

34704-983

4/8/2011

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

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

APR 08 2011

Dr. Premjit Halarnkar
Loveland Products, Inc.
P.O. Box 1286
Greeley, Colorado 80632-1286

Subject: Revised Updated Warranty and Logo

Dear Dr. Halarnkar:

The Agency is in receipt of your Application(s) for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated March 24, 2011 for:

EPA Reg. No 34704-983

Sherpa Insecticide

The Registration Division (RD) has conducted a review of this request for applicability under PRN 98-10 and finds that the label change(s) requested falls within the scope of PRN-98-10. The label has been date-stamped "Notification" and will be placed in our records.

If you have any questions, call me at 703 305-5409 or electronically at daniel.dani@epa.gov.

Sincerely,

Dani Daniel
Registration Division (7504P)
Insecticide/Rodenticide Branch



United States Environmental Protection Agency
Washington, DC 20460

NOTIFICATION

<input type="checkbox"/>	Registration
<input type="checkbox"/>	Amendment
<input checked="" type="checkbox"/>	Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number Loveland Products, Inc. / 34704-983	2. EPA Product Manager Venus Eagle	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Sherpa Insecticide	PM# 1	
5. Name and Address of Applicant (Include ZIP Code) Loveland Products, Inc. P.O. Box 1286 Greeley, Colorado 80632-1286 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Submission of Revised Label - Updated Warranty and Logo

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input checked="" type="checkbox"/> Metal	
				<input type="checkbox"/> Plastic	
				<input type="checkbox"/> Glass	
				<input type="checkbox"/> Paper	
				<input type="checkbox"/> Other (Specify) _____	
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 1 gal		5. Location of Label Directions <input checked="" type="checkbox"/> On label booklet	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled			<input checked="" type="checkbox"/> Other Self-adhesive		

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)

Name Premjit Halarnkar (premjit.halarnkar@cpsagu.com)	Title Registration Manager	Telephone No. (Include Area Code) 970-685-3579
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Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received (Stamped)

2. Signature 	3. Title Registration Manager
4. Typed Name Premjit Halarnkar, Ph.D., MPA	5. Date March 24, 2011



March 24, 2011

Venus Eagle (PM 1)
Insecticide Branch/Registration Division
Document Processing Desk
Office of Pesticide Programs (7504C)
U.S. Environmental Protection Agency
Room S4900, One Potomac Yard
2777 S Crystal Drive
Arlington, VA 22202

**Subject: Sherpa Insecticide (EPA Reg. No. 34704-983)
Submission of Revised Label – Updated Warranty and Logo**

Dear Ms. Eagle:

Loveland Products, Inc. is hereby submitting a revised label for Sherpa Insecticide (EPA Reg. No. 34704-983). The Warranty statement and logo were updated in the label. Enclosed, please find the following documents:

- 1. Form 8570-1 Application for Registration
- 2. One copy of the label.
- 3. One copy of the red-lined label.

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

If you have any questions, please contact me at (970) 685-3579 or by email:
premjit.halarnkar@cpsagu.com

Thank you,
Sincerely,

Premjit Halarnkar, Ph.D., MPA
Registration Manager
Loveland Products

Handwritten notes and markings on the right side of the page, including several sets of small circles and lines.



NOTIFICATION

APR 08 2011

SHERPA[®]

INSECTICIDE

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For control of listed insects infesting various crops.

ACTIVE INGREDIENT:

Imidacloprid, 1-[(6-Chloro-3-pyridinyl)methyl]-N-nitro-2-imidazolidinimine	17.4%
INERT INGREDIENTS:	82.6%
TOTAL	100.0%

Contains 1.6 pounds of imidacloprid per gallon.

SHAKE WELL BEFORE USING.

KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID

If on Skin or Clothing:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
If Swallowed:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If in Eyes:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15 to 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.

Have a product container or label with you when calling a poison control center or doctor, or going for treatment.

**FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL:
1-866-944-8565.**

Note to Physician: No specific antidote is available. Treat the patient symptomatically.

EPA REG. NO. 34704-983

EPA EST. NO. 34704-MS-001

NET CONTENTS 1 GAL. (3.78 L)

041009 V2D 03O11

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if absorbed through skin. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wear long-sleeved shirt and long pants, socks, shoes, and chemical resistant gloves made out of material such as nitrile, butyl, neoprene, barrier laminate, polyvinyl chloride or viton.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants,
- Chemical-resistant gloves made of any waterproof material such as, barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton,
- Shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining personal protective equipment, PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls Statements:

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 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. This product is toxic to wildlife and highly toxic to aquatic invertebrates.

This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in 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) of 12 hours.

Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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 made of any waterproof material such as, barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinylchloride (PVC) or viton,
- Shoes plus socks.

OBSERVE THE FOLLOWING PRECAUTIONS WHEN MIXING AND APPLYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES, RESERVOIRS, RIVERS, PERMANENT STREAMS, MARSHES OR NATURAL PONDS, ESTUARIES AND COMMERCIAL FISH FARM PONDS.

Spray Drift Management

The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator is responsible for considering all of these factors when making application decisions. Avoiding spray drift is the responsibility of the applicator.

Mixing and Loading Requirements

To avoid potential contamination of groundwater, the use of a properly designed and maintained containment pad for mixing and loading of any pesticide into application equipment is recommended. If containment pad is not used, maintain a minimum distance of 25 feet between mixing and loading areas and potential surface to ground water conduits such as field sumps, uncased well head, sinkholes or field drains.

