

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

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JAN 3 1 2013

Subject:

Label Amendment – adding pests, chemigation, and crops

EPA Registration No. 352-384

Submission Date: September 6, 2012

Decision #: 469905

Dear Mrs. Devine:

The labeling referred to above, submitted under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable. Submit two copies of your final printed labeling before you release the product for shipment. A stamped copy is enclosed for your records. If you have any questions, please contact me at (703) 347-0263 or rogala.jessica@epa.gov.

Sincerely,

John Hebert

Próduct Manager 07

Insecticide-Rodenticide Branch Registration Division (7505P)





DuPont™ Lannate® LV

insecticide

MASTER

ACCEPTED JAN 3 1 2013

Under the Federal Insecticide, Pungicide, and Rodenticide Act, as amended, for the pestacide registered under EPA Reg. No. 257 - 384

DUPONT™ LANNATE® LV HIGHLIGHTS

- LANNATE® LV insecticide is a water soluble liquid containing 2.4 lbs active ingredient per gallon.
- LANNATE® LV is a broad spectrum insecticide registered in a wide range of field, fruit and vegetable crops.
- LANNATE® LV is particularly active on many Lepidopterous pests as an ovicide, larvicide and adulticide.
- LANNATE® LV is primarily a contact insecticide giving rapid knockdown effects on insects. LANNATE® LV also provides short term effects from the ingestion of treated foliage.
- LANNATE® LV's short residual on treated crops allows for short preharvest intervals.
- Consult label text for complete instructions.
 Always read and follow label directions for use.

TABLE OF CONTENTS

Page
First Aid
Precautionary Statements 1-2
Directions For Use
Agricultural Use Requirements 3
General Information
Scouting
Insect Predators
Resistance
Compatibility
Integrated Pest Management
Spray Preparation
Application
Spray Drift Management 4
Crop/Rate Tables
Storage and Disposal
Notice of Warranty

RESTRICTED USE PESTICIDE

Due to High Acute Toxicity to Humans.

For retail sale and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification. Direct supervision for this product requires the certified applicator to review federal and supplemental label instructions with all personnel prior to application, mixing, loading, or repair or cleaning of application equipment.

GROUP

INSECTICIDE



DuPontTM Lannate[®] LV

insecticide

Water Soluble Liquid

Contains 2.4 lbs active ingredient per gallon.

Active Ingredient	By Weigh
Methomyl	
(S-methyl-N-[(methylcarbamoyl)	
oxy]thioacetimidate)	29%
Other Ingredients	71%
TOTAL	100%

EPA Reg. No. 352-384 EPA Est. No. ____



JAN 3 1 2013 Under the Federal Insecticide,

Pungicide, and Rodenticide Act, as amended, for the pestacide registered under

EPA Reg. No. 25%

KEEP OUT OF REACH OF CHILDREN

DANGER **PELIGRO**



POISON

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

This Product is an N-Methyl Carbamate insecticide.

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice: Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.

ATROPINE IS AN ANTIDOTE -- SEEK MEDICAL ATTENTION AT ONCE IN ALL CASES OF SUSPECTED POISONING.

If poisoning symptoms appear (see POISONING SYMPTOMS), get medical attention.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for emergency medical treatment information.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER! FATAL IF SWALLOWED, CONTAINS METHANOL: MAY CAUSE BLINDNESS. CORROSIVE. CAUSES IRREVERSIBLE EYE

Do not get in eyes, or on clothing. Wear protective eyewear. Harmful if inhaled or absorbed through skin. Avoid contact with skin or breathing spray mist. Wash hands thoroughly with soap and water after handling.

> ("PRECAUTIONARY STATEMENTS" Continued on next page)

PRECAUTIONARY STATEMENTS(continued) HAZARDS TO HUMANS AND DOMESTIC ANIMALS

POISONING SYMPTOMS — Methomyl poisoning produces effects associated with anticholinesterase activity which may include weakness, blurred vision, headache, nausea, abdominal cramps, discomfort in the chest. constriction of pupils, sweating, slow pulse, muscle tremors. If poisoning symptoms appear, refer to First Aid section on front panel of DuPontTM LANNATE® LV label and seek medical attention at once.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

TREATMENT — Atropine sulfate should be used for treatment. Administer repeated doses, 1.2 to 2.0 mg. intravenously every 10 to 30 minutes until full atropinization is achieved. Maintain atropinization until the patient recovers. Artificial respiration or oxygen may be necessary. Allow no further exposure to any cholinesterase inhibitor until recovery is assured.

Do not use 2-PAM for exposure to LANNATE® LV alone. However, for exposure to combinations of LANNATE® LV and organophosphorous insecticides, 2-PAM may be used as required to supplement the atropine sulfate treatment. Do not use morphine.

For medical emergencies involving this product, call toll free 1-800-441-3637.

PERSONAL PROTECTIVE EQUIPMENT

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

Applicators and others exposed to the diluted spray solution must wear:

Long-sleeved shirt and long pants.

Chemical-resistant gloves, such as barrier laminate or butyl rubber.

Shoes plus socks.

Protective eyewear.

Mixers, loaders, cleaners, repairers of application equipment, and others exposed to the concentrate must wear:

Long-sleeved shirt and long pants.

Chemical-resistant gloves, such as barrier laminate or butyl rubber.

Socks and chemical resistant footwear.

Protective eyewear.

Chemical resistant apron.

For exposures in enclosed areas, a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or NIOSH approved respirator with an organic vapor (OV) cartridge or a canister with any R, P, or HE prefilter.

For exposures outdoors, Dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any R, P, or HE prefilter. Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROL STATEMENTS

Human flaggers must be in enclosed cabs.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR part 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

The enclosed cabs must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR part 170.240 (d)(4-6)]. The handler PPE requirements may be reduced or modified as specified in the WPS.

Pilots must not assist in the mixing and loading operations.

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 personal protective equipment 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

actively visiting the treatment area.

This pesticide is toxic to fish, aquatic invertebrates, and mammals. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean highwater mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are

This chemical is known to leach through soil into groundwater under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

This chemical can contaminate surface water through spray drift. Under some conditions, it may also have a high potential for runoff into surface water for several days to weeks after application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlaying extremely shallow groundwater, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas overlaying tile drainage systems that drain to surface water.

PHYSICAL AND CHEMICAL HAZARDS

Combustible. Do not use or store near heat or open flame. Keep container closed. Use with adequate ventilation.

DIRECTIONS FOR USE

Restricted Use Pesticide

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment(PPE) 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 worker entry into treated areas during the restricted entry interval (REI). REI Summary: apple, cotton, grapefruit, lemon, nectarines, oranges, tangelo, tangerine = 3 day REI; peaches = 4 day REI; all other WPS uses = 48 hour REI.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

Coveralls.

Chemical-resistant gloves, such as barrier laminate or butyl rubber.

Shoes plus socks.

Protective eyewear.

Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

GENERAL INFORMATION

Chemigation: Overhead sprinkler chemigation is allowed for use in alfalfa, barley, succulent and dry beans, oats, onions, succulent peas, potatoes, rye, sugar beets, sweet corn and wheat. Drip chemigation is allowed for onions. See Federal Supplemental labeling for overhead sprinkler chemigation directions for use in sweet corn. 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.

Do not formulate this product into other end-use products without written permission from DuPont.

DuPont™ LANNATE® LV insecticide must be used only in accordance with directions for use on this label or in separate DuPont supplemental labeling.

DuPont will not be responsible for use of the product in a manner not specified by DuPont in the product's labeling and User assumes all risk for such use.

LANNATE® LV is a water soluble liquid that is applied by foliar application to control many important insect pests. LANNATE® LV is mixed with water for application.

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 and drip 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.

SCOUTING

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

BENEFICIAL ARTHROPODS

LANNATE® LV at rates of 2/5 to 3/4 pt. 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.

RESISTANCE MANAGEMENT

For resistance management, LANNATE® LV insecticide is a group 1A insecticide. Repeated exclusive use of LANNATE® LV or other group 1A insecticides may lead to the buildup 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 alternate 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.

SPRAY PREPARATION

Spray equipment must be clean and free of previous pesticide deposits before applying DuPont™ LANNATE® LV.

Fill spray tank 1/4 to 1/2 full of water. Add LANNATE® LV 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, it is recommended that users premix a small quantity of a desired tank mix and observe for possible adverse changes (settling out, flocculation, etc.). Avoid mixtures of several materials and very concentrated spray mixtures.

Do not use LANNATE® LV with Bordeaux mixture. "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.

Tank Mixing Sequence - Add different formulation types in the sequence indicated below. Allow time for complete mixing and dispersion after addition of each product.

- 1. Water soluble bags.
- 2. Water dispersible granules.
- 3. Wettable powders.
- 4. Water based suspensions concentrates.
- 5. LANNATE® LV and other water soluble concentrates.
- 6. Oil based suspension concentrates.
- 7. Emulsifiable concentrates.
- Adjuvants, surfactants, oils, soluble fertilizers and drift retardants: Follow local practice and manufacturer's recommendation.

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 LANNATE® LV should be applied, as needed, to keep pest populations within threshold limits. On most crops, LANNATE® LV 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 LANNATE® LV 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 nectarines and peaches; 15 gpa for oranges, lemons, grapefruit, tangelos and tangerines.

