

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



OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

MAY 13 2003

Ms. Nancy E. H. Wright  
Sunoco, Inc. (R&M)  
1801 Market Street  
Philadelphia, PA 19103

Dear Ms. Wright:

Subject: Revised Labeling  
Sunspray 6E Western  
EPA Registration No. 862-31  
Your Submission Dated April 4, 2003

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable provided you make the following changes before you release the product for shipment bearing the amended labeling:

1. Under Environmental Hazards delete the phrase "For terrestrial uses". Your product only has terrestrial uses.
2. In the Directions for Use, under each table place an "\*" (asterisk) at the beginning of each footnote.

Submit two copies of your final printed labeling before you release the product for shipment. A stamped copy is enclosed for your records. If you have any questions, please contact me at (703) 308-6249 or [hebert.john@epa.gov](mailto:hebert.john@epa.gov).

Regards,

A handwritten signature in black ink, appearing to read "John Hebert".

John Hebert  
Insecticide-Rodenticide Branch  
Registration Division (7505C)

# SUNSPRAY® 6E WESTERN

A superior horticultural spray oil for western agriculture

Active Ingredient: Paraffinic Petroleum Oil*	98.8 wt%
Other Ingredient: Emulsifier	1.2 wt%
	100.0 wt%
*Un sulfonated Residue of Paraffinic Petroleum Oil	92.0 % Min
*50% Distillation Point of Paraffinic Petroleum Oil	415.0 °F
*Flash Point	345.0 °F
Weight per Gallon	7.1 lbs.

## KEEP OUT OF REACH OF CHILDREN - CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail).

### FIRST AID

#### If swallowed:

Immediately call a poison control center or doctor.

DO NOT INDUCE VOMITING unless told to do so by a poison control center or doctor.

Do not give any liquid to the person.

Do not give anything by mouth to an unconscious person.

#### If in eyes:

Hold eye open and rinse slowly and gently with water for 15-20 minutes.

Remove contact lenses, if present, after the first 5 minutes, then continue rinsing the eye.

Call a poison control center or doctor for treatment advice.

#### If on skin or clothing:

Take off contaminated clothing.

Rinse skin immediately with plenty of water

for 15-20 minutes followed by washing with soap and water.

Call a poison control center or doctor for treatment advice.

#### If inhaled:

Move person to fresh air.

Call a poison control center or doctor for further treatment advice.

### HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-964-8861 for emergency medical treatment information.

### NOTE TO PHYSICIAN

Contains petroleum distillate - vomiting may cause aspiration pneumonia. Aspiration may occur after swallowing or vomiting and results in serious, and sometimes delayed lung injury.

According to the California Safe Drinking Water and Toxic Enforcement Act of 1986 Regulations, otherwise known as "Proposition 65" -ATTENTION-This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.



**Sunoco, Inc. (R&M)**  
Ten Penn Center  
1801 Market Street  
Philadelphia, PA 19103-1699

**EPA Registration No. 862-31**  
**EPA Establishment No. 66196-CA-1**  
**Net Content: BULK**

### PRECAUTIONARY STATEMENTS

Hazards to humans & domestic animals

#### CAUTION

Avoid contact with eyes, skin and clothing. Harmful if swallowed. Avoid breathing of spray mists or vapors. Avoid contamination of food or food stuffs.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

Long-sleeved shirt and long pants

Shoes plus socks

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

### USER SAFETY RECOMMENDATIONS

Users should: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

### ENVIRONMENTAL HAZARDS

This product is toxic to fish. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not contaminate water when disposing of equipment washwaters. Apply this product only as specified on this label.

### STORAGE AND DISPOSAL

- 1. Prohibitions:** Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.
- 2. Storage:** Store in a cool, dry, locked area out of the reach of children. Keep oil container tightly closed in storage to prevent entry of water.
- 3. Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.
- 4. Container Disposal:** Metal: Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. Plastic: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

See additional Precautionary Statements inside booklet.  
See Directions For Use inside Booklet

SS-5207 11/02

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ACCEPTED  
with COMMENTS  
In EPA Letter Dated:

MAY 13 2003  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under EPA Reg. No.

