



## **Tropical Sod Webworms**

### **What Are Tropical Sod Webworms?**

The tropical sod webworm is a warm season lawn caterpillar found in the southeastern United States and other tropical areas. The larvae, or caterpillars, are destructive pests of warm season turf grasses, like St. Augustine, bermuda, and zoysia grasses. The first four larval stages only feed on the upper part of the grass blades, so the damage is often overlooked, but mature sod webworms can chew entire sections off the leaf blade, quickly making a lawn look like it was scalped.

Mature sod webworms are 3/4" to 1" long and grayish-green in color. They feed at night and then curl up and hide on the soil surface during the day.

The adult stage of the tropical sod webworm is a tan moth with a 3/4" to 1" wingspan. The moths themselves do not cause damage, but they lay eggs on the grass blades during the night.

## Identifying a Tropical Sod Webworm Infestation

Some initial signs of a tropical sod webworm problem are patches of turf that are shorter and lighter green than the rest of the lawn, or the presence of tan moths that fly up out of the grass when disturbed. If you inspect your lawn closely, parting the grass in the affected areas, you may notice signs of chewing or scraping resulting in ragged-looking blades of grass, thinning grass, and an increase in weeds. You might even find the sod webworm larvae curled up on the soil surface.

Identifying a sod webworm problem can be difficult because the damage they cause is subtle. However, if left too long without being managed, the caterpillars can eat all the way down to the stolons and you may be left with brown, dead patches in your lawn. It's important to keep an eye on your lawn and pay attention to subtle changes that may occur before the damage becomes advanced.



GROUP

4A

INSECTICIDE



# Arena®

0.25G INSECTICIDE<sup>1</sup>



**FOR SYSTEMIC INSECT CONTROL  
IN TURFGRASS, SOD FARMS,  
LANDSCAPE ORNAMENTALS,  
INTERIOR PLANTSCAPES AND  
NON-BEARING FRUITS AND  
NUTS (IN LANDSCAPES).**

Active Ingredient	By Wt.
*Clothianidin.....	0.25%
Other Ingredients.....	99.75%
Total.....	100.00%
*(E)-1-(2-chloro-1,3-thiazol-5-ylmethyl)- 3-methyl-2-nitroguanidine.	

EPA Reg. No. 59639-157

EPA Est. No. 39578-TX-01<sup>®</sup>, 67545-AZ-01<sup>®</sup>

Superscript is first letter in lot number.

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

SEE BELOW FOR ADDITIONAL  
PRECAUTIONARY STATEMENTS.

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Causes moderate eye irritation. Harmful if swallowed, absorbed through skin or inhaled. Avoid contact with eyes, skin or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling.

#### FIRST AID

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

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#### FIRST AID (continued)

**If swallowed:** Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

**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.

**If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

#### HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact **800-892-0099** for emergency medical treatment information.

### PERSONAL PROTECTIVE EQUIPMENT (PPE):

Some of the materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

**Applicators and other handlers must wear:** long-sleeved shirt and long pants, shoes plus socks, chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride.

Follow the manufacturer's instructions for cleaning/maintaining PPE. If there are no instructions for washables available, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### ENGINEERING CONTROLS

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the 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.

**IMPORTANT:** When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment break-down.



#### USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

#### ENVIRONMENTAL HAZARDS

This product is toxic to aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not apply where runoff is likely to occur. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

This product is toxic to bees exposed to direct treatment or residues on blooming crops. Do not apply during bloom or when bees are present.

#### DIRECTIONS FOR USE

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

**READ ENTIRE LABEL USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.**

Do not apply this product in any 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.

#### 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 on this label about personal protective equipment (PPE), notification to workers 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 entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry into 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: coveralls, socks and shoes, chemical-resistant gloves made of any waterproof material.

#### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in the box apply to use of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries and commercial greenhouses.

Keep children and pets off treated area until the dust has settled.

