



U.S. ENVIRONMENTAL PROTECTION AGENCY  
 Office of Pesticide Programs  
 Registration Division (7505T)  
 1200 Pennsylvania Ave., N.W.  
 Washington, D.C. 20460

EPA Reg. Number:

83529-242

Date of Issuance:

3/19/24

NOTICE OF PESTICIDE:

Registration  
 Reregistration  
 (under FIFRA, as amended)

Term of Issuance:

Unconditional

Name of Pesticide Product:

Sharda Clothianidin 23% SC

Name and Address of Registrant (include ZIP Code):

Sharda USA, LLC  
 c/o Wagner Regulatory Associates, Inc.  
 P.O. Box 640  
 7217 Lancaster Pike, Suite A  
 Hockessin, DE 19707

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

*Continues page 2*

Signature of Approving Official:

Date:

3/19/24

Venus Eagle, Product Manager 01  
 Invertebrate and Vertebrate Branch 3, Registration Division

2. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, "EPA Reg. No. 83529-242."
3. If, after formal consultation with the appropriate Service(s), additional modifications are identified in the Service's Biological Opinion(s) for clothianidin, EPA will notify Sharda USA, LLC in writing consistent with the terms in the Biological Opinion of any necessary required changes. Sharda USA, LLC must submit an application for amendment incorporating any required changes, including amended labels, consistent with the timeline specified in EPA's notification. If Sharda USA, LLC fails to comply with this term, Sharda USA, LLC has agreed in prior written acceptance on June 12, 2023 of these terms that EPA may cancel the registration under an expedited process under FIFRA 6(e).
4. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

The record for this product currently contains the following CSF(s):

- Basic CSF dated 8/5/2022

If you have any questions, please contact Marianne Lewis at [lewis.marianne@epa.gov](mailto:lewis.marianne@epa.gov).

Enclosure: Stamped label

[MASTER LABEL]

CLOTHIANIDIN    GROUP    4A    INSECTICIDE

# Sharda Clothianidin 23% SC

For Control of Listed Sucking and Chewing Insects Infesting Cotton, Cucurbits, Fig, Grape, Leafy Vegetables (Including Brassica Vegetables), Peach, Pome Fruit, Pomegranate, Rice<sup>[\*]</sup>, Soybean, Tobacco, Tree Nuts and Tuberos and Corm Vegetables (Including Potato and Sweet Potato), and Sod Farms. [\*For states of AR, CA, LA, MO, MS, and TX only.]

<b>ACTIVE INGREDIENT:</b>	<b>WT. BY %</b>
Clothianidin: (E)-1-(2-chloro-1,3-thiazol-5-ylmethyl)-3-methyl-2-nitroguanidine.....	23.0%
<b>OTHER INGREDIENTS:</b> .....	<b>77.0%</b>
<b>TOTAL:</b> .....	<b>100.0%</b>

Contains 2.13 lbs. active ingredient per gallon.

## KEEP OUT OF REACH OF CHILDREN CAUTION

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	
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• <b>DO NOT</b> induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li> </ul>

HOTLINE NUMBER
Have the product container or label with you when calling a poison control center or doctor or going for treatment. For emergency information concerning this product, call your poison control center at <b>1-800-222-1222</b> .

[Optional referral statements when booklets and container labels are used:]  
[See label booklet for [additional] [complete] First Aid, [Precautionary Statements,] [Directions For Use,] and Storage and Disposal.]

EPA Reg. No. 83529-EUE

EPA Est. No. XXXXX-XX-XXX

Manufactured for:  
**Sharda USA LLC**   
7217 Lancaster Pike, Suite A  
Hockessin, Delaware 19707

Net Contents: \_\_\_\_\_ [Gals./L]  
Lot No.:

<b>A C C E P T E D</b>
<b>03/19/2024</b>
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. <b>83529-242</b>

**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**  
**CAUTION**

Harmful if swallowed.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**All mixers, loaders, applicators, and other handlers must wear:**

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves including barrier laminate, butyl rubber  $\geq 14$  mils, nitrile rubber  $\geq 14$  mils, neoprene rubber  $\geq 14$  mils, polyvinyl chloride  $\geq 14$  mils or viton  $\geq 14$  mils

Follow the 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.

**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.
- 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.

**ENVIRONMENTAL HAZARDS**

This product is toxic to aquatic invertebrates. **DO NOT** apply when weather conditions favor drift from treated areas. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. **DO NOT** apply directly to water, or to areas where surface water is present or to intertidal areas below the mean highwater mark. **DO NOT** contaminate water when cleaning equipment or disposing of equipment wash waters or rinsate.

This product is toxic to bees exposed to treatment and for more than 5 days following treatment. **DO NOT** apply this product to blooming, pollen-shedding or nectar-producing parts of plants if bees may forage on the plants during this time period.

**In the State of Florida:** The properties of this chemical suggest it may leach into ground water if used in areas where soils are permeable and where the water table is very shallow. **DO NOT** apply within 25 feet of lakes, reservoirs, rivers, permanent streams, marshes, natural ponds, estuaries, or commercial fish farm ponds.

**PROTECTION OF POLLINATORS**



**APPLICATION RESTRICTIONS** EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.



Look for the bee hazard icon in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

**This product can kill bees and other insect pollinators.**

Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications.
- Ingestion of residues in nectar and pollen when the pesticide is applied as a seed treatment, soil, tree injection, as well as foliar applications.

When Using This Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site.
- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at: <http://pesticidestewardship.org>

Pesticide incidents (for example, bee kills) must immediately be reported to the State/Tribal lead agency. For contact information for your State, go to: [www.aapco.org](http://www.aapco.org). Pesticide incidents must also be reported to the National Pesticide Information Center at: [www.npic.orst.edu](http://www.npic.orst.edu) or directly to EPA at: [beekill@epa.gov](mailto:beekill@epa.gov)

## DIRECTIONS FOR USE

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

**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.

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

### BEE HAZARD

See individual crops for specific pollinator protection application restrictions. If none exist under the specific crop, for foliar applications, follow these application directions for crops that are contracted to have pollinator services or for food/feed and commercially grown ornamentals that are attractive to pollinators.



#### FOR CROPS UNDER CONTRACTED POLLINATION SERVICES:

- **DO NOT** apply this product while bees are foraging. **DO NOT** apply this product until flowering is complete and all petals have fallen unless the following condition has been met.
- If an application must be made when managed bees are at the treatment site, the beekeeper providing the pollination services must be notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered, or otherwise protected prior to spraying.
- Bees must be removed, covered, or otherwise protected for 5 days following application.



#### FOR FOOD CROPS AND COMMERCIALY GROWN ORNAMENTALS NOT UNDER CONTRACT FOR POLLINATION SERVICES BUT ARE ATTRACTIVE TO POLLINATORS:

- This product is toxic to bees exposed to treatment for more than 5 days following treatment.
- **DO NOT** apply this product to blooming, pollen-shedding or nectar-producing parts of plants if bees may forage on the plants during this time period.

### 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, including plants, soil or water is:

- Coveralls
- Shoes plus socks
- Chemical-resistant gloves

### PRODUCT INFORMATION

**Sharda Clothianidin 23% SC** is an insecticide for broad-spectrum control of insects infesting cotton, cucurbits, fig, grape, leafy vegetables (including brassica vegetables), peach, pome fruit, pomegranate, rice, soybean, tobacco, tree nuts and tuberous and corm vegetables (including potato and sweet potato), and commercial sod farms. When applied as directed, **Sharda Clothianidin 23% SC** provides excellent residual control.

