

## **RICE (ALL STATES EXCEPT CA) - SUBMERGED WEEDS**

### General Information

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

### USE 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 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

### ENVIRONMENTAL CONDITIONS AND BIOLOGICAL ACTIVITY

LONDAX rapidly inhibits the growth of susceptible broadleaf weeds and sedges. Three to 5 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 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. These symptoms, which intensify in cold water and at

high ambient temperatures, are normally temporary and disappear within two to three weeks after application.

## RESISTANCE

LONDAX is WSSA Group 2 herbicide, or ALS herbicide. When herbicides that affect the same biological site of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. Adequate control of these resistant weed bio-types cannot be expected. If weed control is unsatisfactory, it may be necessary to retreat the problem area using a product affecting a different site of action (non-ALS herbicide).

To better manage herbicide resistance through delaying the proliferation and possible dominance of herbicide resistant weed biotypes, it may be necessary to change cultural practices within and between crop seasons such as using a combination of tillage, retreatment, tank-mix partners and/or sequential herbicide applications that have a different site of action. Weed escapes that are allowed to go to seed will promote the spread of resistant biotypes.

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative cultural practices or herbicide recommendations available in your area.

## 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.

## USE INFORMATION: ALL STATES

## SPRAY EQUIPMENT PREPARATION

Spray equipment must be clean and free of deposits before using LONDAX. Deposits

in spray equipment can trap LONDAX and inhibit cleanup of the spray equipment after use.

Therefore, before spraying LONDAX, 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 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 oz. 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 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. 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, reagitate it before application. Always apply LONDAX spray preparations within 24 hours of product mixing, or the product may degrade.

Do not store LONDAX in nurse tanks or any other tanks used to store or transport clean water. Install one-way valves (antisiphoning 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 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.
3. Continue agitation until the LONDAX is fully dispersed, at least 5 minutes.
4. Once the LONDAX is fully dispersed, maintain agitation and continue filling tank with water. The LONDAX 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 spray preparations within 24 hours of product mixing, or the product may degrade.
8. If LONDAX and a tank mix partner are to be applied in multiple loads, pre-slurry the LONDAX in clean water prior to adding to the tank. This will prevent the tank mix partner from interfering with the dissolution of the LONDAX.

## SPRAYER CLEANUP

Before using equipment exposed to LONDAX 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 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. Fill the tank one-half full with clean water and add "Nutra-sol" at 32 oz. 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 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 sulphate 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.

#### USE RESTRICTIONS

- Do not apply this product through any type of irrigation system.
- Do not apply more than 1 2/3 oz. LONDAX per acre per year.
- In all States (excluding CA):
  - Do not graze treated fields or feed treated forage within 60 days of the last application.
  - Do not apply LONDAX 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 within 80 days of harvest. In all States:
    - Do not apply LONDAX 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 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 harvest crayfish (crawfish) prior to harvesting the rice.
- Do not use a swath width greater than 60 feet when applying LONDAX 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 dry (direct) by air to dry rice fields.
- Do not apply LONDAX within 60 feet of sensitive crops.

## Limitations, Restrictions, and Exceptions

### RICE

### SUBMERGED WEEDS

LONDAX may be applied to control certain weeds that are submerged below the water surface. See Post-flood Applications - Submerged Weeds for more information.

Annual arrowhead, Purple ammannia, Redstem, Roughseed bulrush, Smallflower umbrellaplant: Naturally occurring resistant biotypes of this weed are known to exist. LONDAX will not control these resistant biotypes.

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

### LONDAX APPLIED ALONE

To control both submerged and emerged weeds, apply LONDAX at 1 to 1 2/3 oz. per acre.

For applications to emerged weeds, combine LONDAX 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 is applied at a rate of 1 2/3 oz. per acre.

## Submerged Weeds

For best results, LONDAX 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 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 to weeds no larger than 1 true leaf.

## Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

## Pre-Harvest Interval

80 days

## Rates

[field rates 0](#)

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## Restricted Entry Interval

24 hours

## Timings

[Preemergence \(Weed\)](#)

[Postemergence \(Weed\)](#)