



LAWNSTAR GRANULAR INSECTICIDE

For use to control ants (including imported fire ants), mole crickets, and other insect pests on lawns in landscaped areas and perimeters around residential, institutional, public, commercial, and industrial buildings, parks, recreational areas and athletic fields.

Active Ingredient:	By Wt.
Bifenthrin*	0.2%
Other Ingredients:	99.8%
TOTAL	100.0%

*Cis isomers 97% minimum, trans isomers 3% maximum



**KEEP OUT OF REACH OF CHILDREN
CAUTION**

See other panels for additional precautionary information or see back panel pamphlet for additional precautionary information and complete directions for use.

FIRST AID

If on skin or clothing * Take off contaminated clothing. * Rinse skin immediately with plenty of water for 15-20 minutes. * Call a poison control center or doctor for treatment advice.

NOTE TO PHYSICIAN

This product is a pyrethroid. If large amounts have been ingested, milk, cream, and other digestible fats and oils may increase absorption and so should be avoided.

HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical assistance, call the Rocky Mountain Poison Center at 1-866-673-6671.

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and aquatic invertebrates. Do not apply when weather conditions favor drift from treated areas. Drift and run-off from treated areas may be hazardous to aquatic organisms in neighboring areas. 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. Sweeping any product that lands on a driveway, sidewalk, or street back onto the treated area of the lawn or garden will help to prevent runoff to water bodies or drainage systems.

DIRECTIONS FOR USE

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

Do not apply more than 0.2 lb. active ingredient (a.i.) per acre per application on residential use sites (i.e., around private homes, apartment buildings, condominiums, non-agricultural outbuildings, non-commercial greenhouses, pre-schools or day care facilities). Application at up to 0.4 lb. a.i. per acre per application is allowed on non-residential use sites (i.e., around institutional, public, commercial or industrial buildings; parks; recreational areas or athletic fields).

Do not broadcast apply more than 0.4 lbs. a.i. (200 lbs. Lawnstar Granular Insecticide) per acre per year.

Apply this product directly to the lawn or garden area. Water treated area as directed on this label. Do not water to the point of runoff.

Do not make applications during rain.

For ground application only. Do not apply by air.

Do not apply within 25 feet of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds.

Do not use on golf courses, sod farms, nurseries, in commercial greenhouses or on grass grown for seed.

STORAGE AND DISPOSAL

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

Pesticide Storage: Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use close tightly. In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills.

To Confine Spill: Cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

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

Container Disposal: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available, or dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

LAWN AND PERIMETER APPLICATIONS

Lawn Application: Lawnstar Gracular Insecticide with appropriate application equipment which ensures uniform coverage.

APPLICATION RATES

The application rates listed in the following table are recommended for control of the listed pests under typical conditions. At the discretion of the applicator, Lawnstar Gracular Insecticide may be applied at up to 0.4 lb a.i./A to control the pests listed in this Table. However, for residential lawn use, do not apply more than 0.2 lbs. a.i./A per application.

Pest	Active Ingredient lbs per acre	Rate LAWNSTAR	Instructions
Armyworms Webworm Cutworms	0.1	50 lbs/A Or 1.15 lbs/ 1000 sq. ft.	For best control, irrigate the treated area with as much as 0.1 inches of water immediately after application to activate the insecticide.
Annual Bluegrass Weevil (<i>Hyperodes</i>) (Adult)	0.1-0.2	50-100 lbs./A Or 1.15-2.3 lbs./ 1000 sq. ft.	Bluegrass Weevil (<i>Hyperodes</i>) Adults: Time application to control adult weevils as they leave their over-wintering sites and move into grass areas. This movement usually starts when sythia is in full bloom and finishes when flowering dogwood is in full bloom. Consult your State Cooperative Extension Service for more specific information regarding application timing.
Billbugs (Adult)			Billbug Adults: Make first application when adult bill bugs are first seen during April and May. In temperate regions, spring applications for billbug adults will also control over-wintered chinch bugs.
Black Turfgrass Ataenius (Adult) Leafhoppers Mealybugs			Black Turfgrass Ataenius Adults: Apply in May and July to control the first and second generation of black turfgrass ataenius adults, respectively. Time the May application to coincide with the full bloom stage of Vanhoutte spiraea (<i>Spiraea vanhouttei</i>) and horse chestnut (<i>Aesulus hippocastanum</i>). Time the July application to match the blooming of Rose of Sharon (<i>Hibiscus syriacus</i>).
Ants Centipedes Chinch Bugs Fleas (Larvae) Fleas (Adult) Imported Fire Ants (Adult and mounds) Millipedes Mole Cricket (Adult) Mole Cricket (Nymph) Ticks	0.2-0.4	100-200/A Or 2.3-4.6 lbs/ 1000 sq. ft.	Chinch Bugs: Chinch bugs infest the base and thatch layers of grass. Irrigate the treated area with as much as 0.25 inches of water immediately after application to activate the insecticide. Chinch bugs are difficult to control in grasses; higher application rates may be necessary to control populations that contain both nymphs and adults during the summer. Flea Larvae: Flea larvae develop in the soil of shady areas that are available to pets or other animals. Irrigate the treated area with as much 0.5 inches of water immediately following application to activate the insecticide. Imported Fire Ants: For best control, combine broad cast applications with mound treatments. This technique will control Imported Fire Ants (Mounds) both foraging workers and newly mated fly-in queens. Apply to moist soil, irrigating before application if necessary. For broadcast treatments, apply up to 0.4 a.i./A. For mounds, apply 1/2 cup of Lawnstar per mound and then drench the mound with 1 to 2 gallons of water. Treat mounds to break their apex and allow the insecticide solution to flow into the ant tunnels. Also treat a four foot diameter circle around the mound. Best results will be obtained if