862-31

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A superior horticultural spray oil for western agriculture

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Remove contact lenses, if present, after the first 5 minutes, then continue rinsing the eye.  
Call a poison control center or doctor for treatment advice.

**If on skin or clothing:** Take off contaminated clothing.  
Rinse skin immediately with plenty of water for 15-20 minutes followed by washing with soap and water.  
Call a poison control center or doctor for treatment advice.

**If inhaled:** Move person to fresh air.  
Call a poison control center or doctor for further treatment advice.

**NOT LINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-954-8861 for emergency medical treatment information.

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See Additional Precautionary Statements Inside Booklet. See Directions For Use Inside Booklet.

**EPA Registration No. 862-31**



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Ten Penn Center  
1801 Market Street  
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**CAUTION**

Avoid contact with eyes, skin and clothing. Harmful if swallowed. Avoid breathing of spray mists or vapors. Avoid contamination of food or food stuffs.

**Personal Protective Equipment (PPE)**

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

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

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Users should: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

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4. **Container Disposal: Metal:** Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. **Plastic:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**LIMITED WARRANTY AND LIABILITY**

This product conforms to the description and is suitable for the uses set forth on this label but is strictly limited to those uses solely as directed under the specified label conditions, and only if purchased in the original unopened container. **MANUFACTURER AND SELLER DISCLAIM ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE** (except as specified on this label). Buyer and all users shall assume all risk, liability and damage if this product is used, stored, handled or applied other than as specifically set forth on this label. **LIABILITY OF MANUFACTURER AND SELLER AND USER'S REMEDIES SHALL BE LIMITED TO REFUND OF THE PURCHASE PRICE OR REPLACEMENT OF THE SPECIFIC QUANTITY INVOLVED. IN NO EVENT SHALL MANUFACTURER OR SELLER BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

**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. 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, 40CFR 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), restricted-entry interval and notification to workers. 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 plants, soil, or water, is:

- coveralls
- waterproof gloves
- shoes plus socks

**USES**

For control of mite and insect pests on deciduous fruit, nut and vine crops such as almonds, apples, apricots, avocado, cherries, figs, grapes, kiwifruit, nectarines, olives, pears, peaches, persimmons, plums, prunes, walnuts and citrus. This product may also be applied to corn and sugar beets.

**Not for use in Landscape, Greenhouse or Nursery Production Areas.**

**PESTS CONTROLLED**

This product controls a wide range of mite and insect pests in the egg stage such as: spider and eriophyid mites, armored and soft scales, mealybugs, psyllids, aphids, leafrollers and leafhoppers. Will kill other immature forms if spray covers the insect. This product can be applied up to harvest.

**MIXING DIRECTIONS**

1. Add sufficient water to the mixing tank to allow proper agitation by pump or paddles.
2. Add other desired pesticide. If wettable powder formulation, mix the water and powder thoroughly so that the powder is totally suspended in the water before the oil is added. If other pesticide to be added is an emulsifiable formulation, do so after the oil and water have been thoroughly mixed.
3. Add oil under agitation when tank is 3/4 full. Top off with water to form milky solution.
4. Maintain agitation until solution is used.
5. In small equipment lacking agitators, stir or shake diluted spray frequently during application.
6. It is important for users to read and follow all directions and restrictions on the labels of the proposed tank mix products.
7. Flush fluid in sprayer hose lines back into tank reservoir if fluid is allowed to stand for more than 20 minutes.

**APPLICATION INSTRUCTIONS**

The target pest must be completely covered with spray. Oil residue on the plant surface often acts as a feeding and ovipositioning deterrent. However, the primary target is the

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pest itself as oil is a contact pesticide. Spray only when the temperature is above 40°F and there is no danger of freezing.

**DILUTE APPLICATIONS** defined as the number of gallons needed to completely cover all the tree surfaces, but not to the point of runoff. For most tree fruits this can be as much as 300-600 gallons per acre or as low as 100 gallons per acre for smaller trees. For mature citrus trees this can be as much as 600-2000 gallons per acre, depending on the tree size. For avocado trees this can be as much as 700- 1800 gallons per acre. Dilute applications ensure the best coverage.