#### Restrictions:

- Regardless of formulation or type of application method, **DO NOT** apply more than a total of 0.2 lb. active ingredient clothianidin per acre per calendar year, except for sod farms, which is not to exceed 0.4 lb. a.i. per acre per calendar year.
- If the maximum limit of 0.2 lb. active ingredient clothianidin per acre per calendar year (or 0.4 lb. a.i. per acre per year for sod farms) has been applied and pest populations require additional treatments, use another registered pesticide that is not in the neonicotinoid class of chemistry.
- **DO NOT** apply by air except for cotton, potato, rice, and soybean.

### ROTATIONAL CROP PLANT-BACK INTERVALS

Crops Planted	Immediate Plant-Back	30 Day Plant-Back	8 Month Plant-Back	12 Month Plant-Back
Cotton, Cucurbits, Leafy Vegetables (including Brassica Vegetables), Rice*, Soybean and Tuberous and Corm Vegetables	Cereal Grains, Cotton, Cucurbits, Leafy Vegetables (including Brassica Vegetables), Fruiting Vegetables, Soybean, Bulb Vegetables, Root and Tuber Vegetables, Rapeseed, Canola	Dry Beans, Grasses, Non-grass Animal Feeds	Sugarcane	Any crops without an earlier plant-back interval

\*For states of AR, CA, LA, MO, MS, and TX only.

### PLANT TOLERANCE

Neither the manufacturer nor the seller has determined whether or not **Sharda Clothianidin 23% SC** can be used safely on all cultivars registered for use. **Sharda Clothianidin 23% SC** 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 sprayed 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 **Sharda Clothianidin 23% SC** in a manner inconsistent with its labeling.

**Sharda Clothianidin 23% SC** can be tank mixed. However, all plant species and their varieties and cultivars have not been tested with possible tank mix combinations, sequential pesticide treatments and adjuvants and surfactants. Conduct a spray mix compatibility and phytotoxicity trial under local conditions to ensure compatibility prior to any large-scale use.

It is the pesticide user's responsibility to ensure that all products in the mixtures are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

### INSECT RESISTANCE MANAGEMENT

For resistance management, **Sharda Clothianidin 23% SC** contains a Group 4A insecticide. Any insect population may contain individuals naturally resistant to **Sharda Clothianidin 23% SC** and other Group 4A insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance, take the following steps:

- Rotate the use of **Sharda Clothianidin 23% SC** or other Group 4A insecticides within a growing season, or among growing seasons, with different groups that control the same pests.
- Use tank mixtures with insecticides from a different group that are equally effective on the target pest when such use is permitted. **DO NOT** rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):
  - Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
  - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
  - When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
  - Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
  - The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticide/acaricides use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological, and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.
- For further information or to report suspected resistance, contact Sharda USA LLC at (302) 635-7632.

### SPRAY DRIFT MANAGEMENT

Observe the following requirements when spraying in the vicinity of aquatic areas including, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries, and commercial fishponds.

#### Droplet Size

Use the largest droplet size consistent with acceptable efficacy. 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.

For ground boom and aerial application, use only medium or coarser spray nozzles according to ASAE (S572) definition for standard nozzles, or a volume mean diameter (VMD) of 300 microns or greater for spinning atomizer nozzles. In conditions of low humidity and high temperatures, applicator must use a coarser droplet size.

#### Wind Direction and Speed

Make aerial or ground applications when the wind velocity favors on target product deposition (approximately 3 – 10 mph). **DO NOT** apply when wind velocity exceeds 15 mph. Avoid applications when wind gusts approach 15 mph. For all non-aerial applications, wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.

#### Temperature Inversion

**DO NOT** make aerial or ground applications into areas of temperature inversions. Inversions are characterized by stable air and increasing temperatures with increasing distance above the ground. Mist or fog may indicate the presence of an inversion in humid areas. Where permissible by local regulations, the applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface. In conditions of low humidity and high temperature, applicators must use a coarser droplet size.

**Additional Requirements for Ground Applications:** Spray should be released at the lowest height consistent with pest control and flight safety. Applications more than 10 feet above the crop canopy must be avoided. For ground boom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy.

**Additional Requirements for Aerial Applications:** For aerial applications, the spray boom must be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length must be used and must not exceed 75% of wingspan or 90% rotor diameter. Aerial applicators must consider flight speed and nozzle orientation in determining droplet size. When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

## APPLICATION PROCEDURES

### Foliar Application

Select spray nozzles which will provide accurate and uniform spray deposition. Use spray nozzles which provide medium sized droplets and reduce drift. To help ensure accuracy, calibrate sprayer before each use. For information on spray equipment and calibration, consult nozzle manufacturers and/or State and County Extension Service.

Apply **Sharda Clothianidin 23% SC** using sufficient water volume to provide thorough and uniform coverage. In situations where a dense canopy exists and/or pest pressure is high, use greater water volumes. The use of a spray adjuvant may improve spray coverage. **DO NOT** make applications under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur.

### Aerial Application for Cotton, Potato, Rice, and Soybean Only

Apply **Sharda Clothianidin 23% SC** with the required amount of carrier to provide thorough coverage of the crop's foliage. Applications by air need to be done using a minimum of 3 gallons per acre. **DO NOT** apply **Sharda Clothianidin 23% SC** when the risk of excessive drift is expected due to temperature inversion, wind patterns and humidity. To prevent drift into neighboring crops and bodies of water obey the following: Consider the direction of the wind in relation to the spraying pattern that the aircraft will have to follow to make the application. **DO NOT** apply if wind direction can push droplets towards other crops and bodies of water. **DO NOT** apply **Sharda Clothianidin 23% SC** when wind speeds are approaching 10 mph and consider droplet size. Smaller droplets, which include smaller than 200 microns, are more likely to cause drift. Consider a larger size droplet that also provides good coverage on the crop canopy. Nozzle orientation and boom size must be based on the wingspan and type of aircraft (e.g., fixed wing vs rotary wing) to consider air streams, vortices, and lift properties of the aircraft.

### Application Through Irrigation Systems (Chemigation)

**Sharda Clothianidin 23% SC** alone or in combination with other products which are registered for application through sprinkler irrigation may be applied through irrigation systems. Apply this product only through micro-irrigation (individual spaghetti tube), drip irrigation, overhead irrigation, or motorized calibrated irrigation equipment. **DO NOT** apply through any other type of irrigation system. Lack of effectiveness can result from non-uniform distribution of treated water. If you have questions about calibration, contact your State Extension Service specialist, equipment manufacturer or other experts. 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.

### Using Water from Public Water Systems

- **DO NOT** apply **Sharda Clothianidin 23% SC** through any irrigation system physically 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 per year. **Sharda Clothianidin 23% SC** may be applied through irrigation systems which may be supplied by a public water system only if the water from the public water system is discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and to top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. Before beginning chemigation, always make sure that the air gap exists and that there is no blockage of the overflow of the reservoir tank. Any irrigation system using water supplied from a public water system must also meet the following requirements:

### Operating Instructions for All Specified Types of Irrigation Systems

1. The system must be calibrated to uniformly apply the rates specified. If you have questions about calibration, contact your State Extension Service specialist, equipment manufacturer or other experts.
2. 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.
3. The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump.

4. 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.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
6. 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.
7. Systems must use a metering pump, including 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.
8. **DO NOT** apply when wind speed favors drift beyond the area intended.

### Calibration and Application Instructions

Apply **Sharda Clothianidin 23% SC** under the schedule specified in the specific crop rates/instructions, not according to the irrigation schedule, unless the events coincide. In general, set the equipment to apply the minimum amount of water per acre. Run the system at 86% - 90% of the manufacturer's maximum rated travel speed.

