

PM19

862-23

1718

Please read instructions on reverse before completing form.

Form Approved. OMB No. 2070-0060. Approval expires 2-28-95



United States
Environmental Protection Agency
Washington, DC 20460

Registration
 Amendment
 Other

OPP Identifier Number
241842

Application for Pesticide - Section I

1. Company/Product Number 862-23	2. EPA Product Manager D. Edwards	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Sunspray 6E Plus	PM# 19	
5. Name and Address of Applicant (Include ZIP Code) Sun Company Inc. (R&M) 1801 Market Street Philadelphia, PA 19103 Attn: Nancy E. H. Wright (R&D Marcus Hook Pa) <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. 862-23 Product Name Sunspray 6E Plus	

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.)

This is a notification under EPA's final policy statement on "Reduced Restricted Entry Intervals For Certain Pesticides" requesting that the REI for Sunspray 6E Plus be reduced from 12 hours to 4 hours.

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 checked="" type="checkbox"/> Plastic
* Certification must be submitted		If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt	No. per container
				<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 None		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled				<input type="checkbox"/> Other _____	

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)					
Name Nancy E. H. Wright		Title Manager, Horticultural Oil Development		Telephone No. (Include Area Code) (610) 859-5879	
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 <i>Nancy E. H. Wright</i>		3. Title Manager, Horticultural Oil Development			
4. Typed Name Nancy E. H. Wright		5. Date 9/26/95			

2718



Sunspray 6E Plus

A superior horticultural spray oil
for insect and mite pest management.

Active Ingredient: Paraffinic Oil*	98.8%
Inert Ingredient: Emulsifier	1.2%
*Unsulfonated Residue of Paraffinic Oil	92.0% Min
*50% Distillation Point of Paraffinic Oil	414.0°F
*10%-90% Distillation Range of Paraffinic Oil ..	65.0°F Max
*Flash Point	345°F
Weight per Gallon	7.1 lbs.



CAUTION: KEEP OUT OF REACH OF CHILDREN

Statement of Practical Treatment

- **If swallowed:** Do not induce vomiting. Call a physician immediately.
- **If on skin:** Wash with soap and water.
- **If in eyes:** Flush with water.
- **If inhaled:** Move to fresh air.

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



Sun Company, Inc. (RAM)
Ten Penn Center
1801 Market Street
Philadelphia, PA 19103-1888

EPA Registration No. 862-23



PRECAUTIONARY STATEMENTS

Hazards to humans & domestic animals

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

Personal Protective Equipment

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 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:** **Metals:** 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.

USE PRECAUTIONS

Keep the oil container tightly closed in storage to prevent entry of water. All horticultural oils interfere with or slow plant transpiration and respiration during the period of evaporation. Do not spray plants under stress (i.e., drought, disease). Do not apply during periods of prolonged high temperature combined with high relative humidity. Due to the reduced respiration rate of the insect at temperatures below 50°F, the effectiveness of Sunspray 6E Plus is reduced.

Do not tank mix with any fungicides or herbicides. Do not tank mix with any insecticide or miticide whose label indicates that it should not be used with oil. Do not use with Seven 50W formulation (carbaryl) on deciduous fruit trees.

The following list of pesticides represents some of the compounds that should not be used with Sunspray 6E Plus, however this list is not exhaustive: anilazine (Dyrane), captan (Captan), captofol (Difolatan), cyprax (Dodine), chlorothal (Bravo), dimethoate (Cygon), dinocap (Karathene), dithianon (Delant), fenitro hydroxide (Suparant), fenitroacetate (Fenitro), folpet (Folpet), methiocarb (Methiocarb), oxythioquinax (Morestan), PMA (Agrosan), propargite (Omite), lime sulfur, wettable sulfur or any other product containing sulfur. Keep spray equipment used for these other products separate from the equipment used for Sunspray 6E Plus or make sure the sprayer is thoroughly cleaned so that no residues from these other products remain.

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

Protect painted surfaces, carpet and furnishings from overspray. May cause discoloration.



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*Unsulfonated Residue of Paraffinic Oil	92.0% Min
*50% Distillation Point of Paraffinic Oil	314.0°F
*10%-90% Distillation Range of Paraffinic Oil	65.0°F Max
*Flash Point	345°F
Weight per Gallon	7.1 lbs.