LANNATE® LV 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	Celery	Peas (succulent)
Anise	Collards	Peppermint
Asparagus	Com	Peppers
Barley	Cotton	Potato
Beans	Cucumber	Rye
Broccoli	Lettuce	Soybean
Brussels sprouts	Melons	Spinach
Cabbage	Mint	Sugar beet
Carrot	Oats	Summer Squash
Cauliflower	Peanuts	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.

SPRAY TANK CLEANOUT

Immediately following application, thoroughly clean all spray equipment to reduce the risk of forming hardened deposits which might become difficult to remove.

Drain spray equipment. Thoroughly rinse sprayer and flush hoses, boom and nozzles with clean water.

Clean all other associated application equipment. Take all necessary safety precautions when cleaning equipment. Do not clean near wells, water sources or desirable vegetation. Dispose of waste rinse water in accordance with local regulations.

CHEMIGATION

Instructions for the Use of LANNATE® LV on Alfalfa, Barley, Dry and Succulent Beans, Oats, Green and Dry Bulb Onions, Succulent Peas, Potatoes, Rye, Sugar Beets and Wheat Using Overhead Sprinkler Chemigation and Use on Green and Dry Bulb Onion Via Drip Chemigation

Overhead Sprinkler Chemigation

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 LANNATE® LV as high as possible in the application. Apply LANNATE® LV in 0.1 to 0.2 inches of water per acre.

DuPont™ LANNATE® LV is most active as a contact insecticide, although it does also have activity via ingestion of treated plants. For best results, applications of LANNATE® LV should take place when the insects are active and most likely to come into direct contact with the application.

Types of Irrigation Systems:

LANNATE® LV 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 LANNATE® LV through any other type of irrigation systems, except those allowed by instructions provided in a supplemental, SLN or this product label.

Drip Chemigation in Onions

LANNATE®LV is recommended for control of thrips in green and dry bulb onions at the rate of 3 pints of product per acre of plant bed applied through drip irrigation systems. The rate of LANNATE® LV is listed as a broadcast rate. For drip irrigation rates of LANNATE® LV to be applied per 1000 feet, see the table below.

Instructions for the Use of LANNATE®LV in Drip

Bed Spacing	Linear Ft. of Bed to Equal One Acre	Lannate® LV 3 pt/ A rate per 1000 Row Feet
36 inches	14,520 ft.	3.3 fl. oz.
48 inches	10,890 ft.	4.4 fl. oz.
60 inches	8.712 ft.	5.5 fl. oz.
72 inches	7.260 ft.	6.6 fl. oz

Types of Irrigation Systems:

LANNATE® LV may be applied through drip irrigation systems for control of thrips in green and dry bulb onions. 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 LANNATE®LV through any other type of irrigation systems, except those allowed by instructions provided in supplemental, SLN or the main product label.

General Drip Guidance

- 1. Tape placement is critical. All products applied via drip irrigation must be deposited in the root zone. It is recommended to 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 bu ried no more than 2 inches deep.
- Optimum emitter spacing is 6 inches or less. The
 maximum emitter spacing should not exceed 12 inches.
 Emitters should be free of debris and deliver consistent
 amounts of water. Best results are seen when the same
 amount of LANNATE® LV comes out of each emitter.
- The length of the irrigation cycle should be adjusted 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 LANNATE® LV 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, injection of LANNATE® LV should begin 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 LANNATE® LV is pushed all the way to the root zone of the outer row and not left in the area around the emitter.
- 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.
- 9. The system should have no leaks.
- 10. Irrigate the crop to wet the root zone first, then introduce LANNATE® LV for the required time to distribute the material uniformly to the crop.
- 11 LANNATE® LV should not be applied at the same time that a drip irrigation line clean out product is being used as performance may be reduced.

General Directions for Chemigation

Preparation

A pesticide tank is recommended for the application of LANNATE® LV 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 LANNATE® LV into the tank. Complete filling the tank by adding the required amount of water. Agitate thoroughly to insure a uniform solution of LANNATE® LV. 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 injection solution is approximately neutral (~pH 7-7.5).

Injection Into Chemigation Systems

Inject the proper amount of the LANNATE® LV 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. For drip chemigation in onions, the injection solution containing LANNATE® LV should be injected during the middle one-third of the irrigation cycle.

Uniform Water Distribution

The irrigation system used for application of LANNATE® LV must provide for uniform distribution of LANNATE® LV 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 DuPont™ LANNATE® LV. 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 LANNATE® LV 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.

Operation

Start the water pump 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. When the application is finished, allow the entire irrigation and injector system to be thoroughly flushed clean before stopping the system.

For overhead sprinkler chemigation, end guns must be turned off during the application, if they irrigate nontarget areas or if they do not provide uniform application and coverage. It is recommended that nozzles in the immediate area of control panels, chemical supply tanks, wellheads and system safety devices 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 or 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. 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.

SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

- 1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the <u>Aerial Drift Reduction</u>
Advisory Information.

AERIAL DRIFT REDUCTION ADVISORY INFORMATION

Importance of Droplet Size

sections of this label.

The most effective way to reduce drift potential is to apply large droplets (>150 - 200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS! See Wind, Temperature and Humidity, and Temperature Inversions

Controlling Droplet Size - General Techniques

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using lowdrift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Controlling Droplet Size - Aircraft

- Number of Nozzles Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- Nozzle Orientation Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types and the lowest drift.

- Boom Length For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.
- Application Height Applications should not be made at a
 height greater than 10 feet above the top of the largest
 plants unless a greater height is required for aircraft safety.
 Making applications at the lowest height that is safe reduces
 exposure of droplets to evaporation and wind.
- Swath Adjustment When applications are made with a crosswind, the swath will be displaced downwind.
 Therefore, on the up and downwind edges of the fields, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.)

BOOM HEIGHT

Setting the boom at the lowest labeled height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

WIND

Drift potential is lowest between wind speeds of 3-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 3 mph due to variable wind direction and high inversion potential. AVOID GUSTY OR WINDLESS CONDITIONS.

Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

TEMPERATURE INVERSIONS

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

SENSITIVE AREAS

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, nontarget crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

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.

Crops	Insects	Rate DuPont™ LANNATE® LV Pts. Per Acre	Last Application - Days To Harvest	REI
Alfalfa	Pea Aphid Lygus Bugs Blotch Leafminer Aphids Egyptian Alfalfa Weevil Larvae Loopers Beet Armyworm Armyworm	1 1/2 - 3	7 *	48 hr
	Alfalfa Caterpillar Fall Armyworm Western Yellowstriped Armyworm Yellowstriped Armyworm	-		
	Alfalfa Weevil Larvae	3		
	Variegated Cutworm Do not apply to dormant or semidormant alfalfa	3/4 - 3	00.15	
	Do not make more than 10 applications/crop. Chemigation - LANNATE® LV may be applied use the highest listed rate of LANNATE® LV. / "Chemigation" section for more information. * Do not apply within 7 days of cutting or allow	Apply in 0.1 to 0.2 inches or ing livestock to graze.	migation. For best results, if water per acre. See	·
Anise (Fennel)	Cabbage Looper	3	7	48 hr
	Beet Armyworm	1 1/2 - 3	L	
	Do not apply more than 15 pints of LANNATEO Do not make more than 10 applications/crop.	B) LV/acre/crop.	·	
Apple	Apple Aphid	1 1/2 - 3 *	14	72 hr
Ground application only	Rosy Apple Aphid Tufted Apple Budmoth Green Fruitworm Brown Marmorated Stink Bug** Tarnished Plant Bug Codling Moth (10-12 day spray intervals)			
	Leafrollers (Fruittree, Obliquebanded, Redbanded, Variegated) Lesser Appleworm White Apple Leafhopper Tentiform Leafminer Cutworm	3 *		
	Do not use on Early Macintosh & Wealthy varied Do not apply more than 15 pints of LANNATEO Do not make more than 5 applications/crop; min * Apply in a minimum of 50 gallons of water pe ** Brown marmorated stink bugs are very mobil another application is needed prior to the minim Since LANNATE® LV is a fast acting contact it target pest.	B LV/acre /crop. nimum interval between tre. or acre. le pests. They may reinfest um application interval, use nsecticide, best results follo	the treated area quickly. If e a different insecticide.	
Asparagus	Beet Armyworm	1 1/2 - 3		48 hr
	Western Yellowstriped Armyworm Asparagus Beetle Spotted Asparagus Beetle White Cutworm			
	Redbacked Cutworm Variegated Cutworm	1 1/2		
	Do not apply more than 15 pints of LANNATEO	1	<u> </u>	
	Do not make more than 8 applications/crop.	ī		
Avocado	Western Avocado Leafroller Omnivorous Looper	1 1/2 - 3		48 hr
	Do not apply more than 3 pints of LANNATE® Do not make more than 2 applications/crop.	LV/acre/crop.		