The following calibration and application techniques are provided for user reference, but **DO NOT** constitute a warranty of fitness for application through sprinkler irrigation equipment. Check with State and local regulatory agencies for potential use restrictions before applying any agricultural chemical through sprinkler irrigation equipment.

### Center Pivot Irrigation Equipment

1. Use only drive systems that provide uniform water distribution.
2. **DO NOT** use end guns when chemigating **Sharda Clothianidin 23% SC** through center pivot systems because of non-uniform application.
3. Plug the first nozzle closest to the well head to protect the water source.
4. Determine the size of the area to be treated.
5. Determine the time required to apply 0.1 – 0.25 inch of water over the area to be treated when the system and injection equipment are operated at normal pressures as recommended by the equipment manufacturer. Run the system at 80% - 95% of the manufacturer's rated maximum travel speed.
6. Using water, determine the injection pump output when operated at normal line pressure.
7. Determine the amount of **Sharda Clothianidin 23% SC**, and any tank mix partners, required to treat the area covered by the irrigation system.
8. Add the required amount of **Sharda Clothianidin 23% SC**, and any tank mix partners, and sufficient water to meet the injection time requirements to the solution tanks. (See **MIXING INSTRUCTIONS** section of this label.)
9. Make sure the system is fully charged with water before starting injection of the **Sharda Clothianidin 23% SC** solution. Time the injection to last at least as long as it takes to bring the system to full pressure.
10. Maintain constant agitation in the solution tank during the injection period.
11. Inject the specified amount of **Sharda Clothianidin 23% SC** per acre continuously for one complete revolution of the system.
12. Stop the injection equipment after treatment is complete. Continue to operate the system until the **Sharda Clothianidin 23% SC** solution has cleared all of the sprinkler heads.
13. Allow time for all lines to flush the pesticide through all nozzles before turning off irrigation water.

### Solid Set, Hand Move and Moving Wheel Irrigation Equipment

1. Determine the acreage covered by the sprinklers.
2. Fill injector solution tank with plain water and calibrate the flow rate of the system to deliver the contents of the tank over a 20 – 40 minute time interval.
3. Determine the amount of **Sharda Clothianidin 23% SC** required to treat the area covered by the irrigation system.
4. Add the required amount of **Sharda Clothianidin 23% SC**, and any other tank mix partners, into the same quantity of water used to calibrate the injection period. (See **MIXING INSTRUCTIONS** section of this label.)
5. Operate the system at the same pressure and time interval established during the calibration.
6. Inject specified amount of **Sharda Clothianidin 23% SC** per acre for either a 20 – 40 minute period at the end of a regular irrigation set, or as a 20 – 40 minute injection as a separate application not associated with a regular irrigation to maximize retention of the insecticide by the foliage.
7. Stop injection equipment after treatment is completed. Continue to operate the system until the **Sharda Clothianidin 23% SC** solution has cleared the last sprinkler head. To ensure lines are flushed and free from remaining pesticides, a dye indicator may be injected into the lines to mark the end of the application period.

### MIXING INSTRUCTIONS

1. Begin with clean equipment.
2. Add sufficient clean water to the spray tank for half of the mix load.
3. Start tank agitation.
4. When using **Sharda Clothianidin 23% SC** alone in the tank: Add and properly suspend the necessary amount of **Sharda Clothianidin 23% SC** according to established tank mix instructions. Agitate to ensure thorough mixing while adding the remaining required water. A high-quality wetting agent or other spray adjuvant, approved for use on your crop, may be added to spray solutions according to the manufacturer's use instructions. **Sharda Clothianidin 23% SC** must be properly suspended and diluted prior to the addition of any adjuvant. Consult adjuvant label or manufacturer for crop tolerance and safety

information when used with this product.

- When using in combination with other products: Follow the recommended mixing order if **Sharda Clothianidin 23% SC** is going to be part of a tank mix with other registered products. When mixing products in a tank always allow each product to become suspended or reach solution before adding another product to the mix. The following order is suggested when mixing different formulations of registered agricultural products: Wettable powders in soluble packs or bags, soluble or wettable granules, liquid flowables, liquids, emulsifiable concentrates and adjuvants. Agitation and water addition are important during the mixing process. Keep agitation active and adding water throughout the mixing process until all products have been added to the mix. When **Sharda Clothianidin 23% SC** is going to be used in the same tank with a liquid flowable formulation, **Sharda Clothianidin 23% SC** needs to be added before the liquid flowable.
- Maintain agitation during mixing and application.
- Apply with properly calibrated spray equipment.

#### SPECIFIC CROP USE DIRECTIONS

BRASSICA (COLE) LEAFY VEGETABLES		
Broccoli; Broccoli Raab (Rapini); Brussels Sprouts; Cabbage; Cauliflower; Cavalo Broccolo; Chinese Broccoli (Gai Lon); Chinese Cabbage (Bok Choy and Napa); Chinese Mustard Cabbage; Collards; Kale; Kohlrabi; Mizuna; Mustard Greens; Mustard Spinach; and Rape Greens.		
FOLIAR APPLICATION		
Pests	Sharda Clothianidin 23% SC Application Rates	Rates/Instructions
Aphids Bagrada Bugs Flea Beetles Harlequin Bugs Leafhoppers Leafminers (Adults) Leafminers (Larvae) (Suppression) Lygus/Plant Bug Thrips (Suppression) Stinkbugs Whiteflies (Suppression)	3 – 6 fl. Oz./A (0.05 – 0.1 lb. a.i./A)	Apply <b>Sharda Clothianidin 23% SC</b> when target pest(s) threshold populations are observed. <b>DO NOT</b> wait until population beyond threshold has been established.  Choose lower rate for light infestation and the higher rate for heavy infestation.  Apply <b>Sharda Clothianidin 23% SC</b> in sufficient water to ensure uniform and thorough coverage of foliage. Thorough coverage is required for control.
<b>Restrictions:</b> <ul style="list-style-type: none"> <li>Regardless of the application method, <b>DO NOT</b> apply more than 0.2 lb. a.i. clothianidin per acre per calendar year.</li> <li><b>DO NOT</b> apply treatments less than 10 days apart.</li> <li><b>DO NOT</b> apply within 7 days of harvest.</li> <li><b>DO NOT</b> use on crops grown for seed production.</li> <li><b>Sharda Clothianidin 23% SC</b> must not be applied during bloom or when bees are foraging.</li> </ul> 		
SOIL APPLICATION		
Pests	Sharda Clothianidin 23% SC Application Rates	Rates/Instructions
Aphids Bagrada Bug Cabbage Maggot Darkling Beetles Flea Beetles Garden Symphylans Harlequin Bugs Leafhoppers Leafminers (Suppression) Seed Corn Maggot Thrips (Suppression) Whiteflies (Suppression) Wireworms (Suppression)	9 – 12 fl. Oz./A (0.15 – 0.2 lb. a.i./A)	Make 1 soil application at specified dose in sufficient carrier volume to ensure uniform application in 1 of the following methods: <ol style="list-style-type: none"> <li>As a broadcast application before planting or at planting time and incorporated into the soil.</li> <li>In a narrow band centered on the plant row in the bedding operation just prior to planting.</li> <li>In-furrow spray at planting directed on or below seed/transplant.</li> <li>As a sidedress to both sides of the row.</li> <li>Seeding drench or as transplant water drench.</li> <li>Chemigation into root zone through drip, trickle or custom made systems that target the watering of the root zone of the plant.</li> </ol> Choose the lower rate for light infestation and the higher rate for heavy infestation.
<b>Restrictions:</b> <ul style="list-style-type: none"> <li>Regardless of the application method, <b>DO NOT</b> apply more than 0.2 lb. a.i. clothianidin per acre per calendar year.</li> <li><b>DO NOT</b> apply within 21 days of harvest.</li> <li><b>Sharda Clothianidin 23% SC</b> must not be applied during bloom or when bees are foraging.</li> </ul>		

