**SUGAR BEET (TOPS) - VARIEGATED CUTWORM**

**General Information**

Do not formulate this product into other end-use products. NUDRIN LV INSECTICIDE is a water soluble liquid that is applied by foliar application to control many important insect pests. NUDRIN LV INSECTICIDE is mixed with water for application.

Chemigation: Refer to supplemental, or Special Local Need (SLN) labeling or the crop specific sections of this label for use directions for chemigation.

Do not apply this product through any other type of irrigation systems, except those allowed by instructions provided in a supplemental, SLN or this product label. Pilots must not assist in the mixing and loading operations.

Do not apply by ground equipment within 25 feet, or by air within 100 feet of lakes, reservoirs, rivers, estuaries, commercial fish ponds and natural, permanent streams, marshes or natural, permanent ponds. Increase the buffer zone to 450 feet from the above aquatic areas when ultra low volume application is made.

Hand-held equipment is prohibited for applications to crops. This product must be applied to crops only with mechanical ground, overhead sprinkler chemigation or aerial application equipment.

Use only in commercial and farm plantings. Not for use in home plantings. Not for use during any period after a commercial crop site is opened for public entry as a “U-Pick”, “Pick Your Own” or similar operation; in no case shall preharvest applications be made after first public entry. The restricted entry interval and preharvest interval for the crop stated elsewhere on this label must be followed.

**RESISTANCE MANAGEMENT**

For resistance management, NUDRIN LV INSECTICIDE is a group 1A insecticide. Repeated and exclusive use of NUDRIN LV INSECTICIDE or other group 1A insecticides may lead to the build-up of resistant strains of insects in some crops. Not all members of this group have been shown to be cross-resistant. Different resistance mechanisms that are not linked to target site of action, such as enhanced metabolism, are common for this group of chemicals. Alternation of compounds from different sub-groups within this group may be an acceptable part of an integrated pest management program.

Some insects are known to develop resistance to products used repeatedly for
control. When this occurs, the recommended dosages fail to suppress the pest population below the economic threshold. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. These strategies may include incorporation of cultural and biological control practices, alternation of mode-of-action classes of insecticides on succeeding generations and targeting the most susceptible life stage. Consult your local or state agricultural authorities for details. If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternative method of control for your area. For additional information on insect resistance monitoring, visit the Insecticide Resistance Action Committee (IRAC) on the web at http://www.irac-online.org.

INTEGRATED PEST MANAGEMENT
This product should be used as part of an Integrated Pest Management (IPM) program which can include biological, cultural, and genetic practices aimed at preventing economic pest damage. Application of this product should be based on IPM principles and practices including field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

SCOUTING
Monitor insect populations to determine whether or not there is a need for application of NUDRIN LV INSECTICIDE based on locally determined economic thresholds. More than one treatment of NUDRIN LV INSECTICIDE may be required to control a population of pests.

BENEFICIAL ARTHROPODS
NUDRIN LV INSECTICIDE at rates of 2/5 to 3/4 pint per acre helps conserve certain beneficials, including big-eyed bugs, damsel bugs, flower bugs and spiders in cotton and soybeans. While these beneficials cannot be relied upon to control pests, they
are of potential value and should be monitored along with pests in pest management programs on these crops.

SPRAY PREPARATION
Spray equipment must be clean and free of previous pesticide deposits before applying NUDRIN LV INSECTICIDE. Fill spray tank 1/4 to 1/2 full of water. Add NUDRIN LV INSECTICIDE directly to spray tank. Mix thoroughly. Use mechanical or hydraulic means; do not use air agitation. Spray mix should not be stored overnight in spray tank.

Compatibility — Since formulations may be changed and new ones introduced, in this situation users can premix a small quantity of a desired tank mix and observe for possible adverse changes (settling out, flocculation, etc.) before applying the product. Avoid mixtures of several materials and very concentrated spray mixtures. Do not use NUDRIN LV INSECTICIDE with Bordeaux mixture (copper sulfate and hydrated lime), Du Ter triphenyltin hydroxide, lime sulfur, Rayplex iron nor in highly alkaline solutions. Use mildly alkaline mixtures immediately after mixing to prevent loss of insecticidal activity.

