

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

March 14, 2021

Robert Avalos Manager of Registrations Loveland Products Inc. P.O. Box 1286 Greeley, CO 80632-1286

Subject: Registration Review Label Mitigation for Aliphatic Solvents Product Name: BIOCOVER LS EPA Registration Number: 34704-808 Application Date: June 10, 2020 Decision Number: 563755

Dear Mr. Avalos:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Aliphatic Solvents Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

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

A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

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If you have any questions about this letter, please contact Marisa Wright by phone at (703) 347-0463, or via email at <u>wright.marisa@epa.gov</u>.

Sincerely,

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Linda Arrington, Branch Chief Risk Management and Implementation Branch 4 Pesticide Re-Evaluation Division Office of Pesticide Programs

Enclosure



ACTIVE INGREDIENT: Mineral Oil*		By Wt.
OTHER INGREDIENTS:		2.00%
	TOTAL	100.00%

\*Contains petroleum distillates

## KEEP OUT OF REACH OF CHILDREN CAUTION

See inside label booklet for First Aid, Precautionary Statements and Directions for Use.

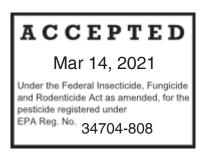
Have the prod treatment.	FIRST AID uct container or label with you when calling a poison control center or doctor or going fo
lf swallowed:	<ul> <li>Immediately call a poison control center or doctor.</li> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>Do not give any liquid to the person.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
lf in eyes:	<ul> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
lf on skin or clothing:	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
lf Inhaled:	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>

be expected from any type of exposure other than pulmonary aspiration. Ingestion may result in some gastroenteritis and mild diarrhea. FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565.

#### EPA REG. NO. 34704-808 EPA EST. NO. NET CONTENTS

[Print Code to be placed here]

MANUFACTURED FOR: LOVELAND PRODUCTS, INC. P.O. BOX 1286 GREELEY, COLORADO 80632-1286



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

Harmful if swallowed or absorbed through skin or inhaled. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. This product is a potential skin sensitizer. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Avoid breathing spray mist. Wash thoroughly with Soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

#### Personal Protective Equipment (PPE):

#### Mixers, loaders, applicators, flaggers, and other handlers must wear:

- Long-sleeved shirt, long pants,
- Shoes plus socks, and
- Chemical-resistant gloves made of any waterproof material.

**User Safety Requirements:** Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

**Engineering controls:** Pilots must use an enclosed cockpit that meets the requirements listed in the WPS for agricultural pesticides [40 CFR 170.240(d)(6)]. 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

#### Users should:

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

#### **ENVIRONMENTAL HAZARDS**

This product is toxic to aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean highwater mark. Do not contaminate water when disposing of equipment wash water or rinsate. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Avoid drift or run off into storm drains, drainage ditches, or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to maximize the chances that wind, or rain will not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

#### **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 through any type of irrigation system.

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. Do not apply this product in a way that will contact adults, children, or pets, directly or through drift.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. Aerial application of this product is prohibited.

## 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 4 hours.** 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 soil or water, is:

- Coveralls,
- Shoes and socks, and
- Chemical-resistant gloves made of any waterproof material.

## NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Do not enter or allow others to enter until sprays have dried.

Advisory Spray Drift Language SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

#### **IMPORTANCE OF DROPLET SIZE**

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

#### Controlling Droplet Size – Ground Boom

Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.

Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.

Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

#### **BOOM HEIGHT – Ground Boom**

For ground equipment, the boom should remain level with the crop and have minimal bounce.

#### **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

#### **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

#### TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing

temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or 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. Avoid applications during temperature inversions.

#### WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

#### **Boom-less Ground Applications:**

Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

#### Handheld Technology Applications:

Take precautions to minimize spray drift.

#### MIXING DIRECTIONS

Use only in equipment with sufficient agitation to keep spray thoroughly mixed. Be sure tank is clean. With agitator running, start filling tank with water; add oil when tank is about ½ full. Pump this mixture through the overflow and back into tank for about two minutes. If this mixture turns white, it indicates good emulsification. Fill the tank with water, adding other desired materials as tank is filling. If wettable powders are used, add and thoroughly mix before adding oil. Observe all cautions and limitations on labeling of all products used in mixtures. Keep agitator running at all times. If an injector is used, first add 25 to 50 gals. of water to tank with engine running to provide good pressure. Put injector suction tube into the measured amount of spray oil, opening injector valve to allow the oil to be sucked into the tank, then fill the tank with water.