#### DISCLAIMER, RISKS OF USING THIS PRODUCT, LIMITED WARRANTY AND LIMITATION OF LIABILITY

**IMPORTANT: Read the entire Label including this Disclaimer, Risks of Using this Product, Limited Warranty, and Limitation of Liability before using this product. If the terms are not acceptable THEN DO NOT USE THE PRODUCT; rather, return the unopened product within 15 days of purchase for a refund of the purchase price.**

#### RISKS OF USING THIS PRODUCT

The Buyer and User (referred to collectively herein as "Buyer") of this product should be aware that there are inherent unintended risks associated with the use of this product which are impossible to eliminate. These risks include, but are not limited to, injury to plants and crops to which this product is applied, lack of control of the target pests or weeds, resistance of the target pest or weeds to this product, injury caused by drift, and injury to rotational crops caused by carryover in the soil. Such risks of crop injury, non-performance, resistance or other unintended consequences are unavoidable and may result because of such factors as weather, soil conditions, disease, moisture conditions, irrigation practices, condition of the crop at the time of application, presence of other materials either applied in the tank mix with this product or prior to application of this product, cultural practices or the manner of use or application, (or a combination of such factors) all of which are factors beyond the control of Valent. The Buyer should be aware that these inherent unintended risks may reduce the harvested yield of the crop in all or a portion of the treated acreage, or otherwise affect the crop such that additional care, treatment and expense are required to take the crop to harvest. If the Buyer chooses not to accept these risks, THEN THIS PRODUCT SHOULD NOT BE APPLIED. By applying this product Buyer acknowledges and accepts these inherent unintended risks AND TO THE FULLEST EXTENT ALLOWED BY LAW, AGREES THAT ALL SUCH RISKS ASSOCIATED WITH THE APPLICATION AND USE ARE ASSUMED BY THE BUYER.

Valent shall not be responsible for losses or damages (including, but not limited to, loss of yield, increased expenses of farming the crop or such incidental, consequential or special damages that

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may be claimed) resulting from use of this product in any manner not set forth on the label. Buyer assumes all risks associated with the use of this product in any manner or under conditions not specifically directed or approved on the label.

#### LIMITED WARRANTY

Valent warrants only that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the label, under average use conditions, when used strictly in accordance with the label and subject to the Risks of Using This Product as described above. To the extent consistent with applicable law AND AS SET FORTH ABOVE, VALENT MAKES NO OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED. No agent or representative of Valent or Seller is authorized to make or create any other express or implied warranty.

#### LIMITATION OF LIABILITY

To the fullest extent allowed by law, Valent or Seller is not liable for any incidental, consequential, indirect or special damages resulting from the use or handling of this product. The limitation includes, but is not limited to, loss of yield on all or any portion of the treated acreage, increased care, treatment or other expenses required to take the crop to harvest, increased finance charges or altered finance ratings, emotional or mental distress and/or exemplary damages. TO THE FULLEST EXTENT ALLOWED BY LAW, THE EXCLUSIVE REMEDY OF THE BUYER, AND THE EXCLUSIVE MAXIMUM LIABILITY OF VALENT OR SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT SHALL BE THE RETURN OF THE PURCHASE PRICE OF THIS PRODUCT OR, AT THE ELECTION OF VALENT OR SELLER, THE REPLACEMENT OF THE PRODUCT.

#### PROMPT NOTICE OF CLAIM

To the extent consistent with applicable law allowing such requirements Valent must be provided notice as soon as Buyer has reason to believe it may have a claim, but in no event later than twenty-one days from date of planting, or twenty-one days from the date of application, whichever is later, so that an immediate inspection of the affected property and growing crops can be made.

To the extent consistent with applicable law if Buyer does not notify Valent of any claims, in such period, it shall be barred from obtaining any remedy.

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#### NO AMENDMENTS

Valent and Seller offer this product, and Buyer accepts it, subject to the foregoing **Disclaimer, Risks of Using This Product, Limited Warranty and Limitation of Liability**, which may not be modified by any oral or written agreement.