Crops	Insects	Rate DuPont™ LANNATE® LV Pts. Per Acre	Last Application - Days To Harvest	REI
Barley	Armyworms	3/4 - 1 1/2	7	48 hrs
	Cereal Leaf Beetle*			
•	Aphids**	1.1/0		
	Brown Marmorated Stink Bug*** Do not apply more than 6 pints of LANNATE®	1 1/2		
	Do not make more than 4 applications/crop. Chemigation - LANNATE® LV may be applied pests listed, except brown marmorated stink but LANNATE® LV. Apply in 0.1 to 0.2 inches of information. * Cereal leaf beetle: LANNATE® LV can prove	d by overhead sprinkler che g. For best results, use the h water per acre. See "Chemi ide contact ovicidal effect o	ighest listed rate of gation" section for more on cereal leaf beetle	
	eggs when applied according to label direction with the appearance of newly laid eggs or in a effect. Use on this pest stage (egg) is not regis ** Aphids: For aphid control, crop must be active.	anticipation of egg hatch to a stered in California. vely growing and not under	achieve maximum ovicidal stress from	
	adverse environmental conditions (such as, ex on Russian wheat aphid need to begin when the stem). *** Brown marmorated stink bugs are very mole if another application is needed prior to the min Since LANNATE®LV is a fast acting contact it target pest. Use sufficient water to obtain thoroum minimum of 20 gallons of water per acre for greaterial applications.	he aphid population is low (bile pests. They may reinfes himum application interval, insecticide, best results follough, uniform coverage. It is	<10 adults per It the treated area quickly, use a different insecticide, we direct spraying of the recommended to use a	
Beans (Succulent)	Leafhopper	3/4 - 3	Succulent Beans	48 hrs
Including: Kidney beans Lima beans	Mexican Bean Beetle Fall Armyworm Variegated Cutworm	1 1/2	3/4 - 1 1/2 pt 1, over 1 1/2 pt 3; 3 Vines	
Mung beans	Beet Armyworm	1 1/2 - 3	. 7 Hay	
Navy beans Pinto beans Snap beans Wax Beans Broad beans Fava beans Asparagas beans	Corn Earworm Saltmarsh Caterpillar Yellowstriped Armyworm Western Yellowstriped Armyworm Lygus Bugs Thrips Aphids			
Blackeyed peas Cowpeas Chickpeas Garbanzo beans Sweet lupine White sweet	Loopers * European Corn Borer (Ovicide & Larvicide) Initiate when moth flights first appear and-continue preventive treatments at 3-4 day intervals to control eggs and larvae			
lupine	Spotted Cucumber Beetle	3/4 - 1 1/2		•
White lupine Grain lupine	Do not apply more than 15 pints of LANNATE Do not make more than 10 applications/crop. * Do not use for Loopers in AL & GA. Chemigation - LANNATE® LV may be applied armyworm, yellowstriped armyworm, western y variegated cutworm and loopers. For best result Apply in 0.1 to 0.2 inches of water per acre. See	d by overhead sprinkler chervellowstriped armyworm, sa	Itmarsh caterpillar, aphids, of LANNATE® LV.	
Beans (Dry)	(Same as Succulent Beans)	(Same as	14 Dry Beans *	48 hrs
(Same as Succulent Beans)		Succulent Beans)	14 Vines * 14 Hay *	
	Do not apply more than 15 pints of LANNATE Do not make more than 10 application/crop. Do not use for Loopers in AL & GA. * Do not apply within 14 days of cutting. Chemigation - LANNATE® LV may be applied armyworm, yellowstriped armyworm, western y variegated cutworm and loopers. For best result Apply in 0.1 to 0.2 inches of water per acre. See	d by overhead sprinkler cher vellowstriped armyworm, sa s. use the highest listed rate	ltmarsh caterpillar, aphids, of LANNATE® LV.	
Beets (Table)	Imported Cabbageworm	3/4 - 3	0 - Roots	48 hrs
	Beet Armyworm Cabbage Looper Diamondback Moth	1 1/2 - 3	10 - Tops	
	Cucumber Beetle Variegated Cutworm	1 1/2		
	Do not apply more than 12 pints of LANNATE Do not make more than 8 applications/crop.	₩ LV/acre/crop.		-

Crops	Insects	Rate DuPont TM LANNATE® LV Pts. Per Acre	Last Application - Days To Harvest	RE
Bermudagrass pasture	Fall Armyworm Armyworm	3/4 - 3	7 Forage * 3 Dehydrated Hay **	48 hi
	Striped Grass Looper Do not apply more than 3 pints of LANNATE® Do not make more than 4 applications/crop. * Do not apply within 7 days of feeding forage o ** Do not apply within 3 days of cutting for hay.	r allowing livestock to graz	ze.	
Blueberries	Blueberry Leafhopper	1 1/2	3	48 hr
	Aphids Tussock Moth Weevil			
	Sharp-Nosed Leafhopper	11/2		
	Cranberry Fruitworm * Cherry Fruitworm * Brown Marmorated Stink Bug*†	1 1/2 - 3		
	Flea Beetle (larvae) Sawfly (larvae) Blueberry Leafroller	3		
	Blueberry Maggot	3/4 - 1 1/2		,
	Do not apply during bloom. Do not apply more than 12 pints of LANNATE® Do not make more than 4 applications/crop. * For ground use only. † Brown marmorated stink bugs are very mobile If another application is needed prior to the minin Since LANNATE® LV is a fast acting contact ir target pest. Use sufficient water to obtain thorough	pests. They may reinfest the mum application interval, the secticide, best results follo	use a different insecticide. www.direct spraying of the	
	applications in a minimum of 50 gallons of water		recommended to make	
Broccoli	Loopers	1 1/2 - 3 **	. 3	48 hr
	Diamondback Moth		}	
	Imported Cabbageworm	3/4 - 3 **		
	Do not apply more than 21 pints of LANNATE®. Do not make more than 10 applications/crop; min ** Add a wetting agent to improve coverage.		catments is 2 days.	
Brussels Sprouts	Loopers Imported Cabbageworm Diamondback Moth	1 1/2 - 3 **	3	48 hr
	Variegated Cutworm	1 1/2 **		
	Do not apply more than 18 pints of LANNATE® Do not make more than 10 applications/crop; min ** Add a wetting agent to improve coverage.	LV/acre/crop. nimum interval between tre	eatments is 2 days.	
Cabbage	Loopers *	1 1/2 - 3 **	I	48 hr
•	Diamondback Moth Fall Armyworm Imported Cabbageworm	3/4 - 3 **		
	Variegated Cutworm	1 1/2 **		
	Do not apply more than 24 pints of LANNATE® Do not make more than 15 applications/crop; min * Do not use for Loopers in AL & GA.	LV/acre/crop.	atments is 2 days.	
Carrot	** Add a wetting agent to improve coverage. Aster Leafhopper	1 1/2 - 3		48 hr
Carrot	Armyworms Beet Armyworm	1 1/2 - 3	1	40 111
	Variegated Cutworm Do not apply more than 21 pints of LANNATE® Do not make more than 10 applications/crop.	3/4 - 1 1/2 DLV/acre/crop.		
	TOTAL PRODUCTION OF THE PROPERTY OF THE PROPER			
Cambbana		2// 2 % % 1	9	10 -
Cauliflower	Imported Cabbageworm Loopers	3/4 - 3 **	3	48 hr
Cauliflower	Imported Cabbageworm			48 hi

Crops	Insects	Rate DuPont™ LANNATE® LV Pts. Per Acre	Last Application - Days To Harvest	REI
Celery	Beet Armyworm Aster Leafhopper	1 1/2 - 3	7	48 hrs
	Loopers	3		
	Variegated Cutworm	1 1/2		
	Armyworms	3/4 - 3		
·	Do not apply more than 24 pints of LANNATE Do not make more than 10 applications/crop.	E® LV/acre/crop.		
Chicory	Beet Armyworm Variegated Cutworm Leafhoppers	1 1/2 - 3	. 80	48 hrs
	Do not apply more than 6 pints of LANNATEO Do not make more than 2 applications/crop.			
Chinese Cabbage	Loopers Beet Armyworm	1 1/2 - 3 *	10	48 hrs
	Do not apply more than 24 pints of LANNATE Do not make more than 10 applications/crop. * Minimum of 25 gallons water per acre by groups.	•		
Collards (Fresh market	Diamondback Moth Variegated Cutworm	1 1/2	10	48 hrs
only)	Imported Cabbageworm Beet Armyworm Loopers*	1 1/2 - 3		
	Do not apply when temp. is less than 50° F. Do not apply when crop is less than 10" tall. Do not apply more than 18 pints of LANNATE Do not make more than 8 applications/crop. * Do not use for Loopers in AL & GA.	E® LV/acre/crop.		
Corn (Field, Popcorn & Seed)	Earworm (Ovicide/Larvicide) Armyworm Fall Armyworm European Corn Borer - Ears 1 - 3 days or as needed Corn Rootworm (adult beetles) Flea Beetles Picnic Beetles Aphids	3/4 - 1 1/2	21 Ears 3 Forage* 21 Stover*	48 hrs
	Variegated Cutworm Beet Armyworm Brown Marmorated Stink Bug**	1 1/2		
	Do not apply more than 7.5 pints of LANNATI Do not make more than 10 applications/crop. *Corn forage is green actively growing plants the fed directly to animals or used to make silagoremain after removal of the grain at full plant in can be fed as roughage to animals. *** Brown marmorated stink bugs are very mobe another application is needed prior to the minimal Since LANNATE® LV is a fast acting contact target pest. Use sufficient water to obtain thorominimum of 20 gallons of water per acre for graerial applications.	hat are harvested with the ears e. Corn stover are the parts of naturity. These remaining stall ile pests. They may reinfest th num application interval, use a insecticide, best results follow ugh, uniform coverage. It is re	the plant that as and leaves the treated area quickly. If a different insecticide, by direct spraying of the accommended to use a	٠