## DO NOT USE THIS MATERIAL IF IT DOES NOT EMULSIFY.

#### **USE LIMITATIONS AND PRECAUTIONS**

Preharvest Interval - This product may be used up to the day of harvest.

To ensure thorough coverage, dilute applications (greater than 150 gallons of spray solution per acre) should be used. Concentrate applications (usually from 20 to 150 gallons of spray solution) may reduce the coverage and thus the effectiveness. Application volumes depend on the crop type, crop size and target pest.

Adjust the spray volume to obtain the best coverage without runoff. Extreme care should be taken when using concentrate sprays as the potential for enhanced crop phytotoxicity is increased. A concentrate application can provide satisfactory results as long as the spray unit is properly engineered, calibrated and operated.

Note: Use efficient equipment of the proper type. Avoid spraying during or immediately prior to hot or freezing weather (over 95°F. or under 32°F.), hot dry winds, rain or other unsuitable conditions; avoid over spraying or double spraying. Plants should be sprayed only when in vigorous condition and when their moisture condition is suitable. Before using, make certain spray tank is free of sulfur residues. Do not apply sulfur within 30 days except in the Northwest (Oregon and Washington) where it may be used in combination on Pears as a Post Harvest (after old fruit is off the tree), Dormant and Delayed Dormant (before the scales slip, or at or prior to bud swell) treatment and on Apples prior to or up to the Delayed Dormant (½ inch green) period. In areas west of the Continental Divide do not apply to Captan treated trees within 10 to 14 days before and after this oil. If in doubt, spray a portion of one tree previously treated with Sulfur or Captan using 1 quart to 25 gallons water. Burn will show in several days if sufficient time has not elapsed.

This product has not been tested on all species or varieties. Before treating a large area, treat a small area and observe prior to full scale application.

A period of 14 days must elapse before any of the following chemicals are used before or after an application of this product: anilazine (Dyrene), chlorothalonil (Bravo), dicloran (Botran), dicofol (Kelthane), Dikar, dinocap

(Karathane), permethrin (Ambush, Pounce).

Do not use chlorothalonil (Bravo) or dimethoate (Cygon) in a spray program with this product on grapes, ornamentals and strawberries. Do not use dicofol (Kelthane) in a spray program with this product on ornamentals and strawberries. Do not use propargite (Omite) with an oil spray or within 30 days before or after an oil spray. The maximum application rate for citrus in Texas and Florida is 159 pounds active ingredient per acre (maximum 1500 gallons of spray mix per acre), and, in California, 212 pounds active ingredient per acre (maximum 2000 gallons of spray mix per acre).

#### FRUIT AND NUT CROPS APPLES AND PEARS:

PESTS	APPLICATION RATE & TIMING	COMMENTS
APPLES AND PEARS:	DORMANT OR DELAYED DORMANT: Use	
European Fruit Lecanium Scale	1 to 2 gals. per 100 gals. of water at 100	
Dlive Scale	to 800 gals, per acre.	
San Jose Scale	(Concentrate Spray: Use 3 to 8 gals.	
uropean Red Mite Eggs	per acre in a minimum of 20 to 100	
	gals. water per acre.)	
wo Spotted Spider Mite	FOLIAR SPRAY (Post Bloom):	
Pacific Red Mite	East of the Mississippi: Use 1 quart	
European Red Mite	to 1½ gallons per 100 gals. of water	
	at 100 to 800 gals. per acre. Do Not	
	exceed more than $1\frac{1}{2}$ gals. per acre per	
	application for SUMMER treatments.	
	(Concentrate Spray: Do not exceed more	
	than 1½ gals. per acre per application.	
	Apply a minimum of 50 gals. water per acre.)	
	West of the Mississippi: Use 1 qt. to 11/2	
	gals. per 100 gals. of water at 100 to 800	
	gals. per acre.	
	(Concentrate Spray: Do not exceed more than	
	1½ gals. per acre per application. Apply a	
	minimum of 20 to 100 gals. water per acre).	
APPLES ONLY:	DORMANT OR DELAYED DORMANT: Use	
Rosy Apple Aphid Eggs	1 to 2 gals. per 100 gals. of water at 100 to	
Apple Aphid Eggs	800 gals. per acre.	
	(Concentrate Spray: Use 3 to 8 gals per acre	
	in a minimum of 20 to 100 gals. water per	
	acre.)	
Fruit Tree Leafroller	GREEN TIP TO DELAYED DORMANT: Use	
Apple Red Bug	1 to 3 gals. per 100 gals. of water at 100 to	
Scurfy Scale	800 gals. per acre.	
5	(Concentrate Spray: Use 3 to 12 gals. per	
	acre in a minimum of 20 to 100 gals. water	
	per acre.)	
European Red Mite	, ,	Delayed dormant preferred
San Jose Scale	DORMANT, GREEN TIP TO DELAYED	· · ·
orbes Scale	<b>DORMANT:</b> Use 1 to 2 gals. per 100 gals.	
	of water at 100 to 800 gals. per acre.	
	(Concentrate Spray: Use 3 to 8 gals. per	
	acre in a minimum of 20 to 100 gals, water	
	per acre.)	
PEARS ONLY:	<b>DORMANT:</b> Use 1 to 2 gals. per 100 gals.	Apply before eggs are laid.
Pear Psylla	of water at 100 to 800 gals. per acre.	
,	(Concentrate Spray: Use 3 to 8 gals. per	
	acre in a minimum of 20 to 100 gals. water	
	per acre.)	
Fruit Tree Leafroller	<b>DORMANT:</b> Use 1 to 3 gals. per 100 gals.	
Pear Leaf Blister Mite	of water at 100 to 800 gals. per acre.	
-	(Concentrate Spray: Use 3 to 12 gals. per	
	acre in a minimum of 20 to 100 gals. water	