spraying is done in cool weather (65-80° F) or in early morning or late evening hours. This treatment will kill the queen within 24 hours. Note: a spray rig that is calibrated to apply 0.1 lb a.i./A (20 ounces) of Bifenthrin Pro in 2.5 gallons per 1,000 sq. ft. contains the approximate dilution (1 teaspoon per gallon) that is required for fire ant mound drenches in the spray tank. Application of 0.25 lb/acre of Lawnstar will give six months residual activity for control of foraging imported Fire Ants and newly mated fly-in queens.

Mole Cricket Adults: Control of adult mole crickets is difficult because grass areas are subject to continuous invasion during the early spring. Apply as late in the day as possible and water in with as much as 0.5 inches of water immediately following treatment. Apply to moist soil, irrigating before application if necessary to bring the mole crickets closer to the soil surface where they will come in contact with insecticide. Grass areas infested with adult mole crickets should be treated at peak egg hatch for optimum control of subsequent nymph populations (see below).

Mole Cricket Nymphs: Grass areas that were heavily infested in the spring should be treated immediately prior to peak egg hatch, because young nymphs are more susceptible to insecticides and they are located near the soil surface where the insecticide is most concentrated. Control of larger, more damaging, nymphs later in the year may require both higher application rates and more frequent applications. Applications should be made as late in the days as possible and should be watered in with up to 0.5 inches of water immediately after treatment. Apply to moist soil, irrigating before application if necessary to bring the mole crickets closer to the soil surface where they will come in contact with insecticide.

Ticks (including ticks that transmit Lyme Disease and Rocky Mountain Spotted Fever): Do not make spot applications, but treat the entire area where exposure to ticks may occur. Use higher application rates when treating areas with dense ground cover or heavy leaf litter. Ticks may be reintroduced from surrounding areas on animals. Do not allow public use of treated areas during application.

Deer ticks (*Ixodes sp.*) have a complex life cycle that ranges over a two year period and involves four life stages. Apply in mid to late spring to control larvae and nymphs that live in the soil and leaf litter.

American dog ticks are commonly found along paths or road ways where humans are likely to pass. Apply as necessary from mid spring to early fall to control larvae, nymphs and adults.

Pillbugs	0.4	200/A
Sowbugs		
European Crane Flies		

In New York State, this product may NOT be applied to any grass or turf area within 100 feet of a water body (lake, pond, river, stream, wetland, or drainage ditch).

In New York State, do make a single repeat application of Lawnstar if there are signs of renewed insect activity, but not sooner than two weeks after the first application.

Perimeter Application

Apply to ground area 5 to 10 feet wide around and adjacent to the structure.

Boundary Applications: Apply to soil areas, ornamental gardens, pavement crevices, fencelines, planter areas, vegetation areas and mulch areas.

The amounts in the table are based on the total area to be treated. To determine the area, follow this formula: linear distance x band width + area of a circle whose radius = the band width (this accounts for the areas treated at the four corners of a rectangular shape).