**CONCENTRATE APPLICATIONS**(usually 45 to 125 gallons spray per acre) may reduce coverage and effectiveness. Concentrate application includes the use of low volume (from 10 to 100 gallons spray per acre) sprayers. A concentrate application can provide satisfactory results as long as the spray unit is properly engineered, calibrated and operated. Speed of travel for ground application is extremely important. Tractor speed from 1 M.P.H. to 4 M.P.H. is recommended depending on crop, crop size and target pest.

Low volume applications of Sunspray will require approximately the same amount of oil per acre as dilute sprays but applied with much less water. Spray oil calculations should be based on no run off of the oil phase of the mixture.

**AERIAL APPLICATIONS** Use only as an emergency application when soil conditions do not permit regular ground application. Apply quantity of product shown for each listed crop for control of listed insects in sufficient water to make a minimum of 20 gals. dilute spray per acre.

**TIMING THE TREATMENT**

The applicator must determine the precise timing to fit local growth and climatic conditions.

**DO NOT EXCEED MAXIMUM RATES OR APPLY MORE OFTEN THAN RECOMMENDED**

**MAY BE USED UP TO THE DAY OF HARVEST**

**TANK MIXES**

Do not tank mix with any herbicides. Do not tank mix with any insecticide, fungicide or miticide whose label indicates that it should not be used with oil. It is recommended that the applicator consult the local pest management recommendations for other insecticides that may be tank mixed with oil. These recommendations will also suggest rates for the insecticide and the oil along with more precise information as to the best time for application. It is important for users to read and follow all directions and restrictions on the labels of the proposed tank mix products. Check tank mixture for physical and chemical compatibility. Mix only enough material to do the job.

1. For use as a carrier for *Bacillus thuringiensis* when applied through a mist blower or cold fog machine.
2. May be used with Ethion to obtain two modes of insecticidal action on citrus fruits.
3. May be used in a tank mix with Lorsban on apples, pears, plums, prunes, peaches, sweet corn and field corn.
4. May be used in a tank mix with Supracide\* on apples, pears, plums, prunes, peaches, and citrus (oranges, grapefruit, lemons).
5. May be used as a spreader or carrier for certain synthetic organic insecticides.

*\*Note: Supracide is a "Restricted Use Pesticide".*

**GENERAL RECOMMENDATIONS FOR APPLICATION TO ALMONDS, APPLES, APRICOTS, CHERRIES, PEACHES, NECTARINES, PEARS, PLUMS AND PRUNES.**

Completely cover all tree parts to achieve adequate control. Oil alone will control low to moderate infestations. Oil may be combined with other compatible insecticides for controlling higher scale infestations or to achieve better control of Peach Twig Borer. Caution is required when combining certain miticides or insecticides due to possible increased phytotoxicity when applied to foliage. Do not apply over certain fresh market fruits after the bloom starts to form as the oil spray will remove the waxy bloom. We recommend consulting the local pest management guidelines or Agricultural Extension Service for more details as to the rates and times of application for your specific location.

**CITRUS**

Oils applied after October may increase cold damage to trees. Oils applied in August and September may affect solid contents and retard coloring.

**GRAPES**

The oil application should be made before mites reach high populations. Vineyards should be vigorous and supplied with sufficient water prior to application. Do not allow excessive webbing or burning. No sensitivity to Sunspray treatments have been seen in the vineyards of cabernet, merlot, chardonnay or ribier when used for insect control. Do not mix Sunspray with dicofol (Kelthane), Captan, or sulfur since all can cause phytotoxicity in some varieties. Air carrier or air-blast sprayers are strongly recommended to avoid plant injury and reduce effect on the bloom of table grapes.