SHERPA® INSECTICIDE

EPA REG. NO. 14-983

For Aerial Applications

The spray boom must be mounted on the aircraft so as to minimize drift caused by wing tip vortices. The minimum practical boom length must be used, and must not exceed 75% of the wing span or rotor diameter.

Importance of Droplet Size

An important factor influencing drift is droplet size. Small droplets (<150-200 microns) drift to a greater extent than large droplets. Within typical equipment specifications, applications must be made to deliver the largest droplet spectrum that provides sufficient control and coverage. Formation of very small droplets may be minimized by appropriate nozzle selection.

Release the spray at the lowest possible height consistent with good pest control and flight safety. Avoid applications more than 10 feet above the crop canopy.

Wind Speed Restrictions

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size, canopy and equipment specifications determine drift potential at any given wind speed. Do not apply when winds are greater than 15 mph and avoid gusty and windless conditions. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.

Restrictions During Temperature Inversions

Do not make aerial or ground applications during temperature inversions. Drift potential is high during temperature inversions. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. 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. 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 mixing.

Airblast (Air Assist) for Tree Crops and Vineyards

Airblast sprayers carry droplets into the canopy of trees/vines via a radially, or laterally directed air stream. The following specific drift management practices must be followed:

- 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 the spray to go beyond the edge of the cultivated area (i.e., turn off sprayer when turning at end rows);
- Only spray inward, toward the orchard or vineyard, for applications to the outside rows.

No-Spray Zone Requirements for Foliar Applications

Do not apply by ground within 25 feet, or by air within 150 feet of lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries and commercial fish farm ponds.

Runoff Management

Do not cultivate within 10 feet of the aquatic areas to allow growth of a vegetative filter strip. When used on erodible soils, best management practices for minimizing runoff must be employed. Consult your local Natural Resources Conservation Service for recommendations in your use area.

Endangered Species Notice

Under the Endangered Species Act, it is a Federal Offense to use any pesticide in a manner that results in the death of a member of an endangered species. Consult your local county bulletin, County Extension Agent, or Pesticide State Lead Agency for information concerning endangered species in your area.

Resistance Management

Some insects are known to develop resistance to insecticides after repeated use. As with any insecticide, the use of this product must conform to resistance management strategies established for the use area.

SHERPA® Insecticide contains a Group 4A Insecticide called imidacloprid. Insect biotypes with acquired or inherent tolerance to group 4A products may eventually dominate the insect population if Group 4A products are used repeatedly as the predominant method for control for targeted species. This may eventually result in partial or total loss of control of those species by SHERPA Insecticide and to other Group 4A products.

The active ingredient in SHERPA Insecticide is a member of neonicotinoid chemical group. Avoid using a block of more than three consecutive applications of SHERPA Insecticide and/or other Group 4A products having the same or similar mode of action. Following a neonicotinoid block of treatments, Loveland Products, Inc. strongly encourages the rotation to a block of applications with effective products of a different mode before using additional applications of neonicotinoid products. Using a block rotation or windowed approach, along with other IPM practices, is considered an effective use strategy for preventing or delaying an insect's pest's ability to develop resistance to this class of chemistry.

Foliar applications of SHERPA Insecticide or other Group 4A products from the neonicotinoid chemical class must not be used on crops previously treated with a long-residual, soil-applied product from the neonicotinoid chemical class.

Other Group 4A, neonicotinoid products used as foliar treatments include: Actara®, Assail®, CALYPSO®, C¹®, Intruder™, LEVERAGE® and TRIMAX™. Other 4A Group, neonicotinoid products used as soil treatment include: ADMIRE® and Platinum®.

Contact your local extension specialist, certified crop advisor and/or product manufacturer for additional Insecticide Resistance Action Committee (IRAC) on the web at <http://irac-online.org/>.

Application Directions

Restriction: Do not apply SHERPA Insecticide in enclosed structures such as greenhouses or planthouses.

Apply SHERPA Insecticide as a directed or broadcast foliar spray. Thorough coverage of foliage is necessary without runoff for optimum insecticidal efficacy. Use adequate spray volumes, properly calibrated application equipment and VADER® spray adjuvant to obtain thorough coverage. To optimize deposition, penetration, and translocation, use .125 - .25% v/v of VADER. Other adjuvants must be used at .25 - .50% v/v. Failure to provide adequate coverage and retention of SHERPA Insecticide on leaves and fruit may result in loss of insect control or delay in onset of activity. Apply SHERPA Insecticide with properly calibrated ground or aerial application equipment. Minimum spray volumes unless otherwise specified on crop specific application sections are 10 gallons/Acre by ground application and 5 gallons/Acre through aerial equipment. Or apply SHERPA Insecticide by overhead chemigation (see additional CHEMIGATION DIRECTIONS FOR USE section below) if allowed in crop specific application section.

SHERPA Insecticide use on crops grown for production of true seed intended for private or commercial planting is not advised but may be allowed under State specific supplemental labeling. As with any insecticide, care must be taken to minimize exposure of SHERPA Insecticide to honey bees and other pollinators.

Restriction: Use of SHERPA Insecticide on crops requiring bee pollination must be avoided during bloom and a minimum of 10 days prior to bloom. Additional information on SHERPA Insecticide uses for these crops and other questions may be obtained from the Cooperative Extension Service, PCAs, consultants or local Loveland Products, Inc. representatives at 1-888-574-2878.