Application Rate: Pounds Per 1,000 sq. ft	Band Width	Pounds of Lawnstar for Perimeter Applications Linear Distances (Feet) Around Structure							
		100	150	200	250	300	400	500	1000
2.3	5 feet	1.3	1.9	2.5	3.0	3.6	4.8	5.9	11.7
2.3	10 feet	3.0	4.2	5.3	6.5	7.6	9.9	12.2	23.7
3.0	5 feet	1.7	2.5	3.3	3.9	4.7	6.3	7.7	15.2
3.0	10 feet	3.9	5.4	6.9	8.5	9.9	12.9	15.9	30.9
3.5	5 feet	2.0	2.9	3.8	4.5	5.4	7.2	8.9	17.5
3.5	10 feet	4.5	6.3	8.0	9.8	11.4	14.9	18.3	35.5
4.6	5 feet	2.6	3.8	5.0	6.0	7.2	9.6	11.8	23.4
4.6	10 feet	6.0	8.4	10.6	13.0	15.2	19.8	24.4	47.4

For treatment of fire ant mounds: Sprinkle 1/2 cup Lawnstar Granules on each mound and then drench each mound with 1 to 2 gallons of water, using enough force to break its apex and allow the insecticide to flow into the tunnels. Best results will be obtained by applying in cool weather (65 to 80° F) or in early morning or late evening hours. Treat new mounds as they appear. If food utensils such as teaspoons and measuring cups are used to measure insecticide, they should not be used for food purposes afterwards.

INDUSTRIAL NON-AGRICULTURAL APPLICATIONS (Including Industrial Sites, Parks, Ball Fields and Cemeteries)

Broadcast Spot Applications to control actively foraging ants (including Imported Fire Ants): Make a uniform broadcast of 2.3 to 4.8 lbs Lawnstar Granules per 1000 sq. ft. (0.2 to 0.4 lbs a.i./Acre). See comments section under Lawn Applications for additional rate recommendations.

Application to Pad Mounted Electrical Sites to lessen or eliminate ant mound building: distribute 1.0 to 1.5 tablespoons (0.06 to 0.09 lbs.) of Insecticide evenly per 4 sq. ft. of mounting pad. If existing transformers are completely or partially filled with soil which has been excavated by resident ants, first remove any excess fill and level the remaining soil before application is made. If food utensils such as tablespoons are used to measure insecticide, they must not be used for food purposes afterwards.

Note: Ants are most attracted to electrical transformers in the Fall or early Spring. For best results, make treatment in these cooler months.

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Recommended Spreader Settings for Broadcast Applications

Equipment	Spreader Setting Ground Speed (MPH)	100 Pounds Per Acre		200 Pounds Per Acre	
		Once Over	Twice Over	Once Over	Twice Over
Hand Pushed					
LESCO Rotary	3	B + 1/4	A + 1/2	C + 1/2	B + 1/4
Scotts R-8A-1 Rotary	3	G	E	Not Rec.	G
Gandy Models					
(42, 36, 30, 24")	3	12	10.5	16	12
Spyker (All Models)	3	2.6	2	3.1	2.6
Equipment Drawn (PTO=540 RPM)					
Grandy Models					
(42, 36, 30, 24")	4.5	14	11.5	19	14
Gandy 6500 Series	4.5	15	11	20	15
Gandy 10T Series	5.0	16.5	12	24	16.5
Herd GT-77	4.0	—	—	8-H	—
Herd GT-77	8.0	8-H	—	—	8-H
Lely 2.3202.000.1	4.5	2	1	3.5	2
Lely Model L-400	4.5	Not Rec.	Not Rec.	2	Not Rec.
Vicon PS402	4.5	10	7	16	10
Vicon PS1002T	4.5	13	9	21	13

Note: Use these recommended settings as starting points when calibrating a spreader to achieve the needed application rate of Lawnstar. Once the equipment is calibrated, the technician should make further setting adjustments, as necessary, to maintain the proper application rate. Calibrate spreaders regularly to confirm that equipment wear or other factors have not changed the flow rate of Lawnstar Granules. Calibration instructions are included in the Owner's Manual that was provided by the equipment manufacturer at the time of purchase.

NR=Not Recommended.

Note: These spreader settings were established using standard equipment available from the spreader manufacturer at swath widths and speeds typically used within the industry. Southern Ag. recommends that all spreader equipment be calibrated at the time of application to ensure the desired application rate.

Resistance: 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 pest management 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 suspect that resistance is reasonable cause, immediately consult your local company representative or pest management advisor for the best alternative method of control for your area.

IMPORTANT INFORMATION. READ BEFORE USING PRODUCT. CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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