COTTON		
FOLIAR APPLICATION		
Pests	Sharda Clothianidin 23% SC Application Rates	Rates/Instructions
Aphids Darkling Beetles Flea Beetles Fleahoppers Leaf Footed Bug Lygus/Plant Bugs Stinkbugs Thrips (Suppression) Whiteflies (Suppression)	3 – 5 fl. Oz./A (0.05 – 0.083 lb. a.i./A)	Apply <b>Sharda Clothianidin 23% SC</b> when target pest(s) threshold populations are observed. <b>DO NOT</b> wait until population beyond threshold has been established.  Apply <b>Sharda Clothianidin 23% SC</b> by ground or air in sufficient water to ensure uniform and thorough coverage of foliage. Use a minimum of 3 gals. Per acre for aerial applications. Thorough coverage is required for control.  Choose the lower rate for light infestation and the higher rate for heavy infestation.  <b>Aphids: Sharda Clothianidin 23% SC</b> will not control cotton aphids in regions where insensitivity to neonicotinoid insecticides has been reported.
<b>Restrictions:</b>		
<ul style="list-style-type: none"> <li>Regardless of the application method, <b>DO NOT</b> apply more than 0.2 lb. a.i. clothianidin per acre per calendar year.</li> <li><b>DO NOT</b> make more than 1 application per calendar year.</li> <li><b>DO NOT</b> make application after pinhead square formation.</li> </ul>		



CUCURBIT VEGETABLES		
FOLIAR APPLICATION		
Pests	Sharda Clothianidin 23% SC Application Rates	Rates/Instructions
Acorn Squash; Balsam Apple; Balsam Pear; Bitter Melon; Butternut Squash; Calabaza; Cantaloupe; Casaba; Chayote; Chinese Cucumber; Chinese Okra; Chinese Waxgourd (Chinese Preserving Melon); Citron Melon; Crenshaw Melon; Crookneck Squash; Cucumber; Cucuzza; Edible Gourd; Gherkin; Golden Pershaw Melon; Hechima; Honey Balls; Honeydew Melon; Hubbard Squash; Hyotan; Mango Melon; <i>Momordica</i> spp.; Muskmelon; Persian Melon; Pineapple Melon; Pumpkin; Santa Claus Melon; Scallop Squash; Snake Melon; Spaghetti Squash; Straightneck Squash; Summer Squash; True Cantaloupe; Vegetable Marrow; Watermelon; Winter Squash; and Zucchini.	3 – 6 fl. Oz./A (0.05 – 0.1 lb. a.i./A)	Apply <b>Sharda Clothianidin 23% SC</b> when target pest(s) threshold populations are observed. <b>DO NOT</b> wait until population beyond threshold has been established.  Choose lower rate for light infestation and the higher rate for heavy infestation.  Apply <b>Sharda Clothianidin 23% SC</b> in sufficient water to ensure uniform and thorough coverage of foliage.  Thorough coverage is required for control.
<b>Restrictions:</b>		
<ul style="list-style-type: none"> <li>Regardless of the application method, <b>DO NOT</b> apply more than 0.2 lb. a.i. clothianidin per acre per calendar year.</li> <li><b>DO NOT</b> make application after 4<sup>th</sup> true leaf on main stem is unfolded.</li> <li><b>DO NOT</b> apply treatments less than 10 days apart.</li> <li><b>Sharda Clothianidin 23% SC</b> must not be applied during bloom or when bees are foraging.</li> </ul>		



SOIL APPLICATION		
Pests	Sharda Clothianidin 23% SC Application Rates	Rates/Instructions
Aphids Cucumber Beetles Darkling Beetles (Suppression) Flea Beetles Leafhoppers Leafminers (Suppression) Seed Corn Maggot Squash Bugs Thrips (Suppression) Whiteflies (Suppression) Wireworms (Suppression)	9 – 12 fl. Oz./A (0.15 – 0.2 lb. a.i./A)	Make 1 soil application at specified dose in sufficient carrier volume to ensure uniform application in 1 of the following methods: 1. As a broadcast application before planting or at planting time and incorporated into the soil. 2. In a narrow band centered on the plant row in the bedding operation just prior to planting. 3. In-furrow spray at planting directed on or below seed/transplant. 4. As a sidedress to both sides of the row. 5. Seeding drench or as transplant water drench. 6. Chemigation into root zone through drip, trickle or custom

		made systems that target the watering of the root zone of the plants.  Choose the lower rate for light infestation and the higher rate for heavy infestation.
<b>Restrictions:</b>		
<ul style="list-style-type: none"> <li>Regardless of the application method, <b>DO NOT</b> apply more than 0.2 lb. a.i. clothianidin per acre per calendar year.</li> <li><b>DO NOT</b> apply within 21 days of harvest.</li> <li><b>Sharda Clothianidin 23% SC</b> must not be applied during bloom or when bees are foraging.</li> </ul>		

FIG		
FOLIAR POST-BLOOM APPLICATION		
Pests	Sharda Clothianidin 23% SC Application Rates	Rates/Instructions
Dried Fruit Beetles Fig Scale Stink Bugs	4 – 6 fl. Oz./A (0.067 – 0.1 lb. a.i./A)	<p>Apply <b>Sharda Clothianidin 23% SC</b> when target pest(s) threshold populations are observed. <b>DO NOT</b> wait until population beyond threshold has been established.</p> <p>The amount of <b>Sharda Clothianidin 23% SC</b> per acre will depend on tree size and pest pressure.</p> <p>Choose lower rate for light infestation and/or small trees and the higher rate for heavy infestations and/or larger trees.</p> <p>Apply by ground 100 – 400 gals. Per acre as a full coverage spray.</p> <p>Spray volume will depend on tree size and density of canopy.</p> <p>Thorough coverage is required for control.</p> <p>A single application may result in suppression only.</p>
<b>Restrictions:</b>		
<ul style="list-style-type: none"> <li>Regardless of the application method, <b>DO NOT</b> apply more than 0.2 lb. a.i. clothianidin per acre per calendar year.</li> <li><b>DO NOT</b> apply treatments less than 14 days apart.</li> <li><b>DO NOT</b> apply within 7 days of harvest.</li> <li><b>DO NOT</b> feed or allow livestock to graze on cover crops from treated orchards.</li> <li>Apply <b>Sharda Clothianidin 23% SC</b> post bloom only when bees are not foraging.</li> </ul>		