CAUTION: KEEP OUT OF REACH OF CHILDREN

PRECAUTIONARY STATEMENTS

Hazards to humans & domestic animals
Avoid contact with eyes, skin and clothing. Harmful if swallowed.
Avoid breathing of spray, mists or vapors. Avoid contamination of feed and foodstuffs.

STATEMENT OF PRACTICAL TREATMENT

- If swallowed: Do not induce vomiting. Call a physician immediately.
- If on skin: Wash with soap and water.
- If in eyes: Flush with water.
- If inhaled: Move to fresh air.

PERSONAL PROTECTIVE EQUIPMENT

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 adjacent areas below the mean high-water mark. Do not contaminate water when disposing of equipment washwaters. Apply this product only as specified on the label.

STORAGE AND DISPOSAL

- Prohibitions:** Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.
- Storage:** Store in a cool, dry, locked area out of the reach of children. Keep all containers tightly closed in storage to prevent entry of water.
- 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:**
 - 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.

EPA Registration No. 862-23



Sun Company, Inc. (RAM)
Ten Penn Center
1801 Market Street
Philadelphia, PA 19103-1699

EPA Establishment No. 862-PA-1
Net Contents: 55 Gallons

AI-1863 4/95

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MIXING INSTRUCTIONS

1. Add sufficient water to the mixing tank to allow proper agitation by pump or paddles.
2. Add other desired pesticides. 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 has 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.

GENERAL INFORMATION

This product controls adelgids, aphids, lace bugs, leafhoppers, leafminers (larvae), mealybugs, mites, plant bugs, psyllids, sawfly larvae, scales, thrips, whitefly and eggs of aphids, mites and certain caterpillars on vegetables, fruits, tree nuts, certain field crops, shrubs, trees, greenhouse plants, ornamental foliage plants and flowers. This product can be applied up to harvest.

APPLICATION INSTRUCTIONS

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

DILUTE APPLICATIONS (greater than 150 gallons spray per acre) in most cases, ensure the best coverage.

CONCENTRATE APPLICATIONS (usually from 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) air-blast or air-carrier 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 6E Plus will require 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. Helicopter only. Apply quantity of product shown for each listed crop for control of listed insects in sufficient water to make minimum of 20 gals. dilute spray per acre.

TIMING THE TREATMENT

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 DAY OF HARVEST.

USES

TANK MIXES: Sunspray 6E Plus may be mixed with other pesticides to improve the level of kill. Users should read and follow all directions and restrictions on the labels of the proposed tank mix products. The combination of Sunspray 6E Plus with ~~more than one additional pesticide is not recommended.~~ Use caution and read all labels thoroughly when using any insecticides or miticides in combination with the Sunspray 6E Plus. Always conduct a test spray for plant sensitivity before making a full scale application.

Note: This pesticide is to be sold only in this original unopened container.





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. SELLER DISCLAIMS ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THOSE RELATING TO 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. SELLER'S LIABILITY AND BUYER'S OR USER'S REMEDIES SHALL BE LIMITED TO REFUND OF THE PURCHASE PRICE OR REPLACEMENT OF THE SPECIFIC QUANTITY INVOLVED. IN NO EVENT SHALL 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, 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.