Restriction: Do not apply more than 0.5 lbs active ingredient per acre, per crop season, regardless of formulation or method of application, unless specified within a crop specific applications section for a given crop.

Mixing Instructions

To prepare the application mixture, add a portion of the required amount of water to the spray tank and with agitation add SHERPA Insecticide. Complete filling tank with balance of water needed. Maintain sufficient agitation during both mixing and application. SHERPA Insecticide may also be used with other pesticides and/or fertilizer solutions. Please see Compatibility Note below. When tank mixtures of SHERPA Insecticide and other pesticides are involved, prepare the tank mixture as above and follow suggested Mixing Order below.

Mixing Order

When pesticide mixtures are needed, add wettable powders first, SHERPA Insecticide, or other flowables second, and emulsifiable concentrates last. Ensure good agitation as each component is added. Do not add an additional component until the previous is thoroughly mixed. If a fertilizer solution is added, a fertilizer pesticide compatibility agent may be needed. Maintain constant agitation during both mixing and application to ensure uniformity of spray mixture.

Compatibility Note

Test compatibility of the intended tank mixture before adding SHERPA Insecticide to the spray or mix tank. Add proportionate amounts of each ingredient in the appropriate order, to a pint or quart jar, cap, shake for 5 minutes, and let set for 5 minutes. Poor mixing or formation of precipitates that do not readily re-disperse indicates an incompatible mixture that must not be used. For further information, contact your local Loveland Products, Inc. representative.

CHEMIGATION DIRECTIONS FOR USE

Refer to DIRECTIONS FOR USE section before proceeding with chemigation application.

Types of Irrigation Systems

Chemigation applications of SHERPA Insecticide may be made to crops through overhead sprinkler chemigation systems if specified in crop-specific recommendations sections. Do not apply SHERPA Insecticide through any other type of irrigation system.

Water Volume

SHERPA Insecticide chemigation applications must be made as concentrated as possible. Retention of SHERPA Insecticide on target site of insect infestation is necessary for optimum activity. Chemigation of SHERPA Insecticide in water volumes exceeding 0.10 inches/Acre is not advised.

Uniform Water Distribution and System Calibration

The irrigation system must provide uniform distribution of treated water. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. The system must be calibrated to uniformly apply the rates specified. If you have questions about calibration, you must contact State Extension Service specialists, equipment manufacturers or other experts.

Chemigation Monitoring

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments must the need arise.

Drift

Do not apply when the wind speed favors drift beyond the area intended for treatment.

SHERPA® INSECTICIDE

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COTTON cont'd:

Apply SHERPA Insecticide through properly calibrated ground, aerial or chemigation application equipment.

Required System Safety Devices

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. The pesticide injection pipeline must contain a functional automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. 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 normally shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. 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. 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.

Using Water Public Water Systems

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back flow 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 must 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 to top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional automatic quick-closing check valve to prevent the flow of fluid back toward the injection. The pesticide injection pipeline must 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. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected. 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.

ROTATIONAL CROPS*

Treated areas may be replanted with any crop specified on an imidacloprid label, or any crop for which a tolerance exists for the active ingredient, as soon as practical following the last application. For crops not listed on an imidacloprid label, or for crops for which no tolerances for the active ingredient have been established, a 12-month plant-back interval must be observed.

IMMEDIATE PLANT-BACK

All crops on this label plus the following crops not on this label: barley, canola, cardoon, Chinese celery, corn (field, sweet and pop), celtuce, cranberry*, cucurbits, Florence fennel, leafy petioles*, mustard seed*, rapeseed, rhubarb, sorghum, sugar beet, Swiss chard, and wheat.

30-DAY PLANT-BACK

Cereals (including buckwheat, millet, oats, rice, rye and triticale), safflower

10-MONTH PLANT-BACK:

Onion and bulb vegetables

12-MONTH PLANT-BACK

All other crops

*Cover crops for soil building or erosion control may be planted any time, but do not graze or harvest for food or feed.

FIELD CROPS

Apply specified rate per acre as a broadcast or directed foliar spray as pest populations begin to build. Thorough uniform coverage is necessary to achieve insect control. VADER spray adjuvant may be used to improve coverage. SHERPA Insecticide may not knockdown established and heavy insect populations. Two applications may be required to achieve control. Scout fields and retreat if needed. SHERPA Insecticide may be tank mixed with other insecticides as for knockdown of pests or for improved control of other pests.

COTTON

Pests Controlled	Rate fluid ounces/Acre
Cotton aphid	
Cotton fleahopper	2.5 - 5.0
Bandedwinged whitefly	
Plant bugs (excludes <i>Lygus Hesperus</i>)	
Green stink bug	
Southern green stink bug	
Bollworm/Budworm (ovicidal effect)	
Pests Suppressed	
Lygus bug (<i>Lygus Hesperus</i>)	
Whiteflies (other than bandedwinged whitefly)	3.8 - 5.0

Restrictions

Pre-harvest Interval (PHI): **14 days**

Minimum interval between applications: **7 days**

Maximum SHERPA Insecticide allowed per season: **25.0 fluid ounces/Acre** (0.31 lb. A/A)

A/A)

Do not graze treated fields after any application of SHERPA Insecticide.