GRAPE		
FOLIAR APPLICATION		
FOLIAR POST-BLOOM APPLICATION		
Pests	Sharda Clothianidin 23% SC Application Rates	Rates/Instructions
Leafhoppers Grape Leaf Skeletonizers Japanese Beetles Multicolored Asian Lady Beetle	2 – 4 fl. Oz./A (0.033 – 0.067 lb. a.i./A)	Apply <b>Sharda Clothianidin 23% SC</b> when target pest(s) threshold populations are observed. <b>DO NOT</b> wait until population beyond threshold has been established.
Sharpshooters Stink Bugs	4 – 6 fl. Oz./A (0.067 – 0.1 lb. a.i./A)	Apply <b>Sharda Clothianidin 23% SC</b> in sufficient water to ensure uniform and thorough coverage of foliage. Thorough coverage is required for control.
European Grapevine Moth Grape Berry Moth Grape Mealybug Longtailed Mealybug Obscure Mealybug Spotted Wing Drosophila Vine Mealybug	6 fl. Oz./A (0.1 lb. a.i./A)	Choose the lower rate for light infestation and the higher rate for heavy infestation.
<b>Restrictions:</b>		
<ul style="list-style-type: none"> <li>Regardless of the application method, <b>DO NOT</b> apply more than 0.2 lb. a.i. clothianidin per acre per calendar year.</li> <li><b>DO NOT</b> make more than 1 application per calendar year.</li> <li>May be applied up to harvest (0 days PHI).</li> <li>Apply <b>Sharda Clothianidin 23% SC</b> post bloom only when bees are not foraging.</li> </ul>		
		
SOIL APPLICATION		
Pests	Sharda Clothianidin 23% SC Application	Rates/Instructions

	Rates	
Grape Mealybug Grape Phylloxera spp. (Suppression) Leafhoppers Longtailed Mealybug Obscure Mealybug Sharpshooters Vine Mealybug	6 – 12 fl. Oz./A (0.1 – 0.2 lb. a.i./A)	Apply <b>Sharda Clothianidin 23% SC</b> when target pest(s) threshold populations are observed. <b>DO NOT</b> wait until population beyond threshold has been established. Apply specified rate in sufficient carrier volume to ensure uniform application and incorporate into the soil using drip or trickle irrigation water.  Make 1 soil application at specified dose in sufficient carrier volume to ensure uniform application using the following method: <ul style="list-style-type: none"> <li>Chemigation into root zone through drip, trickle or custom made systems that target the watering of the root zone of the plants.</li> </ul> Choose the lower rate for light infestation and the higher rate for heavy infestation.
<b>Restrictions:</b> <ul style="list-style-type: none"> <li>Regardless of the application method, <b>DO NOT</b> apply more than 0.2 lb. a.i. clothianidin per acre per calendar year.</li> <li><b>DO NOT</b> apply treatments less than 14 days apart.</li> <li><b>DO NOT</b> apply within 30 days of harvest.</li> </ul>		

LEAFY VEGETABLES (Except Brassica Vegetables)
Amaranth (Chinese Spinach); Arugula (Roquette); Cardoon; Celery; Celtuce; Chervil; Chinese Celery; Chrysanthemum (Edible-leaved and Garland); Corn Salad; Cress (Garden and Upland); Dandelion; Dock (Sorrel); Endive (Escarole); Florence Fennel; Lettuce (Head and Leaf); Orach; Parsley; Purslane (Garden and Winter); Radicchio (Red Chicory); Rhubarb; Spinach; Spinach (New Zealand and Vine); and Swiss Chard.

FOLIAR APPLICATION		
Pests	Sharda Clothianidin 23% SC Application Rates	Rates/Instructions
Aphids Flea Beetles Leafhoppers Leafminers (Adults) Leafminers (Larvae)(Suppression) Lygus/Plant Bugs Whiteflies (Suppression)	3 – 6 fl. Oz./A (0.05 – 0.1 lb. a.i./A)	Apply <b>Sharda Clothianidin 23% SC</b> when target pest(s) threshold populations are observed. <b>DO NOT</b> wait until population beyond threshold has been established.  Choose lower rate for light infestation and the higher rate for heavy infestation.  Apply <b>Sharda Clothianidin 23% SC</b> in sufficient water to ensure uniform and thorough coverage of foliage. Thorough coverage is required for control.

Restrictions:
<ul style="list-style-type: none"> <li>Regardless of the application method, <b>DO NOT</b> apply more than 0.2 lb. a.i. clothianidin per acre per calendar year.</li> <li><b>DO NOT</b> apply treatments less than 10 days apart.</li> <li><b>DO NOT</b> apply within 7 days of harvest.</li> <li><b>DO NOT</b> use on crops grown for seed production.</li> <li><b>Sharda Clothianidin 23% SC</b> must not be applied during bloom or when bees are foraging.</li> </ul>



SOIL APPLICATION		
Pests	Sharda Clothianidin 23% SC Application Rates	Rates/Instructions
Aphids Darkling Beetles (Suppression) Flea Beetles Leafhoppers Leafminers (Suppression) Thrips (Suppression) Trash Bugs (Including Earwigs, Crickets, Ground Beetles) Whiteflies (Suppression) Wireworms (Suppression)	9 – 12 fl. Oz./A (0.15 – 0.2 lb. a.i./A)	Make 1 soil application at specified dose in sufficient carrier volume to ensure uniform application in 1 of the following methods: <ol style="list-style-type: none"> <li>As a broadcast application before planting or at planting time and incorporated into the soil.</li> <li>In a narrow band centered on the plant row in the bedding operation just prior to planting.</li> <li>In-furrow spray at planting directed on or below seed/transplant.</li> <li>As a sidedress to both sides of the row.</li> <li>Seeding drench or as transplant water drench.</li> <li>Chemigation into root zone through drip, trickle or custom made systems that target the watering of the root zone of the plants.</li> </ol> Choose the lower rate for light infestation and the higher rate for heavy infestation.

<p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>Regardless of the application method, <b>DO NOT</b> apply more than 0.2 lb. a.i. clothianidin per acre per calendar year.</li> <li><b>DO NOT</b> apply within 21 days of harvest.</li> </ul>
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PEACH		
FOLIAR POST-BLOOM APPLICATION		
Pests	Sharda Clothianidin 23% SC Application Rates	Rates/Instructions
Aphids Leafhoppers	3 – 6 fl. Oz./A (0.05 – 0.1 lb. a.i./A)	Apply <b>Sharda Clothianidin 23% SC</b> when target pest(s) threshold populations are observed. <b>DO NOT</b> wait until population beyond threshold has been established.
Cherry Fruit Fly (Suppression) Japanese Beetles June Beetles Lygus/Plant Bugs Plum Curculio Scales Sharpshooters Spotted Wing Drosophila Stinkbugs	6 fl. Oz./A (0.1 lb. a.i./A)	
Choose lower rate for light infestation and/or small trees and the higher rate for heavy infestations and/or larger trees.		
Apply by ground 100 – 400 gals. Per acre as a full coverage spray. Thorough coverage is required for control.		
<b>Scales:</b> Time applications to the crawler stage, treat each successive generation. Two applications on a 10- to 14-day interval may be required to achieve control.		
<p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>Regardless of the application method, <b>DO NOT</b> apply more than 0.2 lb. a.i. clothianidin per acre per calendar year.</li> <li><b>DO NOT</b> apply treatments less than 10 days apart.</li> <li><b>DO NOT</b> apply within 21 days of harvest.</li> <li><b>DO NOT</b> feed or allow livestock to graze on cover crops from treated orchards.</li> <li><b>Sharda Clothianidin 23% SC</b> must not be applied during bloom or when bees are foraging.</li> </ul>		