**USE PRECAUTIONS**

Keep oil container tightly closed in storage to prevent entry of water. Store drum on its side. Roll drum before use. All horticultural oils interfere with or slow plant transpiration and respiration during the period of evaporation. Phytotoxicity may result if sprayed to plants during periods of prolonged high temperature and high relative humidity. Do not spray to plants under stress (i.e. drought, disease). Do not spray immediately prior to, during or following unusually cold weather or freezing temperatures. The following list of pesticides represents some of the compounds that should not be used with Sunspray, however this list is not exhaustive: anilazine (Dyrene), captan (Captan), captofol (Difolatan), cyprax (Dodine), Chlorothalnil (Bravo), dimethoate (Cygon), dinocap (Karathene), dithianon (Delan), fentin hydroxide (Supertin), fentinacetate (Fentin), folpet (Folpet), methiocarb (Metmercaptopron), oxythioquinox (Morestan), PMA(Agrosun), propargite (Omite), fine sulfur, wettable sulfur or any other product containing sulfur. For fungicides not included in this listing, consult the label of the specific fungicide formulation for compatibility information when used with oil. We recommend consulting your local extension agent for local recommendations relative to a specific fungicide/oil mix on a specific crop. Keep the spray equipment used for these products separate from the equipment used for Sunspray. Do not use with Sevin 50W formulation (carbaryl) on deciduous fruit trees.

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CROPS	INSECT CONTROL AID	APPLICATION RATE			TIME OF APPLICATION (Stage of Development)
		DILUTE SPRAY per 100 Gal. Water	CONCENTRATE Gallons Oil Per Acre	AERIAL* Gallons Oil Per Acre	
ALMONDS	Mite eggs	1.5-2.0	4-8	4-8	Dormant or delayed dormant.
	European Red Mite				
	Brown Mite				
	Scales	1.5-2.0	4-8	4-8	Dormant or delayed dormant.
	San Jose Scale				
	Fruitree Leafroller eggs	1.5-2.0	4-8	4-8	Dormant or delayed dormant.
	Peach Twig Borer	1.5-2.0	4-8	4-8	Dormant or delayed dormant. If applying oil alone for moderate to severe San Jose scale infestations use the dilute application only. Do not use oil on water stressed trees.
	Mites	1.0	3-6	3-6	Summer (foliar or cover) or Post harvest. Application should not be made over oil sensitive varieties. Do not use oil on water stressed trees.
APPLES	Apple Red Bug	1.5-2.0	4-8	4-8	Dormant through Tightcluster.
	Fruitree Leafroller (eggs)	1.5-2.0	4-8	4-8	
	European Red Mite (eggs)	1.5-2.0	4-8	4-8	
	Aphid Eggs	1.5-2.0	4-8	4-8	
	Scales	1.5-2.0	4-8	4-8	
	San Jose Scale				
	European Fruit Lecanium Scale				
	Sourfy Scale				
	Italian Pear Scale				
	Mites	1.0	3-6	3-6	Summer (foliar or cover) or Post harvest.
	Scales				

Aerial application should be used only as an emergency application when soil and terrain conditions do not permit regular ground application.



CROPS	INSECT CONTROL AID	APPLICATION RATE			TIME OF APPLICATION (Stage of Development)
		DILUTE SPRAY per 100 Gal. Water	CONCENTRATE Gallons Oil Per Acre	AERIAL* Gallons Oil Per Acre	
APRICOTS	Mite eggs	1.5-2.0	4-8	4-8	Dormant or delayed dormant.
	European Red Mite				
	Brown Mite				
	Aphid eggs	1.5-2.0	4-8	4-8	Dormant or delayed dormant.
	Scales	1.5-2.0	4-8	4-8	Dormant or delayed dormant.
	European Fruit Lecanium Scale				
	San Jose Scale				
Fruitree Leafroller eggs	1.5-2.0	4-8	4-8	Dormant or delayed dormant.	
Peach Twig Borer	1.5-2.0	4-8	4-8	Dormant or delayed dormant. Do not use on water stressed trees.	
	Mites Scales	1.0	3-6	3-6	Summer (folar or cover) or Post harvest. Application should not be made over oil sensitive varieties. Do not use oil on water stressed trees.
AVOCADOS Haas variety only	Mites Scales	1.0	7-18	7-18	Late Summer - Fall. Good coverage is required to be effective. Do not use if tem- perature is >90°F or RH is <30%. Trees should not be stressed (i.e. drought). Consult your Agricultural Extension Service for spe- cial recommendations.