ALMONDS, APRICOTS, CHERRIES, NECTARINES, PEACHES, PISTACHIO, PLUMS AND PRUNES: (Directions for use on Plums and Prunes in California's Sacramento Valley can be found in the table following this one):

PEST Black Scale European Fruit Lecanium Scale San Jose Scale Olive Scale Frosted Scale Aphid Eggs European Red Mite Eggs Brown Mite Eggs Fruittree Leafroller Eggs	APPLICATION RATE & TIMING DORMANT AND DELAYED DORMANT: Use 1 to 3 gals. per 100 gals. of water at 300 to 600 gals. per acre. (Concentrate Spray: Use 6 to 8 gals. per acre in a minimum of 20 gals. of water per acre.)	COMMENTS Preferred times of application for European Fruit Lecanium Scale and European Red Mite Eggs are Green Tip to Delayed Dormant, and for San Jose Scale are Dormant, Green Tip to Delayed Dormant.
Terrapin Scale	<b>DELAYED DORMANT:</b> Use 2 to 3 gals. per 100 gals. of water at 300 to 600 gals. per acre. (Concentrate Spray: Use 8 to 12 gals. per acre in a minimum of 20 gals. of water per acre.)	
Cottony Peach Scale	<b>DORMANT:</b> Use 2 to 3 gals. per 100 gals. of water at 300 to 600 gallons per acre. (Concentrate Spray: Use 8 to 12 gals. per acre in a minimum of 20 gals. of water per acre.	
Two-spotted Spider Mite Pacific Mite European Red Mite Brown Mite	<b>FOLIAR SPRAY:</b> Use ½ to 1½ gals. per 100 gals. of water at 300 to 600 gals. per acre. (Concentrate Spray: Do not use more than 4 gals. per acre in a minimum of 20 gals. water per acre.)	Certain varieties of plums and prunes may be injured by oil sprays, check for tolerance prior to treatment. Do not apply to trees lacking moisture.
White Peach Scale on Peaches: Only for use in Georgia, Florida, South Carolina, North Carolina, and Alabama.	<b>DORMANT:</b> Use 1½ to 2 gals. per 100 gals. of water at 300 to 600 gals. per acre. (Concentrate Spray: Use 6 to 8 gals. per acre in a minimum of 20 gals. of water per acre.)	Apply before buds begin to swell in the spring. Make 2 applications 7 to 14 days apart, according to local recommendations, during the dormant period.

#### PLUMS AND PRUNES: (Sacramento Valley of California Only)

PEST	APPLICATION RATE & TIMING	COMMENTS
Black Scale	PRE-BLOOM WHEN FRUIT BUDS SHOW	Application at this time is preferred.
European Fruit Lecanium Scale	GREEN TIPS: Use 1½ to 2 gals. per 100	
San Jose scale	gals. of water at 300 to 600 gals. per acre.	
Olive Scale	(Concentrate Spray: Use 6 to 8 gals. per	
Frosted Scale	acre in a minimum of 20 gals. water per	
Mealy Plum Aphid Eggs	acre.)	
Leaf Curl Plum Aphid Eggs		
Brown Mite Eggs		
European Red Mite Eggs		
Two-spotted Spider Mite	FOLIAR SPRAY: Use ½ to 1 gals. per	Oil sprays may injure certain varieties
Pacific Mite	100 gals. water at 300 to 600 gals.	of plums and prunes, check for
European Red Mite	per acre.	tolerance prior to treatment.
Brown Mite	(Concentrate Spray: Use 4 to 6 gals.	
	per acre in a minimum of 20 gals. water	
	per acre.)	