Pests Controlled (in addition to pests listed above)	Tank Mix Directions	
	SHERPA Insecticide Rate fluid ounces/Acre	Bidrin® 8* Rate fluid ounces/Acre
For early season control of:		
Thrips	2.5 - 3.8	1.6 - 3.2
For mid to late season control of:		
Plant bugs		
Stink bugs (including Brown stink bug)	2.5 - 3.8	4.0 - 8.0
Grasshoppers		
Saltmarsh caterpillar		
Cotton leafperforator		
Tank Mix Directions		
*Refer to the Bidrin 8 product label for specific use directions; observe all restrictions and precautions that appear on the label.		

PEANUT*

Pests Controlled	Rate fluid ounces/Acre
Aphids	
Leafhoppers	3.5
Whiteflies	
Restrictions	
Pre-Harvest Interval (PHI): 14 days	
Minimum interval between applications: 5 days	
Maximum SHERPA Insecticide allowed per crop season: 10.5 fluid ounces/Acre (0.13 lb. A/A)	

*Use not permitted in California unless otherwise directed by supplemental labeling.

POTATO

Pests Controlled	Rate fluid ounces/Acre
Aphids	
Colorado potato beetle	
Flea beetles	3.8
Leafhoppers	
Psyllids	
Restrictions	
Pre-Harvest Interval (PHI): 7 days	
Minimum interval between applications: 7 days	
Maximum number of SHERPA Insecticide allowed per crop season: 16.0 fluid ounces/Acre (0.2 lb. A/A)	

SOYBEAN*

Pests Controlled	Rate fluid ounces/Acre
Aphids	3.75
Bean leaf beetle	
Cucumber beetles/Rootworm adults	
Japanese beetle (adults)	
Leafhoppers	
Whiteflies	
Restrictions	
Pre-Harvest Interval (PHI): 7 days	
Minimum interval between applications: 7 days	
Maximum amount allowed per crop season: 11.25 fluid ounces/Acre (0.14 lb. A/A)	

*Use not permitted in California unless otherwise directed by supplemental labeling.

TOBACCO

Pests Controlled	Rate fluid ounces/Acre
Aphids	2.0 - 4.0
Flea Beetles	
Japanese beetle	4.0
Restrictions	
Pre-Harvest Interval (PHI): 14 days	
Minimum interval between applications: 7 days	
Maximum number of SHERPA Insecticide allowed per crop season: 22.4 fluid ounces/Acre (0.28 lb. A/A)	

VEGETABLE and SMALL FRUIT CROPS*

Apply specified rate per acre as a broadcast or directed foliar spray as pest populations begin to build. Thorough uniform coverage is necessary to achieve insect control. VADER spray adjuvant may be used to improve coverage. SHERPA Insecticide may not knockdown established and heavy insect populations. Two applications may be required to achieve control. Scout fields and retreat if needed. SHERPA Insecticide may be tank mixed with other insecticides for knockdown of pests or for improved control of other pests.

Crops contained within certain Crop Groups recognized by EPA are subject to change. Refer to EPA website (www.epa.gov) for latest Crop Groups.

SHERPA® INSECTICIDE

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70910

FRUITING VEGETABLES¹

Crops of Crop Group 8 Plus Okra, including: Eggplant, Ground cherry, Okra, Pepper (including bell, chili, cooking, pimento and sweet), Tomato, Peppinos, Tomatillo

Pests Controlled	Rate fluid ounces/Acre
Aphids	
Colorado potato beetle	3.8 - 6.2
Leafhoppers	
Whiteflies	
Pepper weevil	6.2

Restrictions

Pre-Harvest Interval (PHI): **0 days**

Minimum interval between applications: **5 days**

Maximum SHERPA Insecticide allowed per crop season: **19.2 fluid ounces/Acre** (0.24 lb. A/A)

Applications

For pepper weevil, apply specified dosage of SHERPA Insecticide by ground equipment only, timing applications prior to a damaging population becoming established. Good coverage of foliage and fruit is necessary for insect control. Applications of SHERPA Insecticide must be incorporated into a full-season program, where alternations of effective products from multiple classes of chemistry and different modes of action are utilized in a blocked or windowed approach. For additional information, please contact your Loveland Products, Inc. representative, Extension Specialist or crop advisor. When targeting adult whiteflies, use higher rates.

¹Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

GLOBE ARTICHOKE

Pests Controlled	Rate fluid ounces/Acre
Aphids	4.0 - 10.0
Leafhoppers	

Restrictions

Pre-Harvest Interval (PHI): **7 days**

Minimum interval between applications: **14 days**

Maximum SHERPA Insecticide allowed per crop season: **40.0 fluid ounces/Acre** (0.50 lb. A/A)

HERBS

Crops of Crop Subgroup 19A including: Angelica, Balm (lemon balm), Basil (fresh and dried), Borage, Bumet, Camomile, Catnip, Chervil (dried), Chinese chive, Chive, Clary, Coriander (cilantro or Chinese parsley leaves), Costmary, Culantro (leaf), Curry (leaf), Dillweed, Horehound, Hyssop, Lavender, Lemongrass, Lovage (leaf), Marigold, Marjoram, Nasturtium, Parsley (dried), Pennyroyal, Rosemary, Rue, Sage, Savory (summer and winter), Sweet bay (bay leaf), Tansy, Tarragon, Thyme, Wintergreen, Woodruff, Wormwood

Pests Controlled	Rate fluid ounces/Acre
Aphids	
Flea beetles	3.5
Leafhoppers	
Whiteflies	

Restrictions

Pre-Harvest Interval (PHI): **7 days**

Minimum interval between applications: **5 days**

Maximum SHERPA Insecticide allowed per crop season: **10.5 fluid ounces/Acre** (0.13 lb. A/A)

Applications

Apply SHERPA Insecticide through properly calibrated ground and aerial application equipment. Thorough coverage with direct contact of the spray material to the target pests is required for insect control. The addition of an organosilicone-based spray adjuvant at a rate not to exceed the adjuvant manufacturer's approved use rate may improve coverage and control.