Crops	Insects	Rate DuPont™ LANNATE® LV Pts. Per Acre	Last Application - Days To Harvest	RE
Corn (Sweet)	EarwormWhorl as needed	1 - 1 1/2	0 Ears	48 h
, ,	Fall Armyworm	3/4 - 1 1/2	3 Forage	
•	Armyworm		21 Stover	
	Earworm, - (Ovicide/Larvicide)			
	European Corn Borer - Ears 1 - 3 days or as needed			
	Corn Rootworm (adult beetles)			
	Flea Beetles			
	Picnic Beetles	,	'	
	Aphids Variable Communication	1 1 / 2		
	Variegated Cutworm Beet Armyworm	1 1/2		
	Brown Marmorated Stink Bug*			
	Certain hybrid varieties of sweet com are susce	ptible to methomyl injury.	\- 	
	Treat a small area to determine crop safety befo			
	Do not apply more than 21 pints of LANNATE			
	Do not make more than 28 applications/crop; m * Brown marmorated stink bugs are very mobile			
	another application is needed prior to the minim	ium application interval, use	e a different insecticide.	
	Since LANNATE® LV is a fast acting contact i	insecticide, best results follo	w direct spraying of the	
	target pest. Use sufficient water to obtain thorou minimum of 20 gallons of water per acre for gro	igh, uniform coverage. It is	recommended to use a	
	aerial applications.	ound:applications and 5:gain	ons of water per acre for	
Cotton	Ovicide/Larvicide -	2/5 - 3/4	15	72 h
U.S	Bollworm	(see Insect		
	Tobacco Budworm	Predators section)		
	(Initiate schedule when significant numbers			
	of eggs are present. Continue at 3 to 5-day intervals while eggs are present and			
	larval control is adequate. If significant			
	larvae survive, use higher rates below.)			
•	Lygus Bugs/Plant Bugs (adults and nymphs)			
	Start treatment on low level population for suppression.			
	Cotton Leafworm	3/4 - 1 1/2		
	Cotton Fleahopper (as needed)	2/5 - 3/4		
	Aphids, Thrips	3/4		
East of Rockies	(Early Season)	1 1/2		
only	Bollworm			
	Tobacco Budworm			
	Beet Armyworm Cotton Leafperforator			
	Fall Armyworm			
	Lygus Bugs/Plant Bugs (adults and nymphs)			
	Use as occasional spray in regular schedule		•	
	but not more often than every 10 days.			
	(Late Season)	1 1/2 - 2 1/4		
	Bollworm Tobacco Budworm			
	Beet Armyworm			
	Cotton Leafperforator			
	Fall Armyworm		j	
	Lygus Bugs/Plant Bugs (adult and nymphs) Up to 3 applications at 3-5 day intervals			
	after desired boll load set on plants.		ļ	
Texas	Cotton Aphid	3/4 - 2	15	
West of Rockies	Larvicide for worms:	1 1/2 - 2 1/4		
only	Bollworm		· .	
	Beet Armyworm			
	Fall Armyworm Tobacco Budworm		İ	
	Lygus Bugs			
	Cotton Leafperforator	1 - 2 1/4		
	For applications West of the Rockies, make app	L	s after desired boll load	
	set on plants.	•		
			1	
·	For all applications made to cotton in the Uni		}	
	For all applications made to cotton in the Uni Do not apply more than 6 pints of LANNATE®			
÷	For all applications made to cotton in the Uni			

Crops	Insects	Rate DuPont TM LANNATE® LV Pts. Per Acre	Last Application - Days To Harvest	REI
Cucumber	Loopers Tobacco Budworm Beet Armyworm, Yellowstriped Armyworm Granulate Cutworm Flea Beetles	1 1/2 - 3	1 1/2 pt 1 Over 1 1/2 pt3	48 hrs
	Cucumber Beetles Melon Aphid Melonworm Pickleworm Fall Armyworm			
	Variegated Cutworm Do not apply more than 18 pints of LANNATE Do not make more than 12 applications /crop.	1 1/2 ® LV/acre/crop.	·	
Eggplant	Green Peach Aphid Tomato Pinworm (Ground Application Only) Beet Armyworm Corn Earworm	3/4 - 3 1 1/2 - 3	5	48 hrs
	Do not apply more than 15 pints of LANNATE Do not make more than 10 applications/crop.			
Endive, Escarole	Beet Armyworm Do not apply more than 15 pints of LANNATE Do not make more than 8 applications/crop.	1 1/2 - 3 ® LV/acre/crop.	10	48 hrs
Garlic	Beet Armyworm Do not apply more than 9 pints of LANNATE® Do not make more than 6 applications/crop. ** Add a wetting agent to improve coverage.	1 1/2 **] LV/acre/crop.	7	48 hrs
Grapefruit CA, AZ & HI only	Thrips Fruittree Leafroller Orange Tortrix Western Tussock Moth Beet Armyworm	1 1/2 - 3		72 hrs
	Do not apply more than 9 pints of LANNATE® Do not make more than 4 applications/crop.	LV/acre/crop.		
Horseradish Ground application only	Aphids Thrips Do not apply more than 6 pints of LANNATE®	1 1/2 LV/acre/crop.	65	48 hrs
Leafy Green Vegetables: Beet (tops) Dandelions,	Do not make more than 4 applications/crop. Beet Armyworm Cabbage Looper * Diamondback Moth Imported Cabbageworm	1 1/2-3	. 10	48 hrs
Kale, Mustard Greens, Parsley, Swiss Chard, Turnip Greens	Do not apply more than 12 pints of LANNATE Do not make more than 8 applications/crop. * Do not use for Cabbage Looper in AL & GA.	® LV/acre/crop.		
Lemon CA, AZ & HI only	Thrips Western Tussock Moth Orange Tortrix Beet Armyworm Do not apply more than 9 pints of LANNATE®	1 1/2 - 3	· .	72 hrs
Lentils	Do not make more than 4 applications/crop. Western Yellowstriped	1 1/2 - 3	21	48 hrs
	Armyworm Do not apply more than 3 pints of LANNATE® Do not make more than 2 applications/crop.	LV/acre/crop.		

Crops	Insects	Rate DuPont™ LANNATE® LV Pts. Per Acre	Last Application - Days To Harvest	REI
Lettuce (head varieties and Leaf varieties)	Alfalfa Looper Thrips Aphids	3/4 - 3 1 1/2 - 3	3/4-1 1/2 pt 7 over 1 1/2 pt 10	48 hrs
	Beet Armyworm Cabbage Looper Corn Earworm Aster Leafhopper			
	Variegated Cutworm	1 1/2		
	Lettuce (head varieties) Do not apply more than 24 pints of LANNATEO Do not make more than 15 applications/crop; mi Lettuce (leaf varieties) Do not apply more than 12 pints of LANNATEO Do not make more than 8 applications/crop; min	inimum interval between tre B LV/acre/crop.	·	
Melons	Loopers	1 1/2 - 3	1 1/2 pt 1 day	48 hrs
Including: Canteloupe Casaba Santa Claus melon	Tobacco Budworm Beet Armyworm Yellowstriped Armyworm Granulate Cutworm	, ,,,,,	over 1 1/2 pt. 3 days	70 1110
Crenshaw melon Honeydew melon Honey balls Persian melon Golden Pershaw	Flea Beetles Cucumber Beetles Meion Aphid Melonworm Pickleworm			
melon	Fall Armyworm			
Mango melon	Variegated Cutworm	1 1/2		
Pineapple melon Snake melon Watermelon	Do not apply more than 18 pints of LANNATE@Do not make more than 12 applications/crop.	® LV/acre/crop.		
Mint (Peppermint,	Variegated Cutworm Alfalfa Looper	3	14	48 hrs
Spearmint)	Flea Beetles Do not apply more than 6 pints of LANNATE® Do not make more than 4 applications/crop.	2 1/4 - 3 LV/acre/crop.		
Nectarine	Thrips Brown Marmorated Stink Bug*	1 1/2 - 3	1	72 hrs
	Do not apply more than 9 pints of LANNATE® LV/acre/crop. Do not make more than 3 applications/crop. * Brown marmorated stink bugs are very mobile pests. They may reinfest the treated area q another application is needed prior to the minimum application interval, use a different inse Since LANNATE® LV is a fast acting contact insecticide, best results follow direct sprayin target pest. Apply by ground applications only and use sufficient water to obtain thorough, to coverage. It is recommended to use a minimum of 50 gallons of water per acre.		a different insecticide. w direct spraying of the tain thorough, uniform	
Oats	Armyworms Cereal Leaf Beetle* Aphids**	3/4 - 1 1/2	7	48 hrs
	Do not apply more than 6 pints of LANNATE® Do not make more than 4 applications/crop. Chemigation - LANNATE® LV may be applied use the highest listed rate of LANNATE® LV. A "Chemigation" section for more information. * Cereal leaf beetle: LANNATE® LV can provious when applied according to label directions. Ap the appearance of newly laid eggs or in anticiperfect. Use on this pest stage (egg) is not regist * Aphids: For aphid control, crop must be active environmental conditions (such as, extreme ter wheat aphid need to begin when the aphid popers.	by overhead sprinkler chemapply in 0.1 to 0.2 inches of de contact ovicidal effect on plication should be timed to ation of egg hatch to achieve ered in California. The proving and not under superatures or drought). App.	water per acre. See cereal leaf beetle eggs correspond with e maximum ovicidal tress from adverse lications on Russian	