#### AVOCADOS:

PESTS	<b>APPLICATION RATE &amp; TIMING</b>	COMMENTS
Avocado Brown Mite	Use ½ to 1 gal. per 100 gals. of water	Apply through late fall.
Thrip	with thorough coverage in 400 to 3000	Consult with your local University of
Pracea Mite	gals. per acre.	California Cooperative Extension
	(Concentrate Spray: Use 4 to 15 gals. per	Service for proper timing and
	acre in a minimum of	application parameters.
	50 to 100 gals. per acre.)	

## BANANAS, PLANTAINS:

PESTS	APPLICATION RATE & TIMING	COMMENTS
Black Leaf Streak (Mycosphaerella fijiensis) Black Sigatoka (Mycosphaerella fijiensis var. difformis) Yellow Sigatoka (Mycosphaerella musicola)	Use ½ to 1½ gals. in 20 to 100 gals. of water per acre. (Mist Blower: Use 1½ gals. in 6 gals. of water per acre.)	Begin application when disease first appears and continue every 10 to 15 days during rainy periods or as is needed. Do not apply when daytime temperatures exceed 80° F as injury may occur. Phytotoxicity may be affected by the quantity of oil used, vigor of trees and temperature at the time of application. Bag fruits, or use a directed spray on unbagged fruits. Bagged fruit improves crop safety whereas unbagged fruit may show phytotoxicity. This application is also effective in loosening Sooty Mold Fungus and in preventing its formation by the control of Aphids, Mealybugs, Scales and Whitefly.

## **BLUEBERRIES\*, BUSHBERRIES\*, CANEBERRIES:**

PESTS	APPLICATION RATE & TIMING (gallons of oil per 100 gallons of water)	COMMENTS
Mites Powdery MIIdew Rust	0.75-1.5	Using ground equipment, spray for optimum coverage of leaf surfaces. For <b>fungal diseases</b> use at least 200 psi
		spray pressure.

CITRUS: (California Only) - Lemons, Grapefruit, and Oranges (Navel and Valencia), Limes, Tangerines and Tangelos and other citrus hybrids.

PEST	APPLICATION RATE & TIMING	COMMENTS
Mites -Citrus Bud -Citrus Flat -Citrus Red -Citrus Rust	<b>Central California:</b> Apply $\frac{1}{2}$ to $\frac{1}{2}$ gals. of oil per 100 gals. of water as thorough coverage spray (TC). Alternately, use a low volume spray (LV) to apply 1 to 10 gals. of oil per acre.	Apply July through September.
Scales -Black -Brown Soft -California Red -Citricola	Apply up to 10 gals. of oil per acre on bearing trees up to 10 feet in height. Add 1 gal. of oil per acre for each foot of tree height over 10 feet. Apply as a low volume spray (LV) 1 to 10 gals. of oil per acre.	
-Purple -Yellow -Red	Apply as a low volume spray (LV) 1 to 10 gals. of oil per acre.	For Lemons and Limes, make applications in all months except December through February; for Grapefruit make applications July through October; for Oranges make applications on Navels July through September and on Valencias, Tangelos and Tangerines and other citrus hybrids July through October.
Mites -Citrus Bud -Citrus Flat -Citrus Red -Citrus Rust	Southern California: Apply ½ to 1½ gals. of oil per 100 gals. water as a thorough coverage spray (TC). Alternately, use a low volume spray (LV) to apply 1 to 10 gals. of oil per acre.	For Coastal Lemons and Limes, apply May and June and/or September through December. For Interior Lemons and Limes, apply in April and May and/or September through November.
Scales -Black -Brown Soft -California Red -Citricola	Apply up to 10 gals. of oil per acre on bearing trees up to 10 feet in height. Add 1 gal. of oil per acre for each foot of tree height over 10 feet. Apply as a low volume spray (LV) 1 to 10 gals of oil per acre.	
-Purple -Yellow -Red	Apply as a low volume spray (LV) 1 to 10 gals. of oil per acre.	For Lemons and Limes, make applications in all months except December through February; for Grapefruit make applications July through October; for Oranges make applications on Navels July through September and on Valencias, Tangelos and Tangerines and other citrus hybrids July through October.
Mites -Citrus Bud -Citrus Flat -Citrus Red -Citrus Rust	Oxnard Plains Area: Apply ½ to 1½ gals. of oil per 100 gals. of water as a thorough coverage spray (TC). Alternately, use a low volume spray (LV) to apply 1 to 10 gals. of oil per acre. Apply up to 10 gals. of oil per acre on bearing trees up	Make applications as needed throughout the year.
Scales -Black -Brown Soft -California Red -Citricola -Purple -Yellow	to 10 feet in height. Add 1 gal. of oil per acre for each foot of tree height over 10 feet. Apply as a low volume spray (LV) 1 to 10 gals. of oil per acre.	