Aerial applicaton should be used only as an emergency application when soil and terrain conditions do not permit regular ground application.

CROPS	INSECT CONTROL AID	APPLICATION RATE			TIME OF APPLICATION (Stage of Development)
		DILUTE SPRAY per 100 Gal. Water	CONCENTRATE Gallons Oil Per Acre	AERIAL* Gallons Oil Per Acre	
CHERRIES (sweet & tart)	Mite Eggs	1.5-2.0	4-8	4-8	Dormant or delayed dormant.
	European Red Mite				
	Brown Mite				
	Aphid eggs	1.5-2.0	4-8	4-8	
	Fruitree Leafroller eggs	1.5-2.0	4-8	4-8	
	Scales	1.5-2.0	4-8	4-8	
	European Fruit Lecanium Scale				
	Black Scale				
	San Jose Scale				
	Cherry Leafhopper eggs	1.5-2.0	4-8	4-8	
Peach Twig Borer	1.5-2.0	4-8	4-8	Dormant or delayed dormant. Do not apply oil to water or disease stressed trees.	
	Mites	1.0	3-6	3-6	Summer (foliar or cover) or Post harvest. Application should not be made over oil sensitive varieties. Do not apply oil to water or disease stressed trees.
	Scales				
CORN (Field & Sweet)	Ear worms	2.0	NR	NR	Spring-early
	Corn root worms				
FIGS	Scales	1.5- 2.0	4-8	4-8	Dormant or delayed dormant.
	Mites	1.5-2.0	NR	NR	Summer (foliar or cover)
	Scales				

Aerial application should be used only as an emergency application when soil and terrain conditions do not permit regular ground application.

NR=not recommended

CROPS	INSECT CONTROL AID	APPLICATION RATE			TIME OF APPLICATION (Stage of Development)
		DILUTE SPRAY per 100 Gal. Water	CONCENTRATE Gallons Oil Per Acre	AERIAL* Gallons Oil Per Acre	
GRAPES	Mealybug	1.0-2.0	NR	NR	Dormant-A tank mix using an insecticide improves control.
	Mites	2.0	NR	NR	Bud swell or shoot growth of 5-7 cm (2-3 inches) in Spring. Can also be used postharvest.
KIWIFRUIT	Scales Leaf Rollers	1.0	NR	NR	Late Spring -summer. Do not apply during period of fruit sensitivity, @ 10 days after flowering to the third week of July. Do not apply at rates higher than indicated. Do not apply during weather conditions that allow for slow drying of the spray solution. Do not use spray additives.
OLIVES	Scales	1.5	NR	NR	Postbloom -Summer and Postharvest-Prebloom. Apply 400-1500 gal dilute spray per acre. Spray at night or early morning if temperatures are expected to exceed 90°F during the day. Do not apply oil to olives used for Spanish or green-ripe processing between Aug 20 and harvest due to fruit spotting.

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NR= not recommended

CROPS	INSECT CONTROL AID	APPLICATION RATE			TIME OF APPLICATION (Stage of Development)
		DILUTE SPRAY per 100 Gal. Water	CONCENTRATE Gallons Oil Per Acre	AERIAL* Gallons Oil Per Acre	
PEARS	Mite eggs	1.5-2.0	4-6	4-6	Dormant or delayed dormant.
	European Red Mite				
	Brown Mite				
	Pear Leaf Blister Mite				Dormant.
	Scales	1.5-2.0	4-6	4-6	
	European Fruit Lecanium Scale				
	San Jose Scale	1.5-2.0	4-6	4-6	SJS-Do not apply to heavy infestations.
	Mealybug (eggs & Crawlers)	1.5-2.0	4-6	4-6	Dormant or delayed dormant.
	Fruitree Leafroller (eggs)	1.5-3.0	4-6	4-6	Dormant.
Pear Psylla	1.5-2.0	4-6	4-6	Dormant - Make sure root zone is wet from rain or irrigation.	
	Mites				Summer (foliar or cover) or Postharvest
	Two-spotted spider mite	1.0	3-6	3-6	
	Brown Mite	1.0	3-6	3-6	
	Pear Rust Mite	1.0-2.0	3-6	3-6	
	Pear Leaf Blister Mite	1.5-2.0	4-6	4-6	
	Pear Psylla	1.5-2.0	4-6	4-6	

Aerial application should be used only as an emergency application when soil and terrain conditions do not permit regular ground application.  
 NR = Not Recommended.