Crops	Insects	Rate DuPont™ LANNATE® LV Pts. Per Acre	Last Application - Days To Harvest	REI
Onions (Green & Dry Bulb)	Beet Armyworm Thrips* Variegated Cutworm Black Cutworm	1 1/2 - 3 ** · 3 **	7 Green and Dry Bulb Onions	48 hrs
	Onions, green Do not apply more than 18 pints of LANNATE@ Do not make more than 8 applications/crop: min Onions, dry bulb Do not apply more than 12 pints of LANNATE@ Do not make more than 8 applications/crop: min treatments is 5 days. *Chemigation - LANNATE@ LV may be applie chemigation to control thrips. Begin applicatio plant. For best results, use the highest listed rat chemigation, add a wetting agent and apply in	imum interval between treated by LV/acre/crop. imum interval between d by overhead sprinkler chans before thrips population to of LANNATE® LV. For 0.1 to 0.2 inches of water p	emigation or via drip s reach 3-5 thrips per overhead sprinkler per acre. Make seguential	
	applications on 5-7 day intervals via overhead drip application. Consider use of products with control program. See "Chemigation" section f and drip chemigation applications. ** Add a wetting agent to improve coverage.	an alternate mode of actio	n as part of your thrips	
Oranges CA, AZ & HI only	Thrips Western Tussock Moth Orange Tortrix Fruittree Leafroller Beet Armyworm Citrus Cutworm	1 1/2 - 3		72 hrs
	Do not apply more than 9 pints of LANNATE® Do not make more than 4 applications/crop.	LV/acre/crop.		
Peaches	Catfacing Insects (Plant Bugs and Stink Bugs) - begin at petal fall and continue in cover sprays at 7-to 10-day intervals Oriental Fruit Moth * - begin at petal fall; use trapping devices and frequent field inspection to determine need for treatment Continue treatment in cover sprays and alternate with residual-type insecticides registered for this use. Green Peach Aphid	3 pt (or 3/4 pt per 100 gal up to 400 gal per acre)	4	4 days
	Brown Marmorated Stink Bug** Do not apply more than 18 pints of LANNATE@ Do not make more than 6 applications/crop. * Oriental Fruit Moth (Ground Application Only ** Brown marmorated stink bugs are very mobil another application is needed prior to the minimum Since LANNATE@ LV is a fast acting contact in target pest. Apply by ground applications only an coverage. It is recommended to use a minimum of). e pests. They may reinfest to may reinfest to mapplication interval, use secticide, best results followed use sufficient water to old 50 gallons of water per a	a different insecticide. w direct spraying of the otain thorough, uniform cre.	
Peanuts	Corn Earworm * Potato Leafhopper Fall Armyworm Beet Armyworm Green Cloverworm Velvetbean Caterpillar Cabbage Looper Soybean Looper ** Thrips Granulate Cutworm	3/4 - 3 1 1/4 - 3 1 1/2 - 3	21	48 hrs
	Do not apply more than 12 pints of LANNATE® Do not make more than 8 applications/crop. Do not feed treated vines. * LANNATE® LV has ovicidal and larvicidal co ** Soybean Looper is difficult to control. Do no Use higher rate for severe infestations.	ontrol on corn earworm.	an 1/2" long.	