APPLICATION
Apply at the recommended rates when insect populations reach locally determined economic thresholds. Consult the cooperative extension service, professional consultants or other qualified authorities to determine appropriate threshold levels for treatment in your area.
Follow-up treatments of NUDRIN LV INSECTICIDE should be applied, as needed, to keep pest populations within threshold limits. On most crops, NUDRIN LV INSECTICIDE should be applied at 5 to 7 day intervals to maintain control. Refer to crop specific directions for use in the crop tables for more specific information on treatment intervals.
Use sufficient water to obtain thorough, uniform coverage. Since NUDRIN LV INSECTICIDE is a fast acting contact insecticide, best results follow direct spraying of the target insect.
For aerial, use a minimum of 2 gals. per acre (gpa) except 10 gpa for peaches and nectarines; 15 gpa for oranges, lemons, grapefruit, tangelos and tangerines. NUDRIN LV INSECTICIDE is recommended for use as a low volume aerial spray 0.53 gpa (2L) for cotton* and soybeans* and 1 gpa for the crops listed below providing the following conditions are met:
- equipment is adjusted to distribute spray uniformly over the spray swath,
- wind conditions and other factors such as temperature and humidity are such that the spray is delivered to the target area,
- local regulations do not prohibit low-volume aerial sprays,
- use rates are applied as directed on the package label or supplemental labeling for the following crops:
  Alfalfa
  Anise
  Asparagus
  Beans
  Broccoli
  Brussels sprouts
  Cabbage
  Carrot
  Cauliflower
  Celery
  Collards
  Corn
  Cotton
  Cucumber
  Lettuce
  Melons
  Mint
  Peanuts
  Peas (succulent)
  Peppermint
  Peppers
  Potato
  Soybean
  Spinach
  Sugar beet
  Summer Squash
  Wheat

Apply the low rates on small plants, small insects and light infestations of insects. Use intermediate rates on large insects and heavier infestations of insects. Use 1 to 3 applications of the highest recommended rate for controlling severe infestations. Thereafter, use the lowest rate possible to maintain control.
* Not Registered for aerial application in a diluted volume of less than 1 gal in CA.

CHEMIGATION

Overhead Sprinkler Chemigation

Instructions for the Use of NUDRIN LV INSECTICIDE on Alfalfa, Dry Beans, Green and Dry Bulb Onions, Potatoes, Succulent Beans, Succulent Peas, Sugar Beets, Sweet Corn, and Wheat Using Overhead Sprinkler Chemigation

Overhead sprinkler chemigation is allowed for use in alfalfa, succulent and dry beans, onions, succulent peas, potatoes, sugar beets, sweet corn and wheat. Do not apply this product through any other type of irrigation systems, except those allowed by instructions provided in a supplemental, SLN or this product label. Overhead chemigation applications offer the advantage of greater penetration and coverage of the target plant. However, typical chemigation applications are more dilute than ground or aerial applications. For best results, it is recommended to keep the concentration of NUDRIN LV INSECTICIDE as high as possible in the application. Apply NUDRIN LV INSECTICIDE in 0.1 to 0.2 inches of water per acre. NUDRIN LV INSECTICIDE is most active as a contact insecticide, although it does also have activity via ingestion of treated plants. For best results, applications of NUDRIN LV INSECTICIDE should take place when the insects are active and most likely to come into direct contact with the application.

Types of Overhead Sprinkler Irrigation Systems:

NUDRIN LV INSECTICIDE may be applied through overhead sprinkler irrigation systems for control of various pests. The irrigation system used must provide uniform water distribution. Do not use filter screens smaller than 50 mesh throughout the system, due to possible build up of material on 100 mesh or smaller screens. Do not apply NUDRIN LV INSECTICIDE through any other type of irrigation systems, except those allowed by instructions provided in a supplemental, SLN, or this main product label.

Directions for Overhead Sprinkler Chemigation:

Preparation

A pesticide tank is used for the application of NUDRIN LV INSECTICIDE in chemigation systems. Thoroughly clean the injection system and tank of any fertilizer or chemical residues using a standard clean-out procedure. Dispose of any residues in accordance with State and Federal laws. Add ¼ to 1/2 of the desired amount of water and then measure the required amount of NUDRIN LV INSECTICIDE into the tank. Complete filling the tank by adding the required amount of water.
Agitate thoroughly to insure a uniform solution of NUDRIN LV INSECTICIDE. Once in solution, no further agitation is required. Injection solution should not be stored overnight. Highly alkaline water should be buffered so that the pH of the spray solution is in the range of neutral to slightly acidic (pH 5-7).