CROPS	INSECT CONTROL AID	APPLICATION RATE			TIME OF APPLICATION (Stage of Development)
		DILUTE SPRAY per 100 Gal. Water	CONCENTRATE Gallons Oil Per Acre	AERIAL* Gallons Oil Per Acre	
PEACHES/ NECTARINES	Mite Eggs	1.0-1.5	3-8	3-8	Dormant.
	European Red Mite				
	Scales	1.0-2.0	3-8	3-8	Dormant.
	Cottony Peach Scale				
	San Jose Scale				
	Fruittree Leafroller (eggs)	1.0-1.5	3-8	3-8	Dormant.
	Peach Twig Borer	1.0-1.5	3-8	3-8	Dormant. Do not use on water stressed trees.
	Mites	1.0	3-6	3-6	Summer (foliar or cover) or Postharvest.
	Scales				
PERSIMMONS	Book lice (psocids)	1.0	NR	NR	Summer (foliar or cover) into Fall. Do not exceed 5 applications in a growing season. A 2 week application interval is recommended.
	Leafrollers				
	Scales				

Aerial application should be used only as an emergency application when soil and terrain conditions do not permit regular ground application.

NR = Not Recommended.

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		DILUTE SPRAY per 100 Gal. Water or as specified	CONCENTRATE Gallons Oil Per Acre	AERIAL* Gallons Oil Per Acre	
PLUMS & PRUNES	Mite eggs	1.5-2.0	4-6	4-6	Dormant or delayed dormant.
	European Red Mite				
	Brown Mite				
	Scales	1.0-1.5	3-6	3-6	Dormant or delayed dormant.
	European Fruit Lecanium Scale				
	San Jose Scale				
	Aphids eggs	1.0-1.5	3-6	3-6	Dormant or delayed dormant.
	Peach Twig Borer	1.0-1.5	3-6	3-6	Dormant or delayed dormant. Oil applications to kill over-wintering eggs may cause some young shoot burn or dieback. Always apply oil to well watered trees. Do not use on Queen Ann variety of Plum.
	Mites	1.0	3-6	3-6	Summer (folar or cover) or Postharvest. Application should not be made over oil sensitive varieties.
	Scales				
SUGAR BEETS	Mites Leafminer	2 gal/acre	NR	NR	As Needed.
WALNUTS	Mites Scales	4 Gal (200-400 gal water/acre)	4	NR	Postbloom - Late Spring to mid Summer. Apply oil to walnuts only when soil moisture is adequate and trees have not been stressed (insect, disease damage, ect.) at anytime during the year. Oils are not recommended for use during the dormant season.

Aerial application should be used only as an emergency application when soil and terrain conditions do not permit regular ground application.

NR = Not Recommended.

CROPS	INSECT CONTROL AID	APPLICATION RATE		COMMENTS
		DILUTE SPRAY Gals./100 Gals.	CONCENTRATE* Gal./Acre	
CITRUS	Citrus Bud Mite Citrus Red Mite Citrus Rust Mite Scale Insects	0.5-1.5	3-30	For best results, spray during Fall, early Winter & Spring months when red scale are more easily controlled and trees generally less reactive to oil. For all citrus oil sprays ensure adequate soil moisture: leaves should not wilt before noon.
	Spider Mites Whitefly Loosens Sooty Mold	0.75	4-15	For low volume oil spray treatment during the Spring, application should be discontinued as soon as temperatures go above 90°F during the day or relative humidity is expected to go down to 20 percent or below. Oils should not be used in late fall if there is any danger of damage from cold. The addition of a tank mix pesticide will improve performance against scales. Do not spray Naval orange orchards when oranges begin to reach maturity, generally from Dec until harvest due to possible water spot damage.

\*Apply in sufficient water and manner to assure thorough distribution.

**NOTES**

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