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



7-8-17

TABLE 1A

Crop	Pest	Application Rate - Gallons Oil			Time of Application (Stage of Development)
		Dilute Spray per 100 Gal. Water	Concentrate per 20-125 Gal. Water	Aerial* Min. 20 Gal. Spray	
Apples	Aphids (eggs)	2	6 - 8	6 - 8	Dormant or Delayed Dormant to 1/2" Green.
	Bugs (immature) - including Apple Red Bug	2	6 - 8	6 - 8	
	Mites (eggs) including European Red Mite	2	6 - 8	6 - 8	
	Scales (hard and soft)	2	6 - 8	6 - 8	
	Sourly Scale	3	6 - 8	6 - 8	
	Fruit Tree Leaf Roller (eggs)	3	6 - 8	6 - 8	
	Mites Scales	1 - 2	4 - 4	4 - 4	Summer (Foliar or Cover) or Postharvest. Do not apply over fruit after waxy bloom forms.
Pears	European Red Mite (eggs)	1 - 2	4 - 6	4 - 6	Dormant or Delayed Dormant (up to and including petal fall).
	Pear Leaf Blister Mite (eggs)	3	4 - 6	4 - 6	
	Pear Psylla	2	4 - 6	4 - 6	
	Scales	2	4 - 6	4 - 6	
	Fruit Tree Leaf Roller (eggs)	3	4 - 6	4 - 6	
	Two-Spotted Spider Mite	1	4	4 - 6	Summer (Foliar or Cover) or Postharvest.
	Brown Mite	1	4	4 - 6	
	Pear Rust Mite	1 - 2	4 - 6	4 - 6	
	Pear Leaf Blister Mite	1.5 - 2	4 - 6	4 - 6	
	Pear Psylla	1.5 - 2	4 - 6	4 - 6	
Almonds Apricots Cherries	Aphids (eggs)	2 - 3	6 - 8	6 - 8	Dormant or Delayed Dormant.
	Bugs (immature) - Fruit Tree Leaf Roller (eggs)				
	Tent Caterpillars	2	4 - 6		Dormant
	San Jose Scale				
	Mites and Scales	1 - 1.5	4 - 6	4 - 6	Summer (Foliar or Cover) or Postharvest. - Application should not be made over of sensitive varieties. - Do not apply to trees lacking adequate moisture.

* Aerial application should be used only as emergency application when soil conditions do not permit regular ground application (helicopter only)

TABLE 1A (cont.)

Crop	Pest	Application Rate - Gallons Oil			Time of Application (Stage of Development)
		Dilute Spray per 100 Gal. Water	Concentrate per 20-125 Gal. Water	Aerial Min. 20 Gal. Spray	
Peaches Nectarines	Aphids (eggs) Bugs (hemiptera) Fruit Tree Leaf Roller (eggs) Mites (eggs) Peach Twig Borer (hibernacule) Cottony Peach Scale San Jose Scale	3	6 - 8	6 - 8	Dormant or Delayed Dormant.
	Mites Scales	2	4 - 6		Dormant
	Mites Scales	1 - 2	4 - 6	4 - 6	Summer (Foliar or Cover) or Postharvest.
Plums Prunes	Aphids (eggs) Scales Mites (eggs) Peach Twig Borer (hibernacule)	1.5 - 2	6 - 8	6 - 8	Dormant or Delayed Dormant to 1/2" Green Tip
	Mites Scales	1 - 1.5	4 - 6	4 - 6	Summer (Foliar or Cover) or Postharvest. Do not apply over certain fresh market fruits after bloom starts to form as the oil spray will remove the waxy bloom. Application should not be made over oil sensitive varieties.
Pecans	Aphids (eggs) Scales Mites (eggs)	3	6 - 8	6 - 8	Dormant
	Aphids Mites	1 - 1.5	4 - 6	4 - 6	Summer (Foliar or Cover) or Postharvest

* Aerial application should be used only as emergency application when soil conditions do not permit regular ground application (helicopter only)

TABLE 1A (cont.)

Crop	Pest	Application Rate - Gallons Oil			Time of Application (Stage of Development)
		Dilute Spray per 100 Gal. Water	Concentrate per 20-125 Gal. Water	Aerial Min. 20 Gal. Spray	
Walnuts	Aphids (eggs) Scales Mites (eggs)	4 - 6	0	0	Delayed Dormant - Use only on trees that have not suffered from lack of moisture at any time during the growing season. Do not apply to orchards where soil moisture is low. Trees must have been fully dormant.
	Mites	4 - 6 (200 gal water/acre)	0	0	Foliar - Late spring to early summer when the leaves are fully expanded.