Green Fruitworm Obliquebanded Leafroller Brown Marmorated Stink Bug** Do not apply more than 6,pints of LANNATE® Do not make more than 2 applications/crop. * Apply in a minimum of 50 gallons of water pe: ** Brown marmorated stink bugs are very mobil another application is needed prior to the minimist Since LANNATE® LV is a fast acting contact in target pest. Apply by ground applications only accoverage. Alfalfa Looper Cabbage Looper * Pea Aphid Beet Armyworm Saltmarsh Caterpillar Variegated Cutworm Alfalfa Caterpillar Armyworm Green Cloverworm Do not apply more than 9 pints of LANNATE® Do not make more than 6 applications/crop; min * Do not use for Cabbage Looper in AL & GA. Chemigation - LANNATE® LV may be applied use the highest listed rate of LANNATE® LV. A "Chemigation" section for more information. Aphids	r acre. e pests. They may reinfest the application interval, use assecticide, best results followed use sufficient water to obtain the second of the second	a different insecticide. If the direct spraying of the stain thorough, uniform I Peas 5 Forage 14 Hay I ments is 3 days. Ingation. For best results,	48 hr
Do not make more than 2 applications/crop. * Apply in a minimum of 50 gallons of water pe: ** Brown marmorated stink bugs are very mobil another application is needed prior to the minimum since LANNATE® LV is a fast acting contact it target pest. Apply by ground applications only accoverage. Alfalfa Looper Cabbage Looper * Pea Aphid Beet Armyworm Saltmarsh Caterpillar Variegated Cutworm Alfalfa Caterpillar Armyworm Green Cloverworm Do not apply more than 9 pints of LANNATE® Do not make more than 6 applications/crop; min * Do not use for Cabbage Looper in AL & GA. Chemigation - LANNATE® LV may be applied use the highest listed rate of LANNATE® LV . A "Chemigation" section for more information.	r acre. e pests. They may reinfest the pests. They may reinfest the pest results followed use sufficient water to obtain the sufficient water to obtain the sufficient water the sufficient water to obtain the sufficient water	a different insecticide. In direct spraying of the stain thorough, uniform I Peas 5 Forage 14 Hay I ments is 3 days. In a	
Cabbage Looper * Pea Aphid Beet Armyworm Saltmarsh Caterpillar Variegated Cutworm Alfalfa Caterpillar Armyworm Green Cloverworm Do not apply more than 9 pints of LANNATE® Do not make more than 6 applications/crop; min * Do not use for Cabbage Looper in AL & GA. Chemigation - LANNATE® LV may be applied use the highest listed rate of LANNATE® LV. A "Chemigation" section for more information.	3/4 - 3 LV/acre/crop. imum interval between treat by overhead sprinkler chem apply in 0.1 to 0.2 inches of	5 Forage 14 Hay ments is 3 days. nigation. For best results, water per acre. See	
Pea Aphid Beet Armyworm Saltmarsh Caterpillar Variegated Cutworm Alfalfa Caterpillar Armyworm Green Cloverworm Do not apply more than 9 pints of LANNATE® Do not make more than 6 applications/crop; min * Do not use for Cabbage Looper in AL & GA. Chemigation - LANNATE® LV may be applied use the highest listed rate of LANNATE® LV. A "Chemigation" section for more information.	LV/acre/crop. imum interval between treat by overhead sprinkler chem apply in 0.1 to 0.2 inches of	14 Hay ments is 3 days. nigation. For best results, water per acre. See	48 hrs
Beet Armyworm Salumarsh Caterpillar Variegated Cutworm Alfalfa Caterpillar Armyworm Green Cloverworm Do not apply more than 9 pints of LANNATE® Do not make more than 6 applications/crop; min * Do not use for Cabbage Looper in AL & GA. Chemigation - LANNATE® LV may be applied use the highest listed rate of LANNATE® LV. A "Chemigation" section for more information.	LV/acre/crop. imum interval between treat by overhead sprinkler chem apply in 0.1 to 0.2 inches of	ments is 3 days. ligation. For best results, water per acre. See	48 hrs
Saltmarsh Caterpillar Variegated Cutworm Alfalfa Caterpillar Armyworm Green Cloverworm Do not apply more than 9 pints of LANNATE® Do not make more than 6 applications/crop; min * Do not use for Cabbage Looper in AL & GA. Chemigation - LANNATE® LV may be applied use the highest listed rate of LANNATE® LV. A "Chemigation" section for more information.	LV/acre/crop. imum interval between treat by overhead sprinkler chem apply in 0.1 to 0.2 inches of	nigation. For best results, water per acre. See	48 hrs
Variegated Cutworm Alfalfa Caterpillar Armyworm Green Cloverworm Do not apply more than 9 pints of LANNATE® Do not make more than 6 applications/crop; min * Do not use for Cabbage Looper in AL & GA. Chemigation - LANNATE® LV may be applied use the highest listed rate of LANNATE® LV. A "Chemigation" section for more information.	LV/acre/crop. imum interval between treat by overhead sprinkler chem apply in 0.1 to 0.2 inches of	nigation. For best results, water per acre. See	48 hr
Alfalfa Caterpillar Armyworm Green Cloverworm Do not apply more than 9 pints of LANNATE® Do not make more than 6 applications/crop; min * Do not use for Cabbage Looper in AL & GA. Chemigation - LANNATE® LV may be applied use the highest listed rate of LANNATE® LV. A "Chemigation" section for more information.	LV/acre/crop. imum interval between treat by overhead sprinkler chem apply in 0.1 to 0.2 inches of	nigation. For best results, water per acre. See	48 hr
Armyworm Green Cloverworm Do not apply more than 9 pints of LANNATE® Do not make more than 6 applications/crop; min * Do not use for Cabbage Looper in AL & GA. Chemigation - LANNATE® LV may be applied use the highest listed rate of LANNATE® LV. A "Chemigation" section for more information.	LV/acre/crop. imum interval between treat by overhead sprinkler chem apply in 0.1 to 0.2 inches of	nigation. For best results, water per acre. See	48 hr
Do not apply more than 9 pints of LANNATE® Do not make more than 6 applications/crop; min * Do not use for Cabbage Looper in AL & GA. Chemigation - LANNATE® LV may be applied use the highest listed rate of LANNATE® LV. A "Chemigation" section for more information.	by overhead sprinkler chem to 0.1 to 0.2 inches of	nigation. For best results, water per acre. See	48 hr
Do not make more than 6 applications/crop; min * Do not use for Cabbage Looper in AL & GA. Chemigation - LANNATE® LV may be applied use the highest listed rate of LANNATE® LV. A "Chemigation" section for more information.	by overhead sprinkler chem to 0.1 to 0.2 inches of	nigation. For best results, water per acre. See	48 hr
Aphids	1 1/2 - 3	30	48 hi
	,		
Do not apply more than 21 pints of LANNATE® LV/acre/crop			
Do not make more than 7 applications/crop.			
Loopers	1 1/2 - 3	3	48 hr
		,	
		•	
Armyworm			
Brown Marmorated Stink Bug*			
Variegated Cutworm	3/4 - 1 1/2		
European Corn Borer	3	•	
Do not make more than 10 applications/crop. * Brown marmorated stink bugs are very mobile another application is needed prior to the minimum Since LANNATE® LV is a fast acting contact in target pest. Use sufficient water to obtain thorouge minimum of 20 gallons of water per acre for group aerial applications.	pests. They may reinfest the im application interval, use a secticide, best results follow gh, uniform coverage. It is re	a different insecticide. v direct spraying of the ecommended to use a	
Omniverous Leafroller	3	14	48 hr
Do not apply more than 6 pints of LANNATE®	LV/acre/crop.		
Tuberworm* Loopers	1 1/2 - 3	6	48 hi
Beet Armyworm Leafhoppers Fall Armyworm			
Variegated Cutworm Flea Beetles	1 1/2		
Do not apply more than 15 pints of LANNATE® Do not make more than 10 applications/crop. Chemigation - LANNATE® LV may be applied use the highest listed rate of LANNATE® LV fo per acre. See "Chemigation" section for more inf * Repeat applications of LANNATE® LV on a 5 tuberworm populations. An application schedu action may be needed to keep foliar feeding lar	by overhead sprinkler chem r the target pests. Apply in 0 ormation. i-7 day schedule, or longer a le of effective insecticides w val populations as low as po	0.1 to 0.2 inches of water as needed, to control with different modes of assible prior to harvest to	
	Do not make more than 7 applications/crop. Loopers Beet Armyworm Green Peach Aphid Fall Armyworm Armyworm Brown Marmorated Stink Bug* Variegated Cutworm European Corn Borer Do not apply more than 15 pints of LANNATE® Do not make more than 10 applications/crop. * Brown marmorated stink bugs are very mobile another application is needed prior to the minimu starget pest. Use sufficient water to obtain thoroug minimum of 20 gallons of water per acre for ground applications. Omniverous Leafroller Do not apply more than 6 pints of LANNATE® Do not make more than 2 applications/crop. Tuberworm* Loopers Aphids Beet Armyworm Variegated Cutworm Flea Beetles Do not apply more than 15 pints of LANNATE® Do not apply more than 10 applications/crop. Chemigation - LANNATE® LV may be applied use the highest listed rate of LANNATE® LV on a 5 tuberworm populations. An application schedu action may be needed to keep foliar feeding lar reduce the risk of larval damage to the tubers. If	Beet Armyworm Green Peach Aphid Fall Armyworm Armyworm Brown Marmorated Stink Bug* Variegated Cutworm Do not apply more than 15 pints of LANNATE® LV/acre/crop. Do not make more than 10 applications/crop. * Brown marmorated stink bugs are very mobile pests. They may reinfest the another application is needed prior to the minimum application interval, use Since LANNATE® LV is a fast acting contact insecticide, best results follow target pest. Use sufficient water to obtain thorough, uniform coverage. It is reminimum of 20 gallons of water per acre for ground applications and 5 gallo aerial applications. Omniverous Leafroller Do not apply more than 6 pints of LANNATE® LV/acre/crop. Do not make more than 2 applications/crop. Tuberworm* Loopers Aphids Beet Armyworm Variegated Cutworm Flea Beetles Do not apply more than 15 pints of LANNATE® LV/acre/crop. Do not make more than 10 applications/crop. Chemigation - LANNATE® LV may be applied by overhead sprinkler chem use the highest listed rate of LANNATE® LV for the target pests. Apply in 0 per acre. See "Chemigation" section for more information. * Repeat applications of LANNATE® LV on a 5-7 day schedule, or longer a tuberworm populations. An application schedule of effective insecticides we action may be needed to keep foliar feeding larval populations as low as po	Do not make more than 7 applications/crop. Loopers Beet Armyworm Green Peach Aphid Fall Armyworm Brown Marmorated Stink Bug* Variegated Cutworm Boron marmorated Stink Bug* Do not apply more than 15 pints of LANNATE® LV/acre/crop. Do not make more than 10 applications/crop. Brown marmorated stink bugs are very mobile pests. They may reinfest the treated area quickly. If another application is needed prior to the minimum application interval, use a different insecticide. Since LANNATE® LV is a fast acting contact insecticide, best results follow direct spraying of the target pest. Use sufficient water to obtain thorough, uniform coverage. It is recommended to use a minimum of 20 gallons of water per acre for ground applications and 5 gallons of water per acre for aerial applications. Omniverous Leafroller Do not apply more than 6 pints of LANNATE® LV/acre/crop. Do not make more than 2 applications/crop. Tuberworm* Loopers Aphids Beet Armyworm Leafnoppers Fall Armyworm Variegated Cutworm Flea Beetles Do not make more than 10 applications/crop. Chemigation - LANNATE® LV may be applied by overhead sprinkler chemigation. For best results use the highest listed rate of LANNATE® LV for the target pests. Apply in 0.1 to 0.2 inches of water per acre. See "Chemigation" section for more information. * Repeat applications of LANNATE® LV for the target pests. Apply in 0.1 to 0.2 inches of water per acre. See "Chemigation" section for more information. * Repeat applications of LANNATE® LV for the target pests. Apply in 0.1 to 0.2 inches of water per acre. See "Chemigation" section for more information. * Repeat applications of LANNATE® LV for the target pests. Apply in 0.1 to 0.2 inches of water per acre. See "Chemigation" section for more information. * Repeat applications of LANNATE® LV for the target pests. Apply in 0.1 to 0.2 inches of water per acre. See "Chemigation" section for more information.

Crops	Insects	Rate DuPont TM LANNATE® LV Pts. Per Acre	Last Application - Days To Harvest	REI
Rye	Armyworms Cereal Leaf Beetle* Aphids**	3/4 - 1 1/2	7	48 hrs
	Do not apply more than 6 pints of LANNATE® LV/acre/crop .			
	Do not make more than 4 applications/crop. Chemigation - LANNATE® LV may be applied by overhead sprinkler chemigation. For best results, use the highest listed rate of LANNATE® LV. Apply in 0.1 to 0.2 inches of water per acre. See			
	"Chemigation" section for more information. * Cereal leaf beetle: LANNATE® LV can provi when applied according to label directions. At the appearance of newly laid eggs or in anticip effect. Use on this pest stage (egg) is not regis ** Aphids: For aphid control, crop must be active environmental conditions (such as, extreme terminate aphid need to begin when the aphid pop	oplication should be timed to pation of egg hatch to achieve tered in California. vely growing and not under s imperatures or drought). Appl	correspond with e maximum ovicidal tress from adverse lications on Russian	
Sorghum,	Sorghum Webworm	1 1/2 *	14 **	48 hrs
including Sudangrass (except Sweet Sorghum)	Sorghum Midge - Apply when 50% bloom and 3-5 days later if needed. Fall Armyworm (Budworm)	3/4 - 1 1/2 *		
Sorgnam)	Beet Armyworm Corn-Earworm			
	Armyworm Do not apply more than 3 pints of LANNATE® Do not make more than 2 application/crop. * Minimum of 10 gallons per acre by ground or ** Do not apply within 14 days of feeding forag	2 gallons per acre by air.		
Soybeans	Green Cloverworm	2/5 - 3/4	14 Soybeans	48 hrs
	Velvetbean Caterpillar Mexican Bean Beetle Corn Earworm Light to moderate infestations	(see Insect Predator section)	3 Forage 12 Hay	
	Moderate to severe infestations	3/4 - 1 1/2		
	Soybean Aphid	1/2 - 1		
	Beet Armyworm Salt Marsh Caterpillar Bean Leaf Beetle Fall Armyworm	3/4 - 1		
	Thrips Silver Spotted Skipper Light to moderate infestations	·		
	Moderate to severe infestations	1 - 1 1/2		•
	Brown Marmorated Stink Bug*	1 1/2		
	Do not apply more than 4.5 pints of LANNATE Do not make more than 3 applications/crop. * Brown marmorated stink bugs are very mobile another application is needed prior to the minim Since LANNATE® LV is a fast acting contact it target pest. Use sufficient water to obtain thorou minimum of 20 gallons of water per acre for groacrial applications.	pests. They may reinfest the um application interval, use a nsecticide, best results follow gh, uniform coverage. It is re	a different insecticide. direct spraying of the ecommended to use a	
Spinach	Alfalfa Loopers	1 1/2 - 3	7	48 hrs
	Cabbage Looper Beet Armyworm Fall Armyworm			
	Variegated Cutworm	1 1/2		
	Do not apply when min. daily temp. is 32° F. or Do not apply to seedlings less than 3" diameter. Do not apply more than 12 pints of LANNATE Do not make more than 8 applications/crop.			