Injection Into Overhead Sprinkler Chemigation Systems
Inject the proper amount of the NUDRIN LV INSECTICIDE solution into the irrigation water flow using a positive displacement injection pump. Injection should occur at a point in the main irrigation water flow to ensure thorough mixing with the irrigation water.

Operation: Start the water pump and sprinkler, and let the system achieve the desired pressure and speed before starting the injector. Start the injector and calibrate the injection system according to the directions above. This procedure is necessary to deliver the desired rate per acre in a uniform manner. Apply NUDRIN LV INSECTICIDE in 0.1 to 0.2 inches of water per acre. When the application is finished, allow the entire irrigation and injector system to be thoroughly flushed clean before stopping the system. End guns must be turned off during the application, if they irrigate nontarget areas or if they do not provide uniform application and coverage.

Nozzles in the immediate area of control panels, chemical supply tanks, wellheads and system safety devices must be plugged to prevent contamination of these areas.

Do not apply when wind speed favors drift beyond the area intended for treatment. Do not apply when system connections or fittings leak or when nozzles do not provide uniform distribution.

Cleaning the System: Thoroughly clean the injection system and tank of any fertilizer or chemical residues using a standard clean-out procedure. Dispose of any residues in accordance with State and Federal laws. Consult your owner’s manual or your local equipment dealer for cleanout procedures for your injection system.
Drip Chemigation
Instructions for the Use of NUDRIN LV INSECTICIDE on green and dry bulb onions

Using Drip Chemigation
Drip chemigation is allowed in green and dry bulb onions. Do not apply this product through any other type of irrigation systems, except those allowed by instructions provided in a supplemental, SLN, or this product label.

Types of Drip Irrigation Systems
The irrigation system used must provide uniform water distribution. Do not use filter screens smaller than 50 mesh throughout the system, due to possible build up of material on 100 mesh or smaller screens. Do not apply NUDRIN LV INSECTICIDE through any other type of irrigation systems, except those allowed by instructions provided in a supplemental, SLN or this main product label.

Directions for Drip Chemigation
Drip Guidance:
1. Tape placement is critical. All products applied via drip irrigation must be deposited in the root zone. Place the tape either under each row or within each bed at the minimum depth that allows planting. The goal is to have the tape within or adjacent to the root zone and buried no more than 2 inches deep.
2. Optimum emitter spacing is 6 inches or less. The maximum emitter spacing must not exceed 12 inches. Emitters must be free of debris and deliver consistent amounts of water. Best results are seen when the same amount of NUDRIN LV INSECTICIDE comes out of each emitter.
3. Adjust the irrigation cycle so that the water reaches the entire root zone without being pushed beyond the root zone.
4. The minimum injection time that will result in uniform distribution of NUDRIN LV INSECTICIDE throughout the field is the time it takes water to move from the injection point to the most distant emitter. Extending the injection time to twice the minimum will improve uniformity of the application. Also applications made with lower delivery volumes of water will improve uniformity.
5. When the drip tape is located between two single or double rows of onions, begin injection of NUDRIN LV INSECTICIDE as soon as the system is up to pressure and continue through the first half to two-thirds of the irrigation cycle. The purpose is to ensure that the NUDRIN LV INSECTICIDE is pushed all the way to the root zone of the outer row and not left in the area around the emitter.
6. Applications should be made before pests reach thresholds.
7. Drip chemigation works best when fields are relatively flat.
8. The tape flow rate should be matched to the soil type, crop and climate. Too much flow can result in puddling and excessive time at soil saturation. Consult the tape manufacturer for more information.

Preparation: A pesticide tank is used for the application of NUDRIN LV INSECTICIDE in chemigation systems. Thoroughly clean the injection system and tank of any fertilizer or chemical residues using a standard clean-out procedure. Dispose of any residues in accordance with State and Federal laws. Add 1/4 to 1/2 of the desired amount of water and then measure the required amount of NUDRIN LV INSECTICIDE into the tank. Complete filling the tank by adding the required amount of water. Agitate thoroughly to insure a uniform solution of NUDRIN LV INSECTICIDE. Once in solution, no further agitation is required. Injection solution should not be stored overnight.