#### TANK MIXES

**NOTICE:** Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator and/or application advisor, to the extent allowed by applicable law.

Read and follow the entire label of each product to be used in the tank mix with this product.

#### RESISTANCE MANAGEMENT

Arena® 0.25 G Insecticide<sup>1</sup> contains a Group 4A insecticide. Insect biotypes with acquired resistance to Group 4A insecticides may eventually dominate the insect population if Group 4A insecticides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by Arena 0.25 G Insecticide<sup>1</sup> or other Group 4A.

To delay insecticide resistance consider:

- Avoiding the consecutive use of Arena 0.25 G Insecticide<sup>1</sup> or other Group 4A insecticides that have a similar target site of action on the same insect species.
- Using tank mixtures or premixes with insecticides from a different target site of action Group as long as the involved products are all registered for the same use and have different sites of action.
- Basing insecticide use on a comprehensive Integrated Pest Management (IPM) program.
- Monitoring treated insect populations for loss of field efficacy.
- Contacting your local extension specialist, certified crop advisors and/or manufacturer for insecticide resistance management or IPM recommendations for the specific site and resistant pest problems.
- For further information or to report a suspected resistance, you may contact Valent U.S.A. Corporation at 800-898-2536.

#### INFORMATION

Arena 0.25 G Insecticide<sup>1</sup> is a broad spectrum insecticide, for control of listed insects infesting turf-grass, sod farms, landscape ornamentals, interior plantscapes and non-bearing fruit trees (including apple and pear) and nut trees (in landscapes). When applied as directed, Arena 0.25 G Insecticide<sup>1</sup> provides excellent and long residual insect control.



#### RESTRICTIONS

- Do not use a foliar application of clothianidin (*Arena* 0.25 G Insecticide<sup>1</sup>) following a soil application of clothianidin.
- Do not apply more than a total of 160 lbs of *Arena* 0.25 G Insecticide<sup>1</sup> (0.4 lb ai/A) per acre per season.
- If the maximum season limit of clothianidin as mentioned above has been applied and pest populations require additional treatments, use another registered pesticide that is not in the neonicotinoid class of chemistry.

#### PLANT TOLERANCE

Neither the manufacturer nor the seller has determined whether or not *Arena* 0.25 G Insecticide<sup>1</sup> can be used safely on all cultivars of plants listed on the label. *Arena* 0.25 G Insecticide<sup>1</sup> has been tested on many cultivars with no phytotoxicity observed at label rates. Since all plant species and their varieties and cultivars have not been tested for tolerance, it is recommended that a small number of plants be treated to make certain that no phytotoxicity occurs, prior to any large scale application to plants. The end user assumes all risks arising from application of *Arena* 0.25 G Insecticide<sup>1</sup> in a manner inconsistent with its labeling. *Arena* 0.25 G Insecticide<sup>1</sup> can be blended just prior to application or co-applied with other crop management tools. However, all plant species and their varieties and cultivars have not been tested with possible blended or co-applied combinations or sequential pesticide treatments. The user must conduct a small scale compatibility and phytotoxicity trial under local conditions to ensure compatibility prior to any large-scale use.

#### COMMERCIAL AND RESIDENTIAL LANDSCAPE USES

*Arena* 0.25 G Insecticide<sup>1</sup> is for use on landscape ornamentals, interior plantscapes and non-bearing fruit trees (including apple and pear) and nut trees (in landscapes).

*Arena* 0.25 G Insecticide<sup>1</sup> should be applied when threshold populations are observed. Do not wait until large insect populations have been established.

Apply to established plants. For control of pests on established plants, irrigate the treated area thoroughly.

Choose lower rates for light infestations and/or smaller plants and higher rates for heavy infestations and/or larger plants.

#### Application Methods:

*Arena* 0.25 G Insecticide<sup>1</sup> is a systemic and soil active insecticide when applied to the soil.