22/3/

Crops	Insects	Rate DuPont™ LANNATE® LV Pts. Per Acre	Last Application - Days To Harvest	REI
Sugar Beet	Beet Webworm Flea Beetles Carrion Beetles Beet Armyworm* Aphids* Western Yellowstriped Armyworm*	3/4 - 3	21 Roots 30 Tops	48 hrs
	Variegated Cutworm Do not apply more than 15 pints of LANNATE Do not make more than 10 applications/crop. *Chemigation - LANNATE® LV may be appl armyworm, aphids and western yellowstriped of LANNATE® LV. Apply in 0.1 to 0.2 inch	ied by overhead sprinkler che armyworm. For best results,	use the highest listed rate	
Summer Squash * Including: Crookneck squash Straightneck squash Scallop squash Vegetable marrow Spaghetti squash Hyotan Cucuzza	more information. Loopers Tobacco Budworm Beet Armyworm Yellowstriped Armyworm Granulate Cutworm Flea Beetles Cucumber Beetles Melon Aphid Melonworm Pickleworm	1 1/2 - 3	1 1/2 pt 1 day over 1 1/2 pt 3 days	48 hrs
Hechima Chinese okra Bitter melon Balsam pear Balsam apple Chinese Cucumber	Fall Armyworm Do not apply more than 18 pints of LANNATE Do not make more than 12 applications/crop. * Fruit of the Gourd (Cucurbitaceae) family the the fruit is edible cooked or raw, once picked easily penetrated, and if seeds were harvested	at are consumed when immand cannot be stored, has a soft r they would not germinate.		
Tangelo, Tangerine CA. AZ & HI only	Thrips Western Tussock Moth. Orange Tortrix Beet Armyworm Do not apply more than 9 pints of LANNATEO Do not make more than 4 applications/crop.	1 1/2 - 3 B LV/acre/crop.	1	72 hrs
Tobacco (Except shade)	Flea Beetle Hornworm Loopers Aphids Tobacco Budworm Fall Armyworm Do not apply more than 7.5 pints of LANNATI Do not make more than 5 applications/crop.	3/4 - 1 1/2 1 1/2 E® LV/acre/crop.	5 Flue cured 14 Air or fire cured	48 hrs
Tomato (Including Tomatillos *)	Tomato Fruitworm Aphids Hornworm Loopers Beet Armyworm Southern Armyworm Pinworm Fall Armyworm Armyworm Brown Marmorated Stink Bug** Variegated Cutworm Do not apply more than 21 pints of LANNATE Do not make more than 16 applications/crop. * For tamatillos, do not apply more than 15 pin Do not make more than 5 applications/crop. **Brown marmorated stink bugs are very mob If another application is needed prior to the min Since LANNATE® LV is a fast acting contact target pest. Use sufficient water to obtain thoro minimum of 20 gallons of water per acre for gr	ats of LANNATE® LV/acre/contlepests. They may reinfest the nimum application interval, uninsecticide, best results followingh, uniform coverage. It is results followingh, uniform coverage.	he treated area quickly. se a different insecticide. w direct spraying of the ecommended to use a	48 hrs
Turf (For use on sod farms only)	aerial applications. Sod Webworm (after application, sprinkle irrigate for 15 minutes) Do not apply more than 12 pints of LANNATE Do not make more than 4 applications/crop. Do not graze or feed.	3 (1.1 fl. ozs. per 1000 sq. ft.)	-	48 hrs

Crops	Insects	Rate DuPont™ LANNATE® LV Pts. Per Acre	Last Application - Days To Harvest	REI
Wheat	Armyworms Cereal Leaf Beetle* Aphids** Brown Marmorated Stink Bug*** Do not apply more than 6 pints of LANNATE® Do not make more than 4 applications/crop. Chemigation - LANNATE® LV may be applied pests listed, except brown marmorated stink bug LANNATE® LV. Apply in 0.1 to 0.2 inches of information. * Cereal leaf beetle: LANNATE® LV can provi when applied according to label directions. Ap the appearance of newly laid eggs or in anticip effect. Use on this pest stage (egg) is not regist ** Aphids: For aphid control, crop must be actived.	3/4 - 1 1/2 1 1/2 LV/acre/crop. by overhead sprinkler che For best results, use the water per acre. See "Chem de contact ovicidal effect of polication should be timed to achie tered in California.	emigation for control of all highest listed rate of igation" section for more on cereal leaf beetle eggs to correspond with twe maximum ovicidal	48 hrs
	environmental conditions (such as, extreme ter wheat aphid need to begin when the aphid pop *** Brown marmorated stink bugs are very mob If another application is needed prior to the mini Since LANNATE® LV is a fast acting contact it target pest. Use sufficient water to obtain thorou minimum of 20 gallons of water per acre for groaerial applications.	mperatures or drought). Apulation is low (<10 adults pile pests. They may reinfes mum application interval, nsecticide, best results folkingh, uniform coverage. It is	plications on Russian per stem). st the treated area quickly. use a different insecticide. ow direct spraying of the recommended to use a	

24/31

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. **PESTICIDE STORAGE:** Do not subject to temperatures below 32 degrees F. Store product in original container only. Not for use or storage in or around the home.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING:

Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable Container" or "Refillable Container" designation.

Nonrefillable Plastic and Metal Containers (Capacity Equal to or Less 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 and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 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, (a) for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning, if burned, stay out of smoke, or (b) for Metal Containers, offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Plastic and Metal Containers (Capacity 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 1/4 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. Then, (a) for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning; if burned, stay out of smoke, or (b) for Metal Containers, offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Plastic and Metal Containers, e.g., Intermediate Bulk Containers [IBC] (Size or Shape Too Large to be Tipped, Rolled or Turned Upside Down): Nonrefillable container. Do not reuse or refill this container. Pressure rinse as follows: Empty the remaining product contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Insert pressure rinsing nozzle in the container, and rinse at about 40 PSI for at least 30 seconds. Drain rinsate for 10 seconds after the flow begins to drip. Pour or pump rinsate into application equipment or rinsate collection system. Then. (a) for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning; if burned, stay out of smoke, or (b) for Metal Containers, offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

All Refillable Containers: Refillable container. Refilling Container: Refill this container with DuPont™ LANNATE® LV containing methomyl only. Do not reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. Check for leaks after refilling and before transporting. Disposing of Container: Do not reuse this container for any other purpose other than refilling (see preceding). Cleaning the container before final disposal is the responsibility of the person disposing of the container. 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 percent 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, (a) for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning, if burned, stay out of smoke, or (b) for Metal Containers, offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. Do not transport if container is damaged or leaking.

If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact DuPont at 1-800-441-3637, day or night.

FOR PUERTO RICO: PESTICIDES MUST BE STORED IN THEIR ORIGINAL CONTAINER: DO NOT REUSE CONTAINER OR STORE CONTENTS IN ANY OTHER CONTAINER.

Notice: Please read the entire label, including the supplemental labeling enclosed. Before buying or using this product, read the Limitationof Warranty and Liability in the supplemental labeling. If the terms are not acceptable, return the product at once, unopened, for a refund of the purchase price.

Notice to Buyer: Purchase of this material does not confer any rights under patents of countries outside of the United States.

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NOTICE: Read this Limitation of Warranty and Liability Before Buying or Using This Product. If the Terms Are Not Acceptable, Return the Product at Once, Unopened, and the Purchase Price Will Be Refunded.

It is impossible to eliminate all risks associated with the use of this product. Such risks arise from weather conditions, soil factors, off target movement, unconventional farming techniques, presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of DuPont. These risks can cause: ineffectiveness of the product, crop injury, or injury to non-target crops or plants. WHEN YOU BUY OR USE THIS PRODUCT, YOU AGREE TO ACCEPT THESE RISKS.

DuPont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purpose stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, DUPONT MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL DUPONT OR SELLER BE LIABLE FOR ANY INCIDENTAL. CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. BUYER'S OR USER'S BARGAINED-FOR EXPECTATION IS CROP PROTECTION. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER AND THE EXCLUSIVE LIABILITY OF DUPONT OR SELLER, FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE. TORT OR STRICT LIABILITY WHETHER FROM FAILURE TO PERFORM OR INJURY TO CROPS OR OTHER PLANTS, AND RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT, OR AT THE ELECTION OF DUPONT OR SELLER, THE REPLACEMENT OF THE PRODUCT.