Note

Not all crops and/or varieties listed above have been tested for phytotoxic effects. Without specific knowledge about a particular crop and variety, Loveland Products, Inc. strongly recommends that only small areas or numbers of plants of each be treated and evaluated prior to commercial use.

BRASSICA (COLE) LEAFY VEGETABLES¹

Crops of Crop Group 5 including: Broccoli, Broccoli raab (*rapini*), Brussels sprouts, Cabbage, Cauliflower, Cavalo broccoli, Chinese (gai Lon) broccoli, Chinese (bok choy) cabbage, Chinese (napa) cabbage, Chinese mustard (gai choy) cabbage, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens

Pests Controlled	Rate fluid ounces/Acre
Aphids	
Flea beetles	3.8
Leafhoppers	
Whiteflies	

Restrictions

Pre-Harvest Interval (PHI): **7 days**

Minimum interval between applications: **5 days**

Maximum SHERPA Insecticide allowed per crop season: **19.2 fluid ounces/Acre** (0.24 lb. A/Acre)

¹Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

LEAFY GREEN VEGETABLES¹

Crops of Crop Subgroup 1 Plus Watercress including: Amaranth (leafy amaranth, Chinese spinach, tampala), Arugula (rocket), Chervil, Chrysanthemum (edible leaved and garland), Corn salad, Cress (garden), Cress (upland, yellow rocket, winter cress), Dandelion, Dock (sorrel), Endive (escarole), Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Raddicchio (red chikory), Spinach (including New Zealand and vine (Malabar spinach, Indian spinach)), Watercress (commercial production only. Applications must not be made to native cress growing in streams or other bodies of water), Watercress (upland)

Pests Controlled	Rate fluid ounces/Acre
Aphids	
Flea beetles	3.8
Leafhoppers	
Whiteflies	

Restrictions

Pre-Harvest Interval (PHI): **7 days**

Minimum interval between applications: **5 days**

Maximum SHERPA Insecticide allowed per crop season: **19.2 fluid ounces/Acre** (0.24 lb. A/A)

Applications

For applications made to watercress, production fields must be drained of water at least 24 hours prior to application and water must not be reapplied to the field for a minimum of 24 hours following the application. Applications must be made to fully leafed-up canopies only.

¹Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

LEGUMES VEGETABLES¹

Crops of Crop Group 6 (except soybean, dry) including: Edible Podded and Succulent Shelled Pea and Bean and Dried Shelled Pea and Bean
 Bean (*Lupinus* spp., includes grain lupin, sweet lupin, white lupin, and white sweet lupin)
 Bean (*Phaseolus* spp., includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean)
 Bean (*Vigna* spp., includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, crowder pea, moth bean, mung bean, rice bean, Southern pea, urd bean, yardlong bean)
 Pea (*Pisum* spp. includes dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea)
 Other Beans and Peas (broad bean (fava)), chickpea (garbanzo bean), guar, jackbean, Lablab bean (hyacinth bean), lentil, pigeon pea, soybean (immature seed), sword bean)

Pests Controlled	Rate fluid ounces/Acre
Aphids	
Leafhoppers	3.5
Whiteflies	

Restrictions

Pre-Harvest Interval (PHI): **7 days**

Minimum interval between applications: **7 days**

Maximum SHERPA Insecticide allowed per crop season: **10.5 fluid ounces/Acre** (0.13 lb. A/A)

¹Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

ROOT, TUBEROUS, and CORM VEGETABLES¹

Crops of Crop Group 1 (except sugarbeet) plus Kava including: Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Beet (garden)², Burdock (edible)², Canna (edible, Queensland arrowroot), Carrot², Cassava (bitter & sweet)², Celeriac², Chayote (root), Chervil (turnip-rooted)², Chickory², Chufa, Dasheen (taro)², Ginger, Ginseng, Horseradish, Kava^{2,3}, Leren, Parsley (turnip-rooted), Parsnip², Radish², Oriental radish (diakon)², Rutabaga², Salsify (black)², Salsify (oyster plant), Salsify (Spanish), Skirret, Sweetpotato², Tanier (cocoyam)², Tumeric, Turnip², Yam bean (jicama, manioc pea), Yam (true)²

For applications on potato see Field Crops section

Pests Controlled	Rate fluid ounces/Acre
Aphids	
Flea beetles	3.5
Leafhoppers	
Whiteflies	

Restrictions

Pre-Harvest Interval (PHI): **7 days**

Minimum interval between applications: **5 days**

Maximum SHERPA Insecticide allowed per crop season: **3.5 fluid ounces/Acre** (0.13 lb. A/A) on radish; **10.5 fluid ounces/Acre** (0.13 lb. A/A) on other crops

Maximum SHERPA Insecticide applications per crop season: **1** on radish; **3** on other crops

¹Not for use on crops grown for seed unless allowed by state-specific supplemental labeling.

²Tops or greens from these crops may be utilized for food or feed.

³Use not permitted in California unless otherwise directed by Supplemental Labeling.