Thorough coverage spray (TC): Applications achieving a uniform film wetting of all portions of the tree at 250 to 2000 gallons of spray solution per acre. The total volume needed is dependent of the size of the trees. Do not exceed a maximum of 212 pounds of

active ingredient (in a maximum volume of 2000 gallons of spray mix per acre) when treating citrus in California (based on thorough coverage spray, with 1½ gallons of product mixed per 100 gallons of water).

Low-volume spray (LV): Applications with droplet depositions achieved on all interior and exterior parts of the tree using 10 to 100 gallons of spray solution per acre.

Do not apply prior to or during a period of excessively high temperatures.

Do not apply oil spray when trees show stress.

Consult with your local University of California Cooperative Extension Specialist for proper timing and spray program.

#### CITRUS: (Florida and Texas) -Grapefruit, Lemons, Limes, Oranges, Tangelos and Tangerines and other citrus hybrids.

PEST	APPLICATION RATE & TIMING	COMMENTS
Citrus Rust Mite	5 to 10 gals. of oil per acre.	Does not control citrus Snow Scale.
	Apply as a dilute spray.	
Spider Mites	5 to 10 gals. of oil per acre.	
	Apply as a dilute spray.	
Scale Insects	5 gals. of oil per acre + 6 pints Ethion	Summer spray only.
-Black Soft	4EC. Apply as a dilute spray.	Observe all applicable precautions on
-Brown Soft		Ethion label.
-Chaff		Do not apply to Navel oranges.
-Glover		5
-Purple		
-Red		
-Yellow		
Scale Insects	5 to 10 gals. of oil per acre.	
-Black Soft	Apply as a dilute spray.	
-Brown Soft		
-Chaff		
-Glover		
-Purple		
-Red		
-Yellow		
Whitefly	5 gals. of oil per acre.	
	Apply as a dilute spray.	
Greasy Spot	5 gals. of oil per acre.	Tank mix with sufficient copper
(Grapefruit)	Apply as a dilute spray.	fungicide to provide 4 lbs. per acre
		of metallic copper.
Greasy Spot	5 to 10 gals. of oil per acre.	If disease pressure is severe, tank mix
(all other varieties)	Apply as a dilute spray.	4 lbs. (metallic) copper per acre. Do
		not exceed 5 gals. oil if copper used.
Loosening sooty mold	5 to 10 gals. of oil per acre.	Use higher rate when disease
0 9	Apply as a dilute spray.	presure is heavy.

Dilute spray: Apply the spray oil application rate in up to 1500 gallons of water per acre, or 10 to 11.6 gallons per tree, to over 15 gallons per tree for large trees. Do not exceed a maximum of 159 pounds of active ingredient (in a maximum volume of 1500 gallons of spray mix per acre) when treating citrus in Florida and Texas (based on dilute spray, with 1½ gallons of product mixed per 100 gallons of water).

Improved efficacy can be obtained when the oil is added to a partially filled spray tank under proper agitation and all foliage is thoroughly covered.

Precautions in the use of oil include: Do not apply oil spray when trees are wilting. Do not apply oil and sulfur within 3 weeks of each other in Florida or Texas. Oil spray applied after October 1 may increase susceptibility of trees to cold damage and may reduce the fruit crop the following year. Oil sprays applied in the fall may inhibit solids formation in the juice and retard coloring of fruit and should not be applied within 60 days of anticipated harvest. Sensitive foliage may be injured.

Florida growers consult the Florida Citrus Spray and Dust Schedule, or your Agricultural Experiment Station or State Extension Service Specialist for complete details on the spraying program best suited to your locale. Texas growers consult with your Agricultural Experiment Station or State Extension Specialist for complete details on the spraying program suited to you locale.