POME FRUIT		
Apple; Crabapple; Loquat; Mayhaw; Pear; Oriental Pear; and Quince.		
FOLIAR POST-BLOOM APPLICATION		
Pests	Sharda Clothianidin 23% SC Application Rates	Rates/Instructions
Aphids Leafhoppers Plant Bugs Stinkbugs	4 – 6 fl. Oz./A (0.067 – 0.1 lb. a.i./A)	Apply <b>Sharda Clothianidin 23% SC</b> when target pest(s) threshold populations are observed. <b>DO NOT</b> wait until population beyond threshold has been established.
Apple Maggot Codling Moth* Leafminers Lygus/Plant Bugs Mealybugs Oblique-banded Leafroller Oriental Fruit Moth Pear Psylla Plum Curculio Scales Stinkbugs	6 fl. Oz./A (0.1 lb. a.i./A)	<p>The amount of <b>Sharda Clothianidin 23% SC</b> per acre will depend on tree size and pest pressure. Choose lower rate for light infestation and/or small trees and the higher rate for heavy infestation and/or larger trees.</p> <p>Apply by ground in a minimum of 50 gals. Per acre as a full coverage spray. Thorough coverage is required for control.</p> <p>Applications may also be made as a concentrate spray. Maintain the same amount of product per acre as a dilute application using the appropriate amount of concentrate spray volume. A single application may result in suppression only.</p> <p><b>For control of Leafminers and Leafrollers:</b> Make the first application as soon as pollination is complete and bees are removed from the orchard.</p> <p><b>Scales:</b> Time applications to the crawler stage, treat each successive generation. Two applications on a 10- to 14-day interval may be required to achieve control.</p> <p><b>*For Codling Moth:</b> For control of first-generation codling moth in areas with light pressure and suppression of first generation codling moth in areas of heavy infestation. Suppression only of second or third generation codling moth in any area.</p>
<p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>Regardless of the application method, <b>DO NOT</b> apply more than 0.2 lb. a.i. clothianidin per acre per calendar year.</li> <li><b>DO NOT</b> apply within 7 days of harvest.</li> <li><b>DO NOT</b> feed or allow livestock to graze on cover crops from treated orchards.</li> <li><b>Sharda Clothianidin 23% SC</b> must not be applied during bloom or when bees are foraging.</li> </ul>		

POMEGRANATE		
FOLIAR POST-BLOOM APPLICATION		
Pests	Sharda Clothianidin 23% SC Application Rates	Rates/Instructions
Aphids Leafhoppers Leafy Footed Bug Mealybugs Sharpshooters Whiteflies (Suppression)	4 – 6 fl. Oz./A (0.067 – 0.1 lb. a.i./A)	Apply <b>Sharda Clothianidin 23% SC</b> when target pest(s) threshold populations are observed. <b>DO NOT</b> wait until population beyond threshold has been established.  The amount of <b>Sharda Clothianidin 23% SC</b> per acre will depend on tree size and pest pressure.  Choose lower rate for light infestation and/or small trees and the higher rate for heavy infestations and/or larger trees.  Apply by ground 100 – 400 gals. Per acre as a full coverage spray. Thorough coverage is required for control. A single application may result in suppression only.
<b>Restrictions:</b>		
<ul style="list-style-type: none"> <li>Regardless of the application method, <b>DO NOT</b> apply more than 0.2 lb. a.i. clothianidin per acre per calendar year.</li> <li><b>DO NOT</b> apply treatments less than 14 days apart.</li> <li><b>DO NOT</b> apply within 7 days of harvest.</li> <li><b>DO NOT</b> feed or allow livestock to graze on cover crops from treated orchards.</li> <li><b>Sharda Clothianidin 23% SC</b> must not be applied during bloom or when bees are foraging.</li> </ul>		

RICE (Including Rice for Seed Production) For states of AR, CA, LA, MO, MS, and TX only.		
FOLIAR APPLICATION		
Pests	Sharda Clothianidin 23% SC Application Rates	Rates/Instructions
Aphids* Billbugs* Chinch Bug* (Suppression) Greenbug* Leafhoppers* Rice Seed Midge (Suppression) Rice Water Weevil Sharpshooters* Stinkbugs* Thrips* (Suppression)	4.5 fl. Oz./A (0.075 lb. a.i./A)	Apply <b>Sharda Clothianidin 23% SC</b> when thresholds for the target insect pests are observed. <b>DO NOT</b> wait until populations over threshold have been established.  Apply <b>Sharda Clothianidin 23% SC</b> in a sufficient amount of water to ensure uniform and thorough coverage of foliage.  Ground and air applications need to use sufficient water to provide full and uniform coverage of the foliage across the field. Use a minimum of 3 GPA for aerial applications.  For a post-flood treatment, hold water from <b>Sharda Clothianidin 23% SC</b> treated rice fields for at least 14 days before discharging from the field.  For a pre-flood treatment, retain any water added to the field after the <b>Sharda Clothianidin 23% SC</b> treatment and incorporate it into the permanent flood. After the permanent flood is established, hold water in the treated rice field for at least 14 days before discharging from the field.  <b>Rice Water Weevil:</b> Application timing needs to follow threshold recommendations for the region based on adult counts and/or percent of scarring observed on plants.  Apply <b>Sharda Clothianidin 23% SC</b> as a pre- or post-flood treatment. Apply within 10 days after complete flood in the field has been established (when rice water weevil adults are present). Always follow local recommendations for foliar applications targeting rice water weevil.
*Except California		
<b>Restrictions:</b>		
<ul style="list-style-type: none"> <li><b>DO NOT</b> apply more than 0.075 lb. a.i./A as a foliar treatment per calendar year.</li> <li>Regardless of the application method, <b>DO NOT</b> apply more than 0.2 lb. a.i. clothianidin per acre per calendar year.</li> <li><b>DO NOT</b> apply after third tillering has initiated.</li> <li><b>DO NOT</b> apply <b>Sharda Clothianidin 23% SC</b> following a clothianidin seed treatment application.</li> </ul>		



- **DO NOT** use **Sharda Clothianidin 23% SC** treated rice fields for the aquaculture of edible fish and crustaceans.
- **Sharda Clothianidin 23% SC** is not to be used on rice crops that contain or support crawfish or any form of aquaculture operation.
- **Sharda Clothianidin 23% SC** is not to be used on rice crops near fish farm, shrimp, prawn, or crab pond (or nursery) operations – particularly when weather conditions are conducive to drift. Exercise caution with air and ground applications near those operations to avoid product drift.

**SOYBEAN****FOLIAR APPLICATION**

Pests	Sharda Clothianidin 23% SC Application Rates	Rates/Instructions
Aphids Bean Leaf Beetles Blister Beetles Japanese Beetles Leafhoppers Lygus/Plant Bugs Stinkbugs Three Cornered Alfalfa Hopper Whiteflies (Suppression)	3 – 6 fl. Oz./A (0.05 – 0.1 lb. a.i./A)	Apply <b>Sharda Clothianidin 23% SC</b> when target pest(s) threshold populations are observed. <b>DO NOT</b> wait until population beyond threshold has been established.  Apply <b>Sharda Clothianidin 23% SC</b> by ground or air in sufficient water to ensure uniform and thorough coverage of foliage. Use a minimum of 3 gals. Per acre for aerial applications. Thorough coverage is required for control.  <b>Aphids:</b> Applications for soybean aphid need to be targeted at or less than 250 aphids/plant. Populations over threshold might require more than 1 application to achieve control.  Choose the lower rate for light infestation and the higher rate for heavy infestation.

**Restrictions:**

- **DO NOT** apply foliar treatments less than 7 days apart.
- **DO NOT** apply within 21 days of harvest.
- **DO NOT** make foliar applications in fields treated with a neonicotinoid insecticide seed treatment(s) within 45 days after planting.
- Regardless of formulation or type of application method, **DO NOT** apply more than 0.2 lb. a.i. of clothianidin per acre per calendar year.
- **DO NOT** graze or feed soybean forage and hay to livestock.

