraying LONDAX herbicide, clean the equipment according to the cleanup procedures specified on the label of the product previously sprayed. After completing this cleanup procedure, clean the spray equipment, loading hoses, batch tanks, and any other equipment that will be exposed to LONDAX herbicide according to the following procedures.

1. Steam-clean the tanks using a non-chlorine-based detergent, taking care to remove all physical residues.
2. Thoroughly rinse the sprayer, tanks, boom, and hoses with clean water. Be sure that the rinse water is free of sediment and agricultural chemicals.
3. Fill the tank one-half full with clean water and add "Nutra-sol" at 32 ozs. per 100 gals. of water. Fill the tank to capacity with clean water. Flush the boom and hoses and agitate (and recirculate, if possible) the sprayer for 15 minutes. Drain the equipment, taking care to flush the nozzles and hoses thoroughly.
4. Remove the nozzles, screens, and strainers and clean them separately.
5. Thoroughly rinse the sprayer, tanks, boom, nozzles, and hoses with clean water to remove "Nutra-sol".
6. Follow the label directions of the product previously sprayed for proper rinsate disposal.

Spray Mixture Preparation

Wet Spray Application

Thoroughly mix LONDAX herbicide with clean water (water that is free of sediment and agricultural chemicals) in the spray tank. Do not use water from paddies. Approved drift control agents may be used with LONDAX herbicide. Do not use any other additives except as directed by this label.

To ensure uniform mixing and application, agitate the mixture before application. If the mixture is not sprayed immediately after agitation, reagitrate it before application. Always apply LONDAX herbicide spray preparations within 24 hours of product mixing, or the product may degrade.

Do not store LONDAX herbicide in nurse tanks or any other tanks used to store or transport clean water. Install one-way valves (anti-siphoning devices) on lines and hoses of mixing/loading equipment to prevent contamination of nurse tanks or other clean water sources.

Mixing and application equipment exposed to LONDAX herbicide cannot be used for anything other than rice applications until it has been cleaned according to the procedures in the **SPRAYER CLEANUP** section of this label.

Additional Mixing Instructions (wet spray)

1. Fill the tank 1/4 to 1/3 full of clean water.
2. While agitating, add the required amount of LONDAX herbicide.
3. Continue agitation until the LONDAX herbicide is fully dispersed, at least 5 minutes.
4. Once the LONDAX herbicide is fully dispersed, maintain agitation and continue filling tank with water. The LONDAX herbicide should be thoroughly mixed with water before adding any other material.
5. As the tank is filling, add the required tank mix partner (other labeled rice herbicides, adjuvants, drift control agents, etc.).
6. If the mixture is not continuously agitated, settling may occur. If settling occurs, thoroughly re-agitate before using.
7. Apply LONDAX herbicide spray preparations within 24 hours of product mixing, or the product may degrade.
8. If LONDAX herbicide and a tank mix partner are to be applied in multiple loads, pre-slurry the LONDAX herbicide in clean water prior to adding to the tank. This will prevent the tank mix partner from interfering with the dissolution of the LONDAX herbicide.

SPRAYER CLEANUP

Before using equipment exposed to LONDAX herbicide to treat another crop, clean the sprayer and any other equipment (loading hoses, batch tanks, etc.) using the following procedure:

1. Steam-clean tank using a non-chlorine-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. Fill the tank one-half full with clean water and add "Nutra-sol" at 32 ozs. per 100 gals. of water. Fill the tank to capacity with clean water. Flush the nozzles, boom, and hoses, and agitate (and recirculate, if possible) the sprayer for 15 minutes. Drain the equipment, taking care to flush the boom and hoses thoroughly.
4. Rinse tanks, hoses, and nozzles with clean water to remove "Nutra-sol".
5. Fill the tank one-half full with clean water and add 1 gal. of 21% ammonia or 7 gals. of 3% ammonia per 100 gals. of water. Fill the tank to capacity with clean water. Flush the nozzles, boom, and hoses, and agitate (and recirculate, if possible) the sprayer for 15 minutes. Drain the equipment, taking care to flush the boom and hoses thoroughly.
6. Remove nozzles, screens, and strainers, and clean them separately.
7. Rinse tanks, booms, and hoses with clean water.
8. Repeat steps 5 and 7 an additional 3 times.
9. Rinse tanks, booms, and hoses to remove all traces of ammonia.
10. Dispose of the rinsate on site or at an approved waste disposal facility.

NOTE: When applying multiple loads of LONDAX herbicide several days in a row, the following procedure must be performed at the end of each day: partially fill the tank with fresh water, flush the boom and hoses, and allow to sit overnight.

Attention: Do not use chlorine bleach with ammonia. All traces of liquid fertilizer containing ammonia, ammonium nitrate or ammonium sulfate must be rinsed from the mixing and application equipment using water before adding chlorine bleach solution. Failure to do so will release a gas with a musty chlorine odor that can cause eye, nose, throat, and lung irritation. Do not clean equipment in an enclosed area.

Perform cleanup 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 herbicide.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal. Open dumping is prohibited.

PESTICIDE STORAGE: Store product in original container only. Store in a cool, dry place. Keep from contact with fertilizers, insecticides, fungicides, and seeds during storage.

PESTICIDE DISPOSAL: Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Triple-rinse container (or equivalent) promptly after emptying. Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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U-70506-372(012521-9233)