#### COFFEE: \*

PEST	<b>APPLICATION RATE &amp; TIMING</b>	COMMENTS
Green Scale	Use 3 to 6 gallons in 100 gallons of water per acre. Use only water as a diluent.	Apply when insects appear and treat as necessary at 30 to 60 day intervals. Do <u>not</u> exceed 18 gallons of oil per acre in a growing season. Do <u>not</u> apply within 30 days of harvest when herries are bandnicked. Oil

when berries are handpicked. Oil residues make picking difficult. Do not apply this product through any type of irrigation system. Phytotoxicity may be affected by the quantity of oil used, vigor of trees and temperature at the time of application.

#### FIGS:

PESTS	APPLICATION RATE & TIMING (gallons of oil per 100 gallons of water)	COMMENTS
Fig Scale	1-3	Dormant or Delayed Dormant
Mites	1-2	Foliar Spray
Mealybug		
Scale		

#### **GRAPES**:

PEST	APPLICATION RATE & TIMING	COMMENTS
Mealybug Mites	<b>DORMANT:</b> Use 1 to 3 gals. plus the appropriate label rate of insecticide	Do not apply over 300 gals. of water per acre.
Leafhopper* Whiteflies* Powdery Mildew	registered for use on grapes in 200 to 300 gals. of water per acre.	Using ground equipment, spray for optimum coverage of leaf surfaces. Repeat sprays every 10-14 days.
		For powdery mildew - Make first application pre-bloom and continue every ten days to three weeks depending on level of disease pressure. Use higher rate and/or shorter spray interval when disease conditions are severe. Oil will remove the bloom on grapes. Table grapes should not be sprayed within 60 days of harvest. On grapes, <b>do not tank mix</b> oil and copper more than once/season. Do not use copper and oil together with fruit present.

#### **OLIVES:**

PEST	APPLICATION RATE & TIMING	COMMENTS
Olive (Parlatoria) Scale	POSTBLOOM THROUGH AUGUST AND	
Oleander Scale	<b>POST HARVEST:</b> Use 1 to 1½ gals. per	
Black Scale	100 gals. of water at 400 to 1500 gals.	
	per acre.	
Mites		
		Prebloom to Postbloom Buckshot
PECANS:		

PESTS	APPLICATION RATE & TIMING	COMMENTS
Scales	Use 2 to 3 gallons in 100 gallons of water	Apply from late February until buds
Aphids (eggs)	using a minimum of 200 gallons of water	first break.
Mites (eggs)	per acre. Use the lower rate of oil when	
	trees are in a weakened condition.	
	(Concentrate Spray: Use 6 to 8 gallons per	
	acre in a minimum of 20 to 125 gallons of wa	ater.)
STRAWBERRIES:		
PESTS	APPLICATION RATE & TIMING (gallons of oil per 100 gallons of water)	COMMENTS
Leafminers*	0.75	Spray at no less than 400 psi using
Mites	0.70	ceramic spray nozzles (ALBUZ® ATR,
Powdery Mildew		lilac color or their equivalent).
TROPICAL FRUIT: Kiwi, Mango, P	apaya and Pineapple. *	
PESTS	APPLICATION RATE & TIMING	COMMENTS
KIWI	Use 4 to 6 gallons of oil in a minimum of	Do <u>not</u> apply after budbreak. Do <u>not</u>
Latania Scale	100 gallons of water per acre.	use on weak or stressed vines,
Greedy Scale	Use higher rate when scale populations	or where soil moisture is inadequate.
Oleander Scale	are high.	
San Jose Scale	<u> </u>	
MANGO	Use 1 to 1.5 gallons of oil in 100 gallons	Apply every 2 to 3 weeks as necessary
Mites	of water per acre.	depending on level of pest pressure.
Powdery Mildew		
РАРАҮА	Use 0.75 to 1.5 gallons in 100 gallons	For Powdery Mildew/Mites: Spray
Mites	of water per acre.	every 10 to 14 days depending on the
Powdery Mildew		level of pest pressure. For Virus:
Papaya Ringspot Virus		Initiate spray when seeds are
		germinated. Spray weekly using 400
		psi spray pressure and ceramic hollow cone nozzles.
PINEAPPLE	Spray - Use 1 to 2 gallons of oil in 100	Allow fruit to dry for 1 hour before being
Mealybugs	gallons of water per acre.	stored.
Bud Moth	<b>Dip</b> - Use 1 to 2 gallons of oil in 100	
Chinese Rose Beetle	gallons of water, dip for 30 seconds.	
WALNUTS:		
PEST	<b>APPLICATION RATE &amp; TIMING</b>	COMMENTS
Black Scale	DELAYED DORMANT: Use 4 to 6 gals.	Use only on trees that have not
Calico Scale	per acre in 200 to 500 gallons of	suffered from lack of moisture at any
European Fruit Lecanium Scale	water per acre.	time during the growing season. Do
Frosted Scale		not apply to orchards where soil
Olive Scale		moisture is low.
San Jose Scale		Trees must be fully dormant. Do not apply after husk split.
European Red Mite Eggs		20 not apply and much opin.
Walnut Aphid Eggs		
Spider Mites	SUMMER FOLIAR (when leaves fully	
Soft Scales	expanded): Use 4 to 6 gals. per acre in	
	200 to 500 gals. water per acre.	