**TOBACCO****FOLIAR APPLICATION**

Pests	Sharda Clothianidin 23% SC Application Rates	Rates/Instructions
Aphids Flea Beetles	3 – 4 fl. Oz./A (0.05 – 0.067 lb. a.i./A)	Apply <b>Sharda Clothianidin 23% SC</b> when target pest(s) threshold populations are observed. <b>DO NOT</b> wait until population beyond threshold has been established.
Tobacco Budworm (Suppression) Tobacco Hornworm (Suppression)	4 fl. Oz./A (0.067 lb. a.i./A)	Make application using equipment that delivers a coarse droplet spray and low pressure to prevent off target drift. Check calibration periodically to ensure that your equipment is working properly. Thorough coverage is required for control.  For suppression of budworms and hornworms, make the first application as soon as eggs hatch and repeat applications as necessary to maintain suppression.  Choose the lower rate for light infestation and the higher rate for heavy infestation.

**Restrictions:**

- Regardless of the application method, **DO NOT** apply more than 0.2 lb. a.i. clothianidin per acre per calendar year.
- **DO NOT** apply treatments less than 7 days apart.
- **DO NOT** apply within 14 days of harvest.

**SOIL APPLICATION****(In Transplanted Water Application or Tray, or Flat Drench Application)**

Pests	Sharda Clothianidin 23% SC Application Rates	Special Instructions
Flea Beetles	3 – 6 fl. Oz./A (0.05 – 0.1 lb. a.i./A)	<b>Sharda Clothianidin 23% SC</b> must be mixed with water prior to application. Keep the <b>Sharda Clothianidin 23% SC</b> solution agitated or mix regularly to prevent settling in the spray or
Aphids	6 fl. Oz./A	

Tobacco Budworm (Suppression) Tobacco Hornworm (Suppression)	(0.1 lb. a.i./A)	<p>transplant tank. Apply <b>Sharda Clothianidin 23% SC</b> at the specified dosage to the soil in transplant water or by drench to trays or flats prior to transplanting. Water the plants in flats or trays by overhead irrigation to wash <b>Sharda Clothianidin 23% SC</b> from foliage into the potting media.</p> <p>Failure to wash <b>Sharda Clothianidin 23% SC</b> from foliage may result in a reduction of control.</p> <p>Soil applications may sometimes cause yellowing on the leaves present at the time of transplanting. This effect does not have any impact on plant growth and yields.</p> <p>Choose the lower rate for light infestation and the higher rate for heavy infestation.</p>
<p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>Regardless of the application method, <b>DO NOT</b> apply more than 0.2 lb. a.i. clothianidin per acre per calendar year.</li> <li><b>DO NOT</b> apply within 14 days of harvest.</li> </ul>		

### TREE NUTS

Almond; Beech Nut; Brazil Nut; Butternut; Cashew; Chestnut; Chinquapin; Filbert (Hazelnut); Hickory Nut; Macadamia Nut; Pecan; and Walnut (Black and English).

#### FOLIAR POST-BLOOM APPLICATION

Pests	Sharda Clothianidin 23% SC Application Rates	Rates /Instructions
Aphids Leafhopper Leaf Footed Bug Pecan Nut Casebearer Pecan Weevil Walnut Husk Fly Whiteflies (Suppression)	3 – 6 fl. Oz./A (0.05 – 0.1 lb. a.i./A)	<p>Apply <b>Sharda Clothianidin 23% SC</b> when target pest(s) threshold populations are observed. <b>DO NOT</b> wait until population beyond threshold has been established.</p> <p>Choose lower rate for light infestation and/or small trees and the higher rate for heavy infestation and/or larger trees.</p>
Hickory Shuckworm Lygus/Plant Bugs Mealybugs Scales Stinkbugs	6 fl. Oz./A (0.1 lb. a.i./A)	<p>Apply by ground 100 – 400 gals. Per acre as a full coverage spray. Thorough coverage is required for control.</p> <p><b>Scales:</b> Time applications to the crawler stage, treat each successive generation. Two applications on a 10- to 14-day interval may be required to achieve control.</p>

**Restrictions:**

- Regardless of the application method, **DO NOT** apply more than 0.2 lb. a.i. clothianidin per acre per calendar year.
- DO NOT** apply treatments less than 10 days apart.
- DO NOT** apply within 21 days of harvest.
- Sharda Clothianidin 23% SC** must not be applied during bloom or when bees are foraging.
- DO NOT** feed or allow livestock to graze on cover crops from treated orchards.

### TUBEROUS AND CORM VEGETABLES

Arracacha; Arrowroot; Artichoke (including Chinese and Jerusalem); Edible Canna; Cassava (including bitter and sweet); Root Chayote; Chufa; Dasheen; Ginger; Leren; Potato; Sweet Potato; Tanier; Turmeric; and Yam.

#### FOLIAR APPLICATION

Pests	Sharda Clothianidin 23% SC Application Rates	Rates /Instructions
Aphids Colorado Potato Beetles Flea Beetles Leafhoppers Potato Psyllids (Suppression)* Scarab Beetle (Adults)*	2 – 3 fl. Oz./A (0.033 – 0.05 lb. a.i./A)	<p>Apply <b>Sharda Clothianidin 23% SC</b> when target pest(s) threshold populations are observed. <b>DO NOT</b> wait until population beyond threshold has been established.</p> <p>Apply <b>Sharda Clothianidin 23% SC</b> by ground or air in sufficient water to ensure uniform and thorough coverage of foliage. Use a minimum of 3 gals. Per acre for aerial applications.</p> <p><b>Colorado Potato Beetles:</b> <b>Sharda Clothianidin 23% SC</b> will not control Colorado potato beetles in regions where insensitivity to neonicotinoid insecticides has been reported.</p>

*Except California.		Choose the lower rate for light infestation and the higher rate for heavy infestation.
<b>Restrictions:</b> <ul style="list-style-type: none"> <li>Regardless of the application method, <b>DO NOT</b> apply more than 0.2 lb. a.i. clothianidin per acre per calendar year.</li> <li><b>DO NOT</b> apply treatment between 50% row closure and petal fall.</li> <li><b>DO NOT</b> make more than 1 application per year prior to 50% row closure.</li> <li><b>DO NOT</b> apply treatments less than 7 days apart.</li> <li><b>DO NOT</b> apply within 14 days of harvest.</li> <li><b>DO NOT</b> apply by air except for potato.</li> </ul> 		
<b>IN-FURROW OR SIDE DRESS APPLICATIONS</b>		
<b>Pests</b>	<b>Sharda Clothianidin 23% SC Application Rates</b>	<b>Rates /Instructions</b>
Aphids Colorado Potato Beetles Flea Beetles Leafhoppers Sugarcane Beetle Wireworms (except for Corn, Southern Potato, and Tobacco Wireworm) (Suppression)*	9 – 12 fl. Oz./A (0.15 – 0.2 lb. a.i./A)	<b>Broadcast Applications:</b> Broadcast application by ground pre-plant or at planting. Incorporate the <b>Sharda Clothianidin 23% SC</b> into the soil. Apply specified rate in sufficient carrier volume to ensure uniform application and incorporate into the soil prior to planting or transplanting.
Corn Wireworm* Potato Psyllids (Suppression) Southern Potato Wireworm* Sweet Potato Weevil Tobacco Wireworm* White Grubs (including Exotic White Grub)	12 fl. Oz./A (0.2 lb. a.i./A)	<b>Directed Applications:</b> As an in furrow at planting side-dress on both sides of the row at ground-crack during hilling. With ground-crack/hilling application make certain product is covered with at least 3 inches of soil.
*Except California		Apply specified rate in sufficient carrier volume to ensure uniform application and incorporate into the soil using 1 of the following methods:
<b>Diseases Suppressed</b>	<b>Sharda Clothianidin 23% SC Application Rate</b>	
<b>Symptoms of:</b> Potato Leafroll Virus (PLRV) Purple Top	12 fl. Oz./A (0.2 lb. a.i./A)	<ol style="list-style-type: none"> <li>In a narrow band centered on the plant row in the bedding operation just prior to planting or transplanting.</li> <li>In-furrow spray at planting or transplanting. Target the application to the bottom part of the furrow. Plant seed pieces, whole potatoes, or place transplants immediately after the application.</li> <li>As a sidedress to both sides of the row or as a spray at ground crack directly over the row during hilling. Cover immediately with soil.</li> <li>Chemigation into root zone through drip, trickle or custom made systems that target the watering of the root zone of the plant.</li> </ol> <p>Chemigation from plant emergence to 50 percent row cover. Applications via chemigation targeting above ground pests after 50% row cover could result in limited plant uptake via the root system. Use at least 0.15 inch of water when chemigating <b>Sharda Clothianidin 23% SC</b>. For control of aphids, Colorado potato beetle, flea beetles, leafhoppers and psyllids (suppression), apply <b>Sharda Clothianidin 23% SC</b> at 9 – 12 fl. Oz./A from plant emergence to hilling. Use the highest rate for maximum residual control. Apply in 0.15 – 0.25 inch of water per acre. Use at least 0.10 inch of water when chemigating <b>Sharda Clothianidin 23% SC</b>.</p> <p>Colorado Potato Beetle: <b>Sharda Clothianidin 23% SC</b> will not control Colorado Potato Beetles in regions where insensitivity to neonicotinoid insecticides has been reported.</p> <p>Choose the lower rate for light infestation and the higher rate for heavy infestation.</p>