TABLE 1B

Crop	Pest	Application Rate - Gals Oil		Comments
		Dilute Spray per 100 Gal. Water	Low Volume Spray per 80-125 Gal. Water	
Lemons and Grapefruit	Mites Scales including California Red Scale	1.0 - 1.4 1.0 - 1.6	10 - 20	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.
Navel & Valencia Oranges, Other Citrus Varieties including Non-Bearing	Mites including Rust Mite Spider Mite Scales including Black Scale California Red Scale Whitefly & Blackfly Sooty Mold	1.0 - 1.4 1.0 - 1.3 1.3 - 1.6 1.0 - 1.3 1.0 - 1.3	10 - 20	For low volume oil spray treatment during the Spring, application should be discontinued as soon as temperatures go above 80°F during the day or relative humidity is expected to go down to 20 percent or below. Oils applied after Oct. may increase cold damage to trees. Oils applied in Aug. and Sept. may affect solids content and retard coloring. The addition of a tank mix pesticide will improve performance against scales.



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*50% Distillation Point of Paraffinic Oil	414.0°F
*10%-90% Distillation Range of Paraffinic Oil	65.0°F Max
*Flash Point	345°F
Weight per Gallon	7.1 lbs.

CAUTION: KEEP OUT OF REACH OF CHILDREN

PRECAUTIONARY STATEMENTS

Hazardous to humans & domestic animals. Avoid contact with eyes, skin and clothing. Harmful if swallowed. Avoid breathing of spray mists or vapors. Avoid contamination of feed and foodstuffs.

STATEMENT OF PRACTICAL TREATMENT

- If swallowed: Do not induce vomiting. Call a physician immediately.
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PERSONAL PROTECTIVE EQUIPMENT

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USER SAFETY RECOMMENDATIONS

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EPA Registration No. 862-23



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

EPA Establishment No. 862-PA-1

Net Contents: 55 Gallons

AI-1863 4/95

TABLE 2 Shade Trees, Shrubs, Ornamentals, Flower and Foliage Plants, Christmas Trees

Crop or Plant	Pest	Application Rate Gallons Oil per 100 Gallon Water	Time of Application
Shade Trees* and Shrubs including Conifers, Deciduous Broadleaf Evergreens & Woody Ornamentals	Aphids Adelgids Bugs (immature) Caterpillar-Gallaphid Enophid Mites Gall Mites Lace Bug Leaf Beetle Larvae Leafminer Mealybug Psyllids (immature) Sawfly (larvae) Scales (immature) Spider Mites Thrips Whiteflies	2 - 3	Winter Dormant Period
	Ornamental Trees*, Shrubs along city streets, other rights-of-way including Conifers, Deciduous and Broadleaf Evergreens	1 - 2	Summer (Foliar or Cover)
Flowering and Foliage plants including Roses and other Flowering Shrubs		2 - 3	Winter Dormant Period
Foliage Ornamentals & Bedding Plants		1 - 2	Summer (Foliar or Cover)
Christmas Trees*	Aphids Adelgids Scale (soft & hard) (immature) Spider Mites	2 - 3	Winter
		1 - 2	Summer

* Oil 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, Chamaecyparis, Juniper, Japanese Holly and Spruce. Tendency toward sensitivity: Red Cedar and Douglas Fir. Do not spray when buds have fully opened and shoot elongation is occurring. Do not spray Walnut foliage.

CAUTION: Spray no more than 4 times during the growing season; Use a 2 week minimum application interval. Do not spray when there is obvious moisture deficit in leaves, or the plant is under stress. For fall dormant applications, reduce rate to 2 gallons oil per 100 gallons water and limit use only to: American Red Oak, Japanese Black Pine, Dogwood, Weeping Cherry, Cornelian Cherry, Crabapple, Norway Maple, Purple Leaf Plum.

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Powdery Mildew Control on Ornamentals

Apply a rate of 1 - 2 gallons Sunspray 6E Plus per 100 gallons water from midsummer to early fall every 2 - 4 weeks to zinnia, lilac, azalea, monarda, phlox, helianthemum and aster. If application to other woody or herbaceous ornamental plants is desired, we recommend first conducting a small scale test on specific plants that are to be treated, to check for sensitivity to the oil treatment. Sunspray 6E Plus is not effective if the plant canopy is extremely dense because adequate coverage is difficult to attain. Greenhouse applications should be at the 1 gallon rate except for greenhouse grown roses for the cut flower market where the dose should not exceed 0.5 gals Sunspray 6E Plus/100 gals water if applied weekly. A test spray should be conducted due to increased sensitivity of greenhouse grown plants.