Residential Landscapes and In-ground Plants: For flower beds, broadcast *Arena* 0.25 G Insecticide<sup>1</sup> evenly over the top of plants. For treatment of individual shrubs or trees, broadcast *Arena* 0.25 G Insecticide<sup>1</sup> evenly on soil around base of plant within 18 inches of the trunk. Pull back mulch prior to application if mulch is more than 1 inch thick. Irrigate after application with enough water to dissolve granules and move product into root zone.

#### RESTRICTIONS

- Do not apply more than a total of 160 lbs *Arena* 0.25 G Insecticide<sup>1</sup> (0.4 lb active ingredient clothianidin) per acre per season.

#### Pests Controlled by *Arena* 0.25 G Insecticide<sup>1</sup> in Landscapes Ornamentals, Interior Plantscapes and Non-bearing Fruit Trees (Including Apple and Pear) and Nut Trees (in Landscapes)

Adelgids including Hemlock Woolly Fungus Gnats (larvae) Glassy-Winged Sharpshooter Lacebugs including Azalea Leaf Beetles Leafhoppers Leafminers including Boxwood Serpentine Mealybugs including Citrus Long-tailed Madeira Obscure Pink Hibiscus Root	Psyllids including Asian Citrus Root Weevils (larvae and adult) including Black Vine Roundheaded Borers Scales (soft) Thrips including Chilli Western Flower (suppression) Whiteflies including Giant Greenhouse Silverleaf Sweetpotato White Grubs including Oriental Beetle
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<b>SOIL APPLICATION TO INTERIORSCAPES, LANDSCAPES, NON-BEARING FRUIT AND NUT TREES</b>		
For systemic insect control on ornamental plants grown in-ground and outdoor landscapes (commercial, industrial, recreational and residential)		
<b>Crops</b>	<b><i>Arena</i> 0.25 G Insecticide<sup>1</sup> Rates</b>	<b>Special Instructions</b>
Ornamental Plants including Shrubs Bedding Plants Flowering Plants Foliage Plants Ground Covers Evergreens Ornamental Trees Non-bearing Fruit Trees Non-bearing Nut Trees Non-bearing Vines	<b>Shrubs</b> 0.5 to 1.0 lb/ft of height 5 to 10 lbs per 10 cumulative ft of height  <b>Trees</b> 0.5 to 1.0 lb/inch of trunk diameter of breast height (DBH) For multi-stem trees, base rate on cumulative inches of diameter of all stems at breast height.	Only apply to moist soil media. Do not apply to dry or saturated soil.  Do not apply to saturated or frozen soil, or when plants are not actively taking up water from soil.  Heavy rainfall or inadequate irrigation immediately following application may decrease performance.  For optimal control, apply early in the shrub or tree's annual growing cycle.
	<b>Broadcast Application in Herbaceous Flower Beds and Ground Covers</b> Apply 3.6 lbs/1,000 sq ft of bed	Broadcast application may not be effective in trees and shrubs.
	<p><i>Arena</i> 0.25 G Insecticide<sup>1</sup> is a systemic insecticide and must move to the area of the plant where the target pest is feeding. Control of pests may be delayed following an application for one or more weeks as <i>Arena</i> 0.25 G Insecticide<sup>1</sup> moves to the feeding site. Factors such as plant size, soil type and water demands will impact the time between application and obvious insect control.</p> <ul style="list-style-type: none"> <li>• Do not apply more than a total of 160 lbs <i>Arena</i> 0.25 G Insecticide<sup>1</sup> (0.4 lb ai/A) per acre per season.</li> <li>• Non-bearing fruit and nut trees in landscapes are only for ornamental use.</li> <li>• Do not harvest fruit and nuts from treated trees within one year of application.</li> <li>• This product may be blended just prior to application or co-applied with other compatible insecticides.</li> </ul>	

### **TURFGRASS**

*Arena* 0.25 G Insecticide<sup>1</sup> can be used as directed on grass grown in industrial, commercial and residential landscapes such as, airports, athletic fields, cemeteries, commercial sod farms, golf courses, home lawns, parks and playgrounds.