#### **VEGETABLE CROPS**

ASPARAGUS, BEANS, BEETS, CABBAGE, CAULIFLOWER and other Cole crops, CELERY, CUCURBITS, EGGPLANT, LETTUCE, MELON, PEPPER, POTATO, PUMPKIN, RADISH, SQUASH, SWEET POTATO, TOMATO, HERBS AND SPICES (Curly Leaf Basil, Lemon Balm, Mexican Oregano, Mint), ORIENTAL VEGETABLES (Acerola, Atemoy, Balsam pear (Bitter melon), Carambola, Chinese broccoli (Gai Lon), Chinese cabbage (Gai Choy), Chinese spinach, Chinese waxgourd, Cilantro, Citron melon, Dasheen, Ginger, Ginseng, Japanese artichoke, Japanese radish (Daikon), Rambutan):

PESTS	APPLICATION RATE & TIMING (gallons of oil per 100 gallons of water)	COMMENTS
Aphids Mites Beetle Larvae Leafminers Thrips Leafhopper Whitefly	0.75-1	For virus control on cucurbits use 0.75 gallons per 100 g. Spray once or twice weekly depending on the rapid growth of the crop and / or vector pressure. When using to control insect transmitted diseases, use higher pressure 400 psi and ceramic hollow cone nozzles.

#### ORNAMENTALS

#### **FOLIAGE ORNAMENTALS & BEDDING PLANTS:**

PESTS	APPLICATION RATE & TIMING (ounces of oil per gallon of water)	COMMENTS
Aphids	1-2.5 oz. per gallon	Summer (Foliar or Cover): Do not spray
Adelgids		plants during flowering.

# SHADE TREES\*\* AND SHRUBS INCLUDING CONIFERS, DECIDUOUS BROADLEAF EVERGREENS & WOODY ORNAMENTALS, ORNAMENTAL TREES\*\*, SHRUBS ALONG CITY STREETS, OTHER RIGHTS-OF-WAY INCLUDING CONIFERS, DECIDUOUS AND BROADLEAF EVERGREENS:

PESTS	APPLICATION RATE & TIMING	COMMENTS
	(ounces of oil per gallon of water)	
Aphids	Winter Dormant Period:	<b>CAUTION:</b> Spray no more than 4 times
Adelgids	2.5-4 oz. per gallon	during the growing season; Use 2
Eriophyid Mites		week minimum application Interval. Do
Gall Mites		not spray when there is obvious
Honey Locust Plant Bug	Summer (Foliar or Cover):	moisture deficit in leaves, or the plant is
Lace Bug	1-2.5 oz. per gallon	under stress. For fall dormant
Leaf Beetle Larvae		applications, reduce rate to 2 gallons oil
Leafminer		per 100 gallons water and limit use
Leafrollers		only to: American Red Oak, Japanese
Mealybugs		Black Pine, Dogwood, Weeping Cherry,
Psyllids (immature)		Cornelian Cherry, Crabapple, Norway
Red Mites		Maple, Purple Plum.
Sawfly (larvae)		<b>NOTE:</b> May cause discoloration of Blue
Scales (immature)		Spruce. Do not use on conifers or ferns
Spider Mites		not tolerant to oil sprays. Use enough
Webworms		spray solution to completely penetrate
Whiteflies		the leaf canopy and cover both top and
		bottom of all of the leaves and stems
		until wet but without significant runoff.
		Do not spray during flowering.

#### FLOWERING AND FOLIAGE PLANTS INCLUDING ROSES AND OTHER FLOWERING SHRUBS:

PESTS	APPLICATION RATE & TIMING (ounces of oil per gallon of water)	COMMENTS
Same as above	Winter Dormant Period: 2.5-4 oz. per gallon	Do not spray during flowering.