Injection Into Drip Chemigation Systems: Inject the proper amount of the NUDRIN LV INSECTICIDE solution into the irrigation water flow. Injection should occur at a point in the main irrigation water flow to ensure thorough mixing with the irrigation water. The injection solution containing NUDRIN LV INSECTICIDE should be injected during the middle one-third of the irrigation cycle.

Operation: Start the water pump and let the system achieve the desired pressure and flow before starting the injector. Start the injector and calibrate the injection system. This procedure is necessary to deliver the desired rate per acre in a uniform manner. When the application is finished, allow the entire irrigation and injector system to be thoroughly flushed clean before stopping the system. Do not apply when system connections or fittings leak or when emitters do not provide uniform distribution.

Cleaning the System: Thoroughly clean the injection system and tank of any fertilizer or chemical residues using a standard clean-out procedure. NUDRIN LV INSECTICIDE should not be applied at the same time that a drip/irrigation line clean out product is being used as performance may be reduced. Dispose of any residues in accordance with State and Federal laws. Consult your owner’s manual or your local equipment dealer for cleanout procedures for your injection system.

Additional Chemigation Directions (both overhead and drip)
Uniform Water Distribution
The irrigation system used for application of NUDRIN LV INSECTICIDE must provide
for uniform distribution of NUDRIN LV INSECTICIDE treated water. Non-uniform distribution might result in crop injury, lack of effectiveness or illegal pesticide residues in or on the crop being treated. Ensure the irrigation system is calibrated to uniformly distribute the chemigation application to the crop. Contact the equipment manufacturer, the local University Extension agent or other experts if you have questions about achieving uniform distribution of the application.

Equipment calibration
Calibrate the irrigation system and injector before applying NUDRIN LV INSECTICIDE. Calibrate the injection pump while the system is running using the expected irrigation rate. If you have questions about calibration, you should contact your state extension service specialists, equipment manufacturer or other experts.

Monitoring of Chemigation Applications
A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of a responsible person, shall shut the system down and make necessary adjustments should the need arise. Wear the personal protective equipment as defined in the PPE section of the label for cleaners and repairers of application equipment when making adjustments or repairs on the chemigation system when NUDRIN LV INSECTICIDE is in the irrigation water.

Required System Safety Devices
Do not connect any irrigation system used for pesticide applications to a public water system unless the pesticide label-prescribed safety devices are in place. Public water system means a system for the provision to the public of piped water for human consumption, if such a system has at least 15 service connections or regularly serves an average of at least 25 individuals at least 60 days out of the year.
1. 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.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. 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.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. 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.
6. Systems must use a metering pump such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be 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 the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

Posting of Areas to be Treated
Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, daycare centers, hospitals, in-patient clinics, nursing homes, or any other public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is open to the public such as golf courses or retail greenhouses.
Posting must conform to all the following requirements. Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other location affording maximum visibility to sensitive areas. The signs shall be printed in ENGLISH. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.
All words shall consist of letters at least 2 1/2 inches tall, and all letters and the symbol shall be a color, which sharply contrasts with their immediate background. At the top of the sign shall be the words “KEEP OUT”, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word “STOP”. Below the
symbol shall be the words “PESTICIDE IN IRRIGATED WATER”. Posting for chemigation does not replace other posting and reentry requirements for farm worker safety.

AIR ASSISTED (AIR BLAST) FIELD CROP SPRAYERS
Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring. Note: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Consult the application equipment section of this label to determine if use of an air assisted sprayer is recommended.

AIR ASSISTED (AIR BLAST) TREE AND VINE SPRAYERS
Air assisted tree and vine sprayers carry droplets into the canopy of trees and vines via a radially or laterally directed air stream. These sprayers are not suitable for applying herbicides. In addition to the general drift management principles already described, the following specific practices will further reduce the potential for drift. Adjust deflectors and aiming devices so that spray is only directed into the canopy. Block off upward pointed nozzles when there is no overhanging canopy. Use only enough air volume to penetrate the canopy and provide good coverage. Do not allow spray to go beyond the edge of the cultivated area. Spray the outside row only from outside the planting.

Limitations, Restrictions, and Exceptions

Do not apply more than 15 pints of NUDRIN LV INSECTICIDE per acre per crop.

Do not make more than 10 applications per crop.

Method
Broadcast/Foliar Air
Broadcast/Foliar Ground
Pre-Harvest Interval

30 days
Rates

**field_rates 0**

- Restricted Entry Interval

48 hours

Timings

*When target pest populations reach locally determined action thresholds.*