STRAWBERRY

Pests Controlled	Rate fluid ounces/Acre
Aphids	
Spittlebugs	3.8
Whiteflies	

Restrictions

Pre-Harvest Interval (PHI): **7 days**

Minimum interval between applications: **5 days**

Maximum SHERPA Insecticide allowed per crop season: **11.4 fluid ounces/Acre** (0.14 lb. A/A)

Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.

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TREE, BUSH and VINE CROPS

Apply specified rate per acre as a broadcast or directed foliar spray as pest populations begin to build. Thorough uniform coverage is necessary to achieve insect control. VADER spray adjuvant may be used to improve coverage. SHERPA Insecticide may not knockdown established and heavy insect populations. Two applications may be required to achieve control. Scout fields and retreat if needed. SHERPA Insecticide may be tank mixed with other insecticides for knockdown of pests or for improved control of other pests.

Aerial application of SHERPA Insecticide may result in slower activity and reduced control relative to results from ground application. For tree and vine crops, recommended application rates are based on full-size, mature trees or vines.

Crops contained within certain crop groups recognized by EPA are subject to change. Refer to EPA website (www.epa.gov) for latest crop groups.

BANANA AND PLANTAIN

Pests Controlled	Rate fluid ounces/Acre
Aphids	
Leafhoppers	8.0
Thrips	

Restrictions

Pre-Harvest Interval (PHI): **0 day**
 Minimum interval between applications: **14 days**
 Maximum SHERPA Insecticide allowed per crop season: **40.0 fluid ounces/Acre** (0.5 lb. A/A)

Applications

Apply specified dosage of SHERPA Insecticide as a broadcast or directed spray to infested area insuring thorough coverage. Apply SHERPA Insecticide through properly calibrated ground or aerial application equipment. Aerial application of SHERPA Insecticide may result in slower activity and reduced control relative to results from ground application.
 Addition of an organosilicone adjuvant at a rate not to exceed 2.0 fluid ounces/100 gallons, finished spray solution may improve coverage and pest control.

BUSHBERRY

Crops of Crop Subgroup 13B including: Blueberry, Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Lingonberry, Salal

Pests Controlled	Rate fluid ounces/Acre
Aphids	
Leafhoppers/Sharpshooters	3.0 - 4.0
Blueberry maggot	
Japanese beetles (adults)	6.0 - 8.0
Thrips (foliage feeding thrips only)	

Restrictions

Pre-Harvest Interval (PHI): **3 days**
 Minimum Interval between applications: **7 days**
 Maximum SHERPA Insecticide allowed per crop season: **40.0 fluid ounces/Acre** (0.5 lb. A/A)
 Maximum number of SHERPA Insecticide applications per crop season: **5**
 Maximum application volume (water): **20.0 GPA** - ground; **5.0 GPA** - aerial.
 Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.

CANE BERRY¹

Crops of the Caneberry Crop Subgroup 13A including: Blackberry (*Rubus* spp. - including Andean Blackberry, Arctic blackberry, Bingleberry, Black satin berry, Boysenberry, Brombeere, California blackberry, Chesterberry, Cherokee blackberry, Cheyenne blackberry, Common blackberry, Coryberry, Darrowberry, Dewberry, Dirksen thornless berry, Evergreen blackberry, Himalayaberry, Hullberry, Lavacaberry, Loganberry, Lowberry, Lucretiaberry, Mammoth blackberry, Marionberry, Moras, Mures deronce, Nectarberry, Northern dewberry, Olallieberry, Oregon evergreen berry, Phenomenalberry, Rangeberry, Ravenberry, Rossberry, Shawnee blackberry, Southern dewberry, Tayberry, Youngberry, Zarzamora, and varieties and/or hybrids of these) **Raspberry** (*Rubus* spp. - including Bababerry, Black raspberry, Blackcap, Caneberry, Frambueso, Himbeere, Keriberry, Mayberry, Red raspberry, Thimbleberry, Tulameen, Yellow raspberry, and varieties and/or hybrids of these, and Wild raspberry)

Pests Controlled	Rate fluid ounces/Acre
Aphids	
Leafhoppers	8.0
Thrips	

Restrictions

Pre-Harvest Interval (PHI): **3 day**
 Minimum interval between applications: **7 days**
 Maximum SHERPA Insecticide allowed per crop season: **24.0 fluid ounces/Acre** (0.3 lb. A/A)
 Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.

¹Use not permitted in California unless otherwise directed by supplemental labeling.

CITRUS

Crops of Crop Group 10 including: Calamondin, Citrus citron, Citrus hybrids (includes chironja, tangelo and tang), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Pummelo, Orange (sweet and sour), Satsuma mandarin, White sapote (*Casimiroa* spp.), and other cultivars and/or hybrids of these

Pests Controlled	Rate fluid ounces/100 gallons	Rate fluid ounces/Acre
Aphids		
Asian citrus psyllid	3.5 - 5.0	10.0 - 20.0
Black fly	(for dilute applications)	(depending on tree size, target pest and infestation pressure)
Leafhoppers/Sharpshooters		
Leafminers		
Mealy bugs		
Scales		
Whiteflies		
Thrips (foliage feeding thrips only)	3.5 - 5.0	10.0 - 20.0

Restrictions

Pre-Harvest Interval (PHI): **0 days**
 Minimum interval between applications: **10 days**
 Maximum SHERPA Insecticide allowed per crop season: **40.0 fluid ounces/Acre** (0.5 lb. A/A)
 Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.