#### CHRISTMAS TREES \*\*:

PESTS	APPLICATION RATE & TIMING (ounces of oil per gallon of water)	COMMENTS
Scale (soft & hard) (immature)	2-3	Winter
Spider Mites	0.75-2	Summer

Use a lower concentration for more sensitive plants.

\*\* This product removes the glaucous (blue) bloom from such evergreens as Colorado Blue Spruce and Koster Spruce. Always use lower dosage or test spray oil sensitive plants such as Cryptomeria, Smoke Tree, Chamaecypris, Juniper, Japanese Holly and Spruce. Tendency toward sensitivity: Red Cedar and Douglas Fir.

#### **GREENHOUSE AND CONTAINER**

**Frequency of Application:** For the greenhouse pests listed, use once a week initially, then as the pest is controlled, decrease the frequency to every 2-3 weeks as needed.

Application safety during bloom period should be determined for each individual species of plant to be treated by conducting a small test.

## AGERATUM, CROWN OF THORNS, DIEFFENBACHIA, FERNS, FICUS, LISIANTHUS, ORCHID, PALMS, PETUNIA, POINSETTIA, SCHEFFLERA, SUNFLOWER:

PESTS	APPLICATION RATE & TIMING (gallons of oil per 100 gallons of water)	COMMENTS
Aphids Fungus Gnats Leafminers Mealybugs Scales (soft & hard) Spider Mites Thrips Whitefly	0.5-1	Due to varietal differences in response to a treatment of this product at the specified rates, conduct a small test on 1 or 2 plants of the specific variety to be treated.

#### LEAF POLISH FOR HARDY PLANTS:

PESTS	APPLICATION RATE & TIMING	COMMENTS
	(ounces of oil per gallon of water)	
	1	

AGLAONEMA, ASTER, AZALEAS, BEGONIAS, BROWALLIA, CAMELLIAS, CARNATION, CELOSIA, CHRYSANTHEMUM, COLEUS, COSMOS, DUSTY MILLER, EASTER LILIES, GARDENIAS, GERBERA, HELLICHRYSUM, HIBISCUS FOLIAGE, HYDRANGEA, JADE PLANT, MARIGOLD, NEW GUINEA IMPATIENS, NICOTONIA, PHILODENDRON, PORTULACA, REIGER BEGONIAS, SNAPDRAGON, ZINNIAS:

PESTS	APPLICATION RATE & TIMING (gallons of oil per 100 gallons of water)	COMMENTS
Aphids	1-2	Due to varietal differences in response
Fungus Gnats		to a treatment of this product at the
Leafminers		specified rates, conduct a small test on
Mealybugs		1 or 2 plants of the specific variety to
Scales (soft & hard)		be treated.
Spider Mites		
Thrips		
Whitefly		

Some plants are more sensitive to oil treatments if any of the following conditions are present when application is made: High humidity (74%), an overcast or cloudy day, inadequate air flow, a small greenhouse where the sunlight is magnified causing a fast build-up of temperature and light intensity.

#### **FIELD CROPS**

#### CORN (Sweet & Field), SUGAR BEETS:

PESTS	APPLICATION RATE & TIMING (gallons of oil per 100 gallons of water)	COMMENTS
Aphids	<b>Corn:</b> 1-2	
Mites	Sugar Beets: 2	
Leafminers		
Corn Earworm		
Rootworm		
Armyworm		
Whitefly		
HOPS*:		
PESTS	APPLICATION RATE & TIMING	COMMENTS
	(gallons of oil per 100 gallons of water)	
Mites	1-2	For powdery mildew: Initiate sprays at
Powdery Mildew		early leaf stage. Continue sprays every
		10-14 days. Mite control will be
		effective under the same spray interval
		as powdery mildew sprays. Discontinue
		sprays at burr development.
TOBACCO:		
PESTS	APPLICATION RATE & TIMING	COMMENTS
<u> </u>	(gallons of oil per 100 gallons of water)	
Aphids	0.75-1	
Mites		
Beetle Larvae		
Leafminers		
Thrips		
Leafhopper		
Whitefly		

\*Asterisk denotes crop, pest Not approved in California.

This product has not been tested on all species or varieties. Before treating a large area, treat a small area and observe prior to full scale application.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

**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 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.acrecycle.org. If not recycled, then 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.

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 <sup>1</sup>/<sub>4</sub> 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. 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. Offer for recycling or reconditioning, if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

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

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**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.

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