To the extent consistent with applicable law that allows such requirement, DuPont or its Ag Retailer must have prompt notice of any claim so that an immediate inspection of buyer's or user's growing crops can be made. Buyer and all users shall promptly notify DuPont or a DuPont Ag Retailer of any claims, whether based on contract, negligence, strict liability, other tort or otherwise, or be barred from any remedy.

This Limitation of Warranty and Liability may not be amended by any oral or written agreement.

For product information call: 1-888-6-DUPONT [1-888-638-7668]

Internet address: http://cropprotection.dupont.com/

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SUPPLEMENTAL LABELING

DuPont Crop Protection

DUPONT™ LANNATE® LV INSECTICIDE ON BLUEBERRIES

DUPONTTM LANNATE® LV INSECTICIDE

EPA Reg. No. 352-384

FOR USE ON BLUEBERRIES VIA OVERHEAD SPRINKLER IRRIGATION FOR CONTROL OF SPOTTED WINGED DROSOPHILA (DROSOPHILA SUZUKII) IN THE STATES OF OREGON AND WASHINGTON

RESTRICTED USE PESTICIDE

Due to High-Acute Toxicity-to Humans.

For retail sale and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification. Direct supervision for this product requires the certified applicator to review federal and supplemental label instructions with all personnel prior to application, mixing, loading, or repair or cleaning of application equipment.

DIRECTIONS FOR USE

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

IMPORTANT

BEFORE USING LANNATE® LV, READ AND FOLLOW ALL APPLICABLE DIRECTIONS; RESTRICTIONS; AND PRECAUTIONS ON THE EPA-REGISTERED LABEL.

This bulletin contains new or supplemental instructions for use of these products in combination which does not appear on the package label. Follow the instructions carefully.

This labeling must be in the possession of the user at the time of pesticide application.

General Information

LANNATE® LV is a water soluble liquid that is applied by foliar application to control many important insect pests. LANNATE® LV is mixed with water for application.

Application Information, Rates and Timing

DuPont™ LANNATE® LV is recommended for control of Spotted Winged Drosophila (*Drosophila suzukii*) on blueberries at the rate of 1.5 to 3 pints of product per acre applied through overhead solid set sprinkler irrigation systems. Begin applications when Spotted Winged Drosophila adults first appear.

Apply LANNATE® LV in the minimum amount of water required to provide thorough coverage and canopy penetration.

It is recommended to use a water soluble dye to determine the minimum length of time necessary to provide complete coverage of the crop without excessive run-off. Inject the dye into the sprinkler system at a rate per acre equal to the selected rate of Lannate® LV. Track the time required to run the dye through the sprinkler system and use that information to calibrate the injection procedure for applying the proper rate of Lannate® LV. After all of the Lannate® LV has been applied, shut down the irrigation system and allow the plants to thoroughly dry for at least two hours before running additional water to flush the irrigation system. Make repeat applications as needed based on scouting.

PRECAUTIONS

Read and follow all chemigation application instructions on the Lannate® LV package label.

Do not apply during bloom.

Do not make more than four applications per crop.

Do not apply more than 12 pints of Lannate® LV per acre per crop season.

Before using, read and follow all directions and precautions on the Lannate® LV package label.

Instructions for the Use of LANNATE® LV in Overhead Sprinkler Chemigation Systems.

Types of Irrigation Systems:

LANNATE® LV may be applied through overhead sprinkler irrigation systems for control of the Spotted Winged Drosophila in blueberries. 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 LANNATE® LV through any other type of irrigation systems.

General Directions for Chemigation:

Preparation

A pesticide tank is recommended for the application of LANNATE® LV 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 LANNATE® LV into the tank. Complete filling the tank by adding the required amount of water. Agitate thoroughly to insure a uniform solution of LANNATE® LV. 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 approximately neutral (~pH 7-7.5).

Injection Into Chemigation Systems

Inject the proper amount of the LANNATE® LV 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.

Uniform Water Distribution

The irrigation system used for application of LANNATE® LV must provide for uniform distribution of LANNATE® LV 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 LANNATE® LV. 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 LANNATE® LV 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.

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. When the application is finished, allow the plants to dry for 2 hours before thoroughly flushing clean the irrigation and injection 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.

It is recommended that nozzles in the immediate area of control panels, chemical supply tanks, wellheads and system safety devices 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.

Read the Limitation of Warranty and Liability on the Section 3 Federal product label before buying or using LANNATE® LV Insecticide. If terms are not acceptable, return the unopened package at once to Seller for full refund of purchase price paid. Otherwise, use by Buyer or any other User constitutes acceptance of the terms of the limitation of Warranty and Liability on the Section 3 Federal product label.

SUPPLEMENTAL LABELING

DuPont Crop Protection

DUPONT™ LANNATE® LV INSECTICIDE GREEN AND DRY BULB ONIONS

DUPONTTM LANNATE® LV INSECTICIDE

EPA Reg. No. 352-384

FOR USE ON GREEN AND DRY BULB ONIONS VIA DRIP IRRIGATION IN THE UNITED STATES

RESTRICTED USE PESTICIDE

Due to High Acute Toxicity to Humans.

For retail sale and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification. Direct supervision for this product-requires the certified applicator to review federal and supplemental label instructions with all personnel prior to application, mixing, loading, or repair or cleaning of application equipment.

DIRECTIONS FOR USE

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

IMPORTANT

BEFORE USING LANNATE® LV, READ AND FOLLOW ALL APPLICABLE DIRECTIONS; RESTRICTIONS; AND PRECAUTIONS ON THE EPA-REGISTERED LABEL.

This bulletin contains new or supplemental instructions for use of these products in combination which does not appear on the package label. Follow the instructions carefully.

This labeling must be in the possession of the user at the time of pesticide application.

General Information

LANNATE®LV is a water soluble liquid that is applied by foliar application to control many important insect pests. LANNATE®LV is mixed with water for application.

Application Information, Rates and Timing

DuPont[™] LANNATE® LV is recommended for control of thrips in green and dry bulb onions at the rate of 3 pints of product per acre of plant bed applied through drip irrigation systems.

The rate of LANNATE® LV is listed as a broadcast rate. For drip irrigation rates of LANNATE® LV to be applied per 1000 feet, see the table at the end of this section. Treatments should begin before populations of thrips reach 3-5 thrips per plant.

Make sequential applications at 7 to 10 day intervals. Consider use of products with an alternate mode of action as part of your thrips control program. Do not apply more than 12 pints (3.6 lbs a.i.) LANNATE* LV per crop to dry bulb onions. Do not apply more than 18 pints (5.4 lbs a.i.) LANNATE* LV per crop to green onions. Make the last application of LANNATE* LV at least 7 days before harvest.

Instructions for the Use of LANNATE®LV in Drip

Bed Spacing	Linear Ft. of Bed to Equal One Acre	Lannate® LV 3 pt./A rate per 1000 Row Feet
36 inches	14,520 ft.	3.3 fl. oz.
48 inches	10,890 ft.	4.4 fl. oz.
60 inches	8,712 ft.	5.5 fl. oz.
72 inches	7.260 ft.	6.6 fl. oz

Chemigation Systems

Types of Irrigation Systems:

LANNATE®LV may be applied through drip irrigation systems for control of thrips in green and dry bulb onions. 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 LANNATE®LV through any other type of irrigation systems, except those allowed by instructions provided in supplemental, SLN or the main product label.

General Directions for Drip Chemigation:

General Drip Guidance

1. Tape placement is critical. All products applied via drip irrigation must be deposited in the root zone. It is recommended to

30/31

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 should not exceed 12 inches. Emitters should be free of debris and deliver consistent amounts of water. Best results are seen when the same amount of LANNATE® LV comes out of each emitter.
- 3. The length of the irrigation cycle should be adjusted 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 LANNATE® LV 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, injection of LANNATE® LV should begin 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 LANNATE® LV 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 recommended for the application of LANNATE®LV 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 LANNATE®LV into the tank. Complete filling the tank by adding the required amount of water. Agitate thoroughly to insure a uniform solution of LANNATE®LV. 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 injection solution is approximately neutral (~pH 7-7.5).

Injection Into Chemigation Systems

Inject the proper amount of the LANNATE®LV 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 LANNATE® LV should be injected during the middle one-third of the irrigation cycle.

Uniform Water Distribution

The irrigation system used for application of LANNATE®LV must provide for uniform distribution of LANNATE®LV

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 root zone.

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 LANNATE®LV. 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 LANNATE*LV 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.

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. LANNATE® LV 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.

IMPORTANT

BEFORE USING LANNATE® LV, READ AND CARE-FULLY NOTE THE CAUTIONARY STATEMENTS AND OTHER PROCEDURAL INFORMATION APPEARING ON THE EPA REGISTERED LABEL OR ON OTHER SUPPLEMENTAL LABELS.

This bulletin contains new or supplemental instructions for use of these products in combination which does not appear on the package label. Follow the instructions carefully.

This labeling must be in the possession of the user at the time of pesticide application.

Read the Limitation of Warranty and Liability on the Section 3 Federal product label before buying or using LANNATE* LV. If terms are not acceptable, return the unopened package at once to Seller for full refund of purchase price paid. Otherwise, use by Buyer or any other User constitutes acceptance of the terms of the Limitation of Warranty and Liability on the Section 3 Federal product label.