Applications

Scales - time applications to the crawler stage. Treat each generation.
 Where concentrated applications are appropriate, increase the spray solution concentration to apply an equivalent rate per acre to than applied in the diluted application. The 20.0 fluid ounce/Acre rate is based on full sized trees. This rate may be reduced proportionally for smaller trees.

COFFEE

Pests Controlled	Rate fluid ounces/Acre
Aphids	
Leafhoppers	8.0
Whiteflies	

Pest Suppressed

Scales	8.0
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Restrictions:

Pre-Harvest Interval (PHI): **7 days**
 Minimum interval between applications: **7 days**
 Maximum SHERPA Insecticide allowed per crop season: **40.0 fluid ounces/Acre** (0.5 lb. A/A)
 Do not apply pre-bloom or when bees are actively foraging.

Applications:

Apply specified dosage of SHERPA Insecticide as a broadcast or directed spray to infested area insuring thorough coverage. Apply SHERPA Insecticide through properly calibrated ground or aerial application equipment. Aerial application of SHERPA Insecticide may result in slower activity and reduced control relative to results from ground application.

GRAPE

Including: American bunch grape, Muscadine grape and Viniferous grape.

Pests Controlled	Rate fluid ounces/Acre
Leafhoppers/Sharpshooters	
Mealybugs	3.0 - 4.0
Grapeleaf skeletonizer	3.8 - 4.0

Restrictions

Pre-Harvest Interval (PHI): **0 days**
 Minimum interval between applications: **14 days**
 Maximum SHERPA Insecticide allowed per crop season: **8.0 fluid ounces/Acre** (0.1 lb. A/A)
 Apply SHERPA Insecticide by ground application only.

HOP

Pests Controlled	Rate fluid ounces/Acre
Aphids	8.0

Restrictions

Pre-Harvest Interval (PHI): **28 days**
 Minimum interval between applications: **21 days**
 Maximum SHERPA Insecticide allowed per crop season: **24.0 fluid ounces/Acre** (0.30 lb. A/A)

POME FRUIT

Crops of Crop Group 11 including: Apple, Crabapple, Loquat, Mayhaw, Pear (including Oriental pear), Quince

Pests Controlled	Rate fluid ounces/100 gallons	Rate fluid ounces/Acre ¹
Leafhoppers	1.0 - 2.0	4.0 - 8.0
Aphids (except wooly apple aphid)		
Apple maggot	2.0	8.0
Leafminers		
San Jose scale		
FOR PEAR, ONLY		
Mealybugs	5.0	20.0
Pear psylla		

Restrictions

Pre-Harvest Interval (PHI): **7 days**
 Minimum interval between applications: **10 days**
 Maximum SHERPA Insecticide allowed per crop season: **40.0 fluid ounces/Acre** (0.5 lb. A/A)
 Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.

Applications:

Apple maggot - Combined with manufacturer's approved rate of a sticker, such as Nu-Film 17.

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POME FRUIT cont'd:

Leafminer – for first generation leafminer control, make application as soon as pollination is complete and bees are removed from the orchard. Greatest leafminer control will result from the earliest possible application. For second and succeeding generations of leafminer, insect control is obtained from applications made early in the adult flight against eggs and early instar larvae. A second application may be required 10 days later if severe pressure continues or if generations are overlapping. A single application may result in suppression only. SHERPA Insecticide will not control late instar larvae. Mealybugs – apply maximum gallonage for tree with ground equipment. Ensure good spray coverage of the trunk and scaffolding limbs or other resting sites of mealybugs. Rosy apple aphid – apply prior to leafrolling caused by rosy apple aphid. San Jose scale – time applications to the crawler stage. Treat each generation.

The amount of SHERPA Insecticide required per acre will depend on tree size and volume of foliage present. The rate per acre is based on a standard of 400 gallons of dilute spray solution per acre for large trees. To calculate the rate needed on smaller trees, multiply the pest specific rate (e.g., for aphid control, 2 fluid ounces/100 gallons) times the number of 100 gallons of spray solution required to thoroughly wet foliage just prior to the point of runoff, on one acre of the trees being treated. For concentrate sprays, apply the same amount of SHERPA Insecticide per acre as would be applied in a dilute spray based on tree size and foliage volume.

POMEGRANATE

Pests Controlled	Rate fluid ounces/Acre
Aphids	8.0
Leafhoppers/Sharpshooters	
Whiteflies	
Pest Suppressed	
Scales	8.0

Restrictions:

Pre-Harvest Interval (PHI): **7 days**
 Minimum interval between applications: **7 days**
 Maximum SHERPA Insecticide allowed per crop season: **24.0 fluid ounces/Acre** (0.3 lb. A/A)
 Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.

STONE FRUIT

Crops of Crop Group 12 including: Apricot, Cherry (including sweet and tart), Nectarine, Peach, Plum (including Chickasaw, Damson and Japanese), Plumcot, Prune (fresh and dried)

Pests Controlled	Rate fluid ounces/100 gallons	Rate fluid ounces/Acre
Aphids		
Green June beetle	2.0	4.0 – 8.0
Japanese beetle		
Leafhoppers/Sharpshooters		
Plant bugs		
Rose chafer		
San Jose scale		
Cherry fruit fly (maggot of Eastern and Western)	2.0	8.0
Pests Suppressed		
Plum curculio		
Stink bugs	2.0	8.0

Restrictions for Apricot, Nectarine, Peach:

Pre-Harvest Interval (PHI): **0 days**
 Minimum interval between applications: **7 days**
 Maximum SHERPA Insecticide allowed per crop season: **24.0 fluid ounces/Acre** (0.30 lbs. A/A)
 Minimum application volume (water): **50 GPA** – ground application; **25 GPA** – aerial application
 Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.