*Arena* 0.25 G Insecticide<sup>1</sup> has sufficient residual activity to provide high levels of control when applications are made proceeding or during the egg laying activity of the target pests. The need for an application can be based on historical monitoring of the site, previous records or experiences, current season adult trapping or other methods. Follow applications with sufficient irrigation or rainfall to move the active ingredient through the thatch.

*Arena* 0.25 G Insecticide<sup>1</sup> can be applied to turf at 80 to 160 lbs per acre. The rate is dependent on

the target pest(s), their stage of development and the desired of control. Multiple applications can be made but do not exceed the maximum amount per year (160 lbs/A). Consult your local State Agricultural Experiment Station, State Extension Turf Specialists or other turf experts for specific information concerning the timing of application(s). When targeting multiple pests, make application to earliest egg lay or adult flight. The high end of the rate range may be needed if extended control of secondary pests are desired.

Apply *Arena* 0.25 G Insecticide<sup>1</sup> as a broadcast application to turfgrass for control of targeted pests. Use a calibrated spreader to uniformly broadcast *Arena* 0.25 G Insecticide<sup>1</sup> over the treatment area. Do not mow turfgrass until after irrigation or rainfall has occurred to allow for the uptake and distribution of *Arena* 0.25 G Insecticide<sup>1</sup> in soil and turfgrass.



PESTS	ARENA 0.25 G INSECTICIDE <sup>1</sup> APPLICATION RATES	TIMING INSTRUCTIONS
Annual Bluegrass Weevil (larval stages) Bill Bugs Black Turfgrass Ataenius (larval stages) <i>Phyllophaga</i> spp. (May or June Beetle) Spittlebug White Grubs including Asiatic Garden Beetle European Chafer Green June Beetle Japanese Beetle Northern Masked Chafer Oriental Beetle Southern Masked Chafer	80 to 160 lbs/A (0.2 to 0.4 lb ai/A)	<b>Preventive applications:</b> Make applications through peak egg hatch of target species. Use the upper end of the rate range if application is made 60 days or more prior to peak adult flight and/or egg lay. <b>Applications:</b> For applications after egg hatch or when obvious turf damage has occurred use the upper end of the rate range.
Armyworms Chinch Bugs Crane Fly including American European Cutworms Nuisance Ants Sod Webworms	120 to 160 lbs/A (0.3 to 0.4 lb ai/A)	Crane fly: Apply in the spring, when larvae are mature but prior to pupation or in the fall prior to egg hatch. Other pests: Apply when pests first appear.
Mole Crickets (suppression)	160 lbs/A (0.4 lb ai/A)	Time application to peak egg lay or early instars.
• Do not apply more than a total of 160 lbs of <i>Arena</i> 0.25 G Insecticide <sup>1</sup> (0.4 lb ai/A) per acre per season.		

## STORAGE AND DISPOSAL

### PESTICIDE STORAGE

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

Store in a dry place away from excessive heat.

Do not store near food or feed.

Store in original container only.

### 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 the container. Offer for recycling, if available. Completely empty the bag into granular application equipment. Then dispose of the empty bag by depositing in a sanitary landfill, or by other procedures allowed by state and local ordinances.

*Arena* is a registered trademark of Sumitomo Chemical Company, Ltd.

*Products That Work, From People Who Care* is a registered trademark of Valent U.S.A. Corporation

Manufactured for

**Valent U.S.A. Corporation**

P.O. Box 8025, Walnut Creek CA 94596-8025

Made in U.S.A.

Form 1731-C

EPA Reg. No. 59639-157

EPA Est. No. 39578-TX-01<sup>®</sup>, 67545-AZ-01<sup>®</sup>

Superscript is first letter in lot number.

Information contained in this booklet is accurate at the time of printing. Since product testing is a continuous process, please read and follow the directions on the product label for the most current directions and precautionary statements.

Always check with your state to verify state registration status or call 800-89-VALENT (898-2536).