

## **CEREAL GRAINS - SORGHUM (GRAIN)**

### General Information

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR INSECT CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.

### GENERAL INFORMATION

Initial and residual control is contingent upon thorough crop coverage. Apply with ground or air equipment using sufficient water to obtain full coverage of foliage. Apply in a minimum of 2 gallons per acre by air or 10 gallons per acre by ground unless otherwise specified in this label. When foliage is dense or pest pressure is high (heavier insect or egg pressure, larger larval stages), use of higher application volumes and/or higher use rates may improve initial and residual control.

For cutworm control, LambdaStar Insecticide may be applied before, during or after planting. For soil incorporated applications, use higher rates for improved control.

### Resistance

LambdaStar Insecticide is a Group 3 Insecticide (contains the active ingredient Lambda-cyhalothrin). Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state agricultural authorities for details. If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternative method of control for your area.

### Spray Drift Precautions

OBSERVE THE FOLLOWING PRECAUTIONS WHEN SPRAYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES; RESERVOIRS; RIVERS; PERMANENT STREAMS, MARSHES OR NATURAL PONDS; ESTUARIES AND COMMERCIAL FISH FARM PONDS.

- Do not apply by ground within 25 feet, or by air within 150 feet of lakes; reservoirs; rivers; permanent streams, marshes, pot holes, or natural ponds; estuaries and commercial fish farm ponds. Increase the buffer zone to 450 feet when ultra low volume (ULV) application is made.
- All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers.
- For aerial applications, the spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices. The minimum practical boom length should be used and must not exceed 75% of wing span or rotor diameter.
- Use the largest droplet size consistent with good pest control. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.
- Spray should be released at the lowest height consistent with pest control and flight safety.

Applications more than 10 feet above the crop canopy should be avoided.

- Make aerial or ground applications when the wind velocity favors on-target product deposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 15 mph. Avoid applications when wind gusts approach 15 mph.
- Risk of exposure to aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.
- Do not cultivate within 10 feet of the aquatic area so as to allow growth of a vegetative filter strip.
- Low humidity and high temperatures increase the evaporation rate of spray droplets and therefore the likelihood of increased spray drift to aquatic areas. Avoid spraying during conditions of low humidity and/or high temperature.
- Do not make aerial or ground applications during temperature inversions. Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid

areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

In the State of New York, a 25 foot vegetated, non-cropped buffer strip untraversed by drainage tiles must be maintained between a treated field and a coastal salt marsh or stream that drains into a coastal salt marsh, for both aerial or ground application. For aerial applications, the 25 foot vegetated noncropped buffer strip for runoff protection would be part of the larger 150 foot buffer strip (or 450 foot buffer strip for ULV application) required for spray drift.

#### TANK MIX APPLICATION

When tank mixing with any other agricultural product, always add LambdaStar Insecticide last. Fill the tank with one half to two thirds volume of the mixing diluent. Make sure all other products are fully dispersed in the mixing diluent before adding the recommended rate of LambdaStar Insecticide to the tank. Add the remainder of the mixing diluent volume. It is recommended that mixing and spray equipment have continuous agitation for best results. Follow the precautions and limitations of the most restricted product in the tank mixture.

While LambdaStar Insecticide has good flexibility for tank mixing with other agricultural products, a jar test for physical compatibility is recommended for untried mixtures using proper ratios and mixing sequences of all ingredients to be included in the mixture.

LambdaStar Insecticide is an aqueous based formulation. It is recommended that no type of nonemulsifiable oils be used in combination with LambdaStar Insecticide. If adjuvants are used, use only:

- Nonionic Surfactant (NIS) containing at least 75% surface agent, or
- Non-phytotoxic Crop Oil Concentrate (COC) including once refined Vegetable Oil concentrate (VOC), or
- Methylated Sunflower Oils (MSO) containing a minimum of 17% emulsifier.