Restrictions for Cherries, Plums, Plumcot, Prune:

Pre-Harvest interval (PHI): **7 days**
 Minimum interval between applications: **10 days**
 Maximum SHERPA Insecticide allowed per crop season: **40.0 fluid ounces/Acre** (0.50 lbs. A/A)
 Minimum application volume (water): **50 GPA** – ground application; **25 GPA** – aerial application.
 Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.

TREE NUTS

Crops of Crop Group 14 including: Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert, Hickory nut, Macadamia nut, Pecan, Pistachio, Walnut [black and English]

Pests Controlled	Rate fluid ounces/Acre
Aphids (except Black pecan aphid)	
Leafhoppers/Sharpshooters	3.5 - 7.0
Phylloxera sp. (leaf infestations)	
Spittlebugs	
Whiteflies	
Black pecan aphid	
Mealybugs	8.0
San Jose scale	

TREE NUTS cont'd:

Restrictions

Pre-Harvest Interval (PHI): **7 days**
 Minimum interval between applications: **6 days**
 Maximum SHERPA Insecticide allowed per crop season: **28.8 fluid ounces/Acre** (0.36 lb. A/A)
 Minimum application volume (water): **50 GPA** - ground application, **25 GPA** - aerial application
 Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.
Applications:
 Applications for control of San Jose scale should be timed according to crawler stage, treating each successive generation. Two applications on a 10 to 14 day interval may be required to achieve control.

TROPICAL FRUIT

Including: Acerola, Atemoya, Avocado, Birida, Black sapote, Canistel, Cherimoya, Custard Apple, Feijoa, Jaboticaba, Guava, Liama, Longan, Lychee, Mamey sapote, Mango, Papaya, Passionfruit, Persimmon, Pulasan, Rambutan, Sapodilla, Soursop, Spanish lime, Star apple, Starfruit, Sugar apple, Wax iambu

Pests Controlled	Rate fluid ounces/Acre
Aphids	
Leafhoppers/Sharpshooters	8.0
Mealybugs	
Thrips (foliage feeding thrips only)	
Whiteflies	
Pests Suppressed	
Scales	8.0

Restrictions

Pre-Harvest Interval (PHI): **7 days**
 Minimum interval between applications: **10 days**
 Maximum SHERPA Insecticide allowed per crop season: **40.0 fluid ounces/Acre** (0.50 lb. A/A)
 Maximum number of SHERPA Insecticide applications per crop season: **5**
 Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.

OTHER CROPS

Apply specified rate per acre as a broadcast or directed foliar spray as pest populations begin to build. Thorough uniform coverage is necessary to achieve insect control. VADER spray adjuvant may be used to improve coverage. SHERPA Insecticide may not knockdown established and heavy insect populations. Two applications may be required to achieve control. Scout fields and retreat if needed. SHERPA Insecticide may be tank mixed with other insecticides for knockdown of pests or for improved control of other pests.

POPLAR/COTTONWOOD¹

Includes members of the genus *Populus* grown for pulp or timber

Pests Controlled	Rate fluid ounces/Acre
Aphids	
Leaf beetles	4.0 – 8.0
Restrictions	
Pre-Harvest Interval (PHI): 7 days	
Minimum interval between applications: 10 days	
Maximum SHERPA Insecticide allowed per crop season: 40.0 fluid ounces/Acre (0.50 lb. A/A)	
Do not apply during bloom or within 10 days prior to bloom or when bees are actively foraging.	

¹Use not permitted in California unless otherwise directed by supplemental labeling.

CHRISTMAS TREE

Pests Controlled	Rate fluid ounces/Acre
Aphids	
Adelgids	4.0 – 8.0
Sawflies	
Restrictions	
Pre-Harvest Interval (PHI): 7 days	
Minimum interval between applications: 7 days	
Maximum SHERPA Insecticide allowed per crop season: 40.0 fluid ounces/Acre (0.50 lb. A/A)	
Gall-forming adelgids – time applications to coincide with full bud-swell or first bud break of earliest bud-breaking trees. Once galls form spraying will be ineffective.	

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.
PESTICIDE STORAGE: Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Handle and open container in a manner as to prevent spillage. If the container is leaking, invert to prevent leakage. If container is leaking or material spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. In spill or leak incidents, keep unauthorized people away.
PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.
CONTAINER DISPOSAL: Nonrefillable container. Do not reuse this container to

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Storage & Disposal cont'd.:

hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at www.acrcycle.org.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

For packages up to 5 gallons: 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. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

For packages greater than 5 gallons and less than 56 gallons: 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. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

For packages greater than 56 gallons: 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.

For refillable containers: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 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.

For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC - 1-800-424-9300.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY
BEFORE BUYING OR USING THIS PRODUCT, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use. EXCEPT AS WARRANTED IN THIS LABEL AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THIS PRODUCT IS SOLD "AS IS," AND LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE.

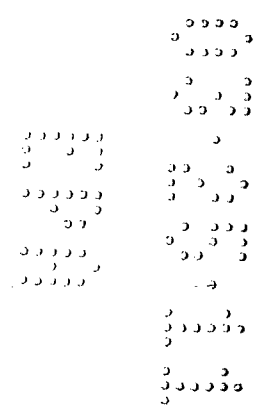
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