**Restriction:**

- Regardless of the application method, **DO NOT** apply more than 0.2 lb. a.i. clothianidin per acre per calendar year.

**SEED-PIECE APPLICATION**

<b>Pests</b>	<b>Sharda Clothianidin 23% SC Rates/100 lbs. seed</b>	<b>Rates /Instructions</b>
Aphids Colorado Potato Beetles Flea Beetles	0.4 – 0.6 fl. Oz. (0.067 – 0.1 lb. a.i.)	<b>Seed-Piece Application:</b> <ol style="list-style-type: none"> <li>Apply specified dosage as a diluted, fine spray applied over the cut or whole seed tubers. A dilution rate of 1 part <b>Sharda</b></li> </ol>

Leafhoppers Potato Leafhoppers Potato Psyllids (Suppression Only) Wireworms (Seed-Piece Protection Only)		<p><b>Clothianidin 23% SC</b> to 3 parts water, or less, is recommended.</p> <ol style="list-style-type: none"> <li>Maintain agitation of spray mixture during the application process.</li> <li>Use a spray system that is properly shielded to prevent any spray from moving off target.</li> </ol> <p>Liquid-based fungicides can be applied with <b>Sharda Clothianidin 23% SC</b>; however check compatibility before use. If using inert dusts or dust-based fungicides, apply <b>Sharda Clothianidin 23% SC</b> first, followed by dust application.</p> <p>Apply only in areas with adequate ventilation to accommodate dry-down and in areas equipped to remove mist or dust.</p> <p>Plant treated seed-pieces as soon as possible after treating.</p> <p><b>Colorado Potato Beetle: Sharda Clothianidin 23% SC</b> will not control Colorado Potato Beetles in regions where insensitivity to neonicotinoid insecticides has been reported.</p> <p><b>Note:</b> Based on seeding rate of 2,000 lbs./acre, seed-piece application rate range equals in-furrow/side-dress per acre application rate range.</p> <p>Choose the lower rate for light infestation and the higher rate for heavy infestation.</p>
<b>Diseases Suppressed</b>	<b>Sharda Clothianidin 23% SC Rates/100 lbs. seed</b>	
<b>Symptoms of:</b> Potato Leafroll Virus (PLRV) Purple Top Net Necrosis	0.6 fl. Oz. (0.1 lb. a.i.)	
<p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li><b>DO NOT</b> use treated seed-pieces for food, feed, or fodder.</li> <li><b>DO NOT</b> apply any subsequent application of <b>Sharda Clothianidin 23% SC</b> (in-furrow, side-dress) following a <b>Sharda Clothianidin 23% SC</b> seed-piece treatment.</li> <li>Regardless of the application method, <b>DO NOT</b> apply more than 0.2 lb. a.i. clothianidin per acre per calendar year.</li> </ul>		

### SOD FARMS

**Sharda Clothianidin 23% SC** can be used as directed on grass grown in commercial sod farms.

**Sharda Clothianidin 23% SC** has sufficient residual activity to provide high levels of control when applications are made preceding 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 application with sufficient irrigation or rainfall to move the active ingredient through the thatch.

**Sharda Clothianidin 23% SC** can be applied at 12 - 24 fl. oz. per acre. The rate is dependent on the target pest(s), their stage of development and the desired level of control. Optimum results for grubs (larvae) will be achieved when applications are made just prior to or just after peak egg laying. Use higher rates when long residual control is desired or late season curative applications are made to sod already showing grub damage. Multiple applications can be made but **DO NOT** exceed the maximum amount per calendar year (24 fl. oz. per acre). Consult your local State Agricultural Experiment Station, State Extension Turf Specialists or other turf experts for specific information concerning the timing of application(s).

Apply **Sharda Clothianidin 23% SC** in sufficient water to provide optimal distribution in the treated area. The use of properly calibrated equipment normally used for the application of sod farm insecticides is required. Use equipment which will produce a uniform, coarse droplet spray, using a low pressure setting to eliminate off target drift. Check calibration periodically to ensure that equipment is working properly.

APPLICATION RATES ON SOD FARMS	
Pests	Sharda Clothianidin 23% SC Application Rates
Annual Bluegrass Weevil Billbugs Black Turfgrass Ataenius Chinch Bugs Sod Webworms White Grubs (Asiatic Garden Beetle, European Chafer, Green June Beetle, Japanese Beetle, Northern Masked Chafer, Oriental Beetle, and Southern Masked Chafer)	12 - 24 fl. oz./A (0.2 - 0.4 lb. a.i./A)
Cutworms (Suppression) Mole Crickets (Suppression)	24 fl. oz./A (0.4 lb. a.i./A)
<b>Restrictions:</b>	

- **DO NOT** apply more than a total of 24 fl. oz. (0.4 lb. a.i.) of **Sharda Clothianidin 23% SC** per acre per calendar year.
- **DO NOT** allow this product to contact plants in bloom if bees are foraging the treatment area.
- **DO NOT** mow until after irrigation or rainfall has occurred so that uniformity of application will not be affected.

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage and disposal.

**PESTICIDE STORAGE:** Store in a dry place away from excessive heat. **DO NOT** store near food or feed. Store in original container only. To close package, replace and tighten cap to form an airtight seal.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

### CONTAINER HANDLING:

**[Plastic HDPE Less Than or Equal to 5 Gallons]** Nonrefillable container. **DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ 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 reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

**[Plastic HDPE Greater Than 5 Gallons]** [Refillable container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system Repeat this rinsing procedure two more times.]

**[Plastic HDPE Greater Than 5 Gallons]** [Nonrefillable container. **DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration. Offer for recycling, if available.]

**[For Plastic HDPE Bulk and Mini-Bulk Containers]** [Refillable container. Refill this container with pesticide only. **DO NOT** use this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by State and local authorities.]

**CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER!**

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3	[This side Up]