Adjuvants other than NIS or COC may be used providing the product meets the following criteria:

1. Contains only EPA exempt ingredients.

2. Is non-phytotoxic to the target crop.
3. Is compatible in mixture (may be established through a jar test).
4. Is supported locally for use with LambdaStar Insecticide on the target crop through proven field trials and through university and extension recommendations.

In addition, the following may be used as diluents:

Crop Oil Concentrate  
Methylated Sunflower  
Oils Urea-Ammonium  
Nitrate

It is recommended that the following not be used in combination with LambdaStar Insecticide as diluents or adjuvants:

Non-emulsifiable  
Oils Diesel Fuel  
Straight Mineral Oil

## CHEMIGATION

### Sprinkler Irrigation Application

Apply LambdaStar Insecticide at rates and timing described elsewhere in this label.

As local recommendations differ, consult your local State Extension Service or other local experts for recommendations on adjuvant or diluent types (see TANK MIX APPLICATION) rates and mixing instructions. These recommendations should be proven, through university and extension field trials, to be effective with LambdaStar Insecticide applied by chemigation.

Check the irrigation system to insure uniform application of water to all areas. Thorough coverage of foliage is required for good control. Good agitation in the pesticide supply tank should be maintained prior to and during the entire application period.

Apply by injecting the recommended rate of LambdaStar Insecticide into the irrigation system using a metering device that will introduce a constant flow and by distributing the product to the target area in 0.1-0.2 acre-inch of water. In general, use the least amount of water required for proper distribution and coverage. It is

recommended that the product be injected into the main irrigation line ahead of a right angle turn in the line to insure adequate dispersion or mixing in the irrigation water. Once the application is completed, flush the entire irrigation and injection system with clean water before stopping the system. In addition to the above recommendations, if application is being made during a normal irrigation set of a stationary sprinkler, the recommended rate of LambdaStar Insecticide for the area covered should be injected into the system only during the end of the irrigation set for sufficient time to provide adequate coverage and product distribution.

It is not recommended that LambdaStar Insecticide be applied through an irrigation system connected to a public water system. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year

#### Use Precautions - Sprinkler Irrigation Application

A. Apply this product only through (sprinkler including center pivot, lateral move, end tow, side [wheel] roll, traveler, big gun, solid set, or hand move) irrigation system(s). Do not apply this product through any other type of irrigation system.

B. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

C. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

D. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

E. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

F. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.

G. The pesticide injection pipeline must contain a functional, automatic, quick-

closing check valve to prevent the flow of fluid back toward the injection pump.

H. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

I. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

J. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

K. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

L. Any alternatives to the above required safety devices must conform to the list of EPA-approved alternative devices.

M. Do not apply when wind speed favors drift beyond the area intended for treatment or non-uniform distribution of treated water.

N. Do not apply through chemigation systems connected to public water systems.

Limitations, Restrictions, and Exceptions

SORGHUM (GRAIN)

REMARKS

- Apply as required by scouting, usually at intervals of 5 or more days. Timing and frequency of applications should be based upon insect populations reaching locally determined economic thresholds.

- Apply with ground or air equipment using sufficient water and application methods to obtain full coverage of target location. Apply in a minimum of 2 gallons per acre by air and a minimum of 10 gallons per acre by ground.
- For sorghum midge control, begin applications when 25% of the sorghum heads have emerged and are in tip bloom. Repeat applications at 5-day intervals if needed.
- Do not apply within 30 days of harvest.
- Do not apply more than 0.08 lb. a.i. (0.64 pt.) per acre per season.
- Do not apply more than 0.06 lb. a.i. (0.48 pt.) per acre per season after crop emergence.
- Do not apply more than 0.02 lb. a.i. (0.16 pt.) per acre per season once crop is in soft dough stage.

#### Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

Pre-Harvest Interval

30 days

#### Rates

[field rates 0](#)

[field rates 1](#)

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Restricted Entry Interval

24 hours

#### Timings

[When 25% of the sorghum heads have emerged and are in tip bloom.](#)