TABLE 3 Small Fruits

Crop	Pest	Application Rate Gallons Oil per 100 Gallon Water	Time of Application
Caneberries	Aphids	2	Dormant
	Leafhopper	1	Spring - Summer (Foliar)
	Mites	2	Postharvest
	Whitefly		
	Psyllid		
Cranberries	Leafhopper	1 - 2	As needed
	Scale		
Blueberries	Thrips	2	Foliage
	Mites	2	Foliage
	Sawfly (eggs)	2	
	Scales	3	Dormant
Strawberries	Aphids	1	Dormant and Foliage
	Mites		



TABLE 3 Small Fruits (continued)

Crop	Pest	Application Rate - Gallons of Oil		Time of Application
		Dilute Spray	Concentrate Spray* (40-100 Gals. Spray per Acre)	
Grapes	Mealybug	4 - 6 Gal. with 20.0 to 300 Gal. water/acre	Not recommended	Dormant - A tank mix using an insecticide improves control.
	Mites	2 gal. per 100 gal. water		Bud swell or shoot growth of 5 - 7 cm in spring
	Mealybug	Not recommended	4	Spray when crawlers are active and exposed usually around early Sum- mer (around July 1).
	Leafhopper	Not recommended	4	Best results will occur when sprayed during first brood. Sprays after grapes are more than 1/4" diameter may affect bloom.
	Mites	2 gal. per 100 gal. water		Postharvest
	Powdery Mildew	1 - 2 gal. per 100 gal. water	Not recommended	First spray Pre-bloom, continue spraying approximately every 14 days depending on disease pressure.

Apply before mites reach high populations. Vineyard should be vigorous and supplied with ample water prior to application. Do not allow excessive webbing or burning.

No sensitivity to Sunspray 6E Plus treatments have been seen in the vineyards of cabernet, merlot, chardonnay or riesling. Do not mix Sunspray 6E Plus with dicofol (Kelthane) since it causes phytotoxicity in some varieties.

** Air-carrier or air-blast type sprayers strongly recommended to avoid plant injury and reduce effect on bloom of table grapes.*

TABLE 4 Vegetables: Outdoor and Greenhouse

Crop	Pest	Application Rate Gallons Oil per 100 Gallon Water	Time of Application
Asparagus	Aphids	1 - 2	Do not exceed 4 applications in a growing season. A 2 week application interval is recommended.
Beans	Mites	1 - 2	
Beets	Beetle Larvae	1 - 2	
Cabbage	Leafminers	1 - 2	
Cauliflower and other cole crops	Ceanoth-Gatepillars	1 - 2	
	Thrips	1 - 2	
	Leafhopper		
	Whitefly	1 - 2	
Celery		1 - 2	
Corn		1 - 2	
Cucurbit		1 - 2	
Eggplant		1 - 2	
Herbs		1 - 2	
Lettuce		1 - 2	
Melon		1 - 2	
Pepper		1 - 2	
Potato		1 - 2	
Radish		1 - 2	
Spices		1 - 2	
Squash		1 - 2	
Sweet Potatoe		1 - 2	
Tomato		1 - 2	
Tobacco		1 - 2	

Disease Control on Vegetables

Apply a rate of 1 - 2 gallons Sunspray 6E Plus per 100 gallon water to control powdery mildew on cucurbits, melons and squash; gummy stem blight and Alternaria leaf blight on melons. Application should be made when the disease is first noticed and continue on a weekly basis to both the upper and lower leaf surfaces. If application to other vegetables listed above is desired, we recommend first conducting a small scale test spray. Greenhouse applications should be at the 1 gallon rate.

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TABLE 5 Field Crops

Crop	Pest	Application Rate Gallons Oil per 100 Gallon Water	Time of Application
Alfalfa Corn (sweet & field) Cotton Peanuts Soybeans Sugar Beets	Aphids	2	Do not exceed 4 applications in a growing season. A 2 week application interval is recom- mended.
	Mites	2	
	Leafminers	2	
	Certain Caterpillars including:	1 - 2	
	Corn Earworm, Rootworm and Armyworm	2	
	Whitefly	2	
	Bugs (strawberry)		

TABLE 6 Greenhouse

Crop or Plant	Pest	Application Rate Gallons Oil per 100 Gallon Water	Specific Comments
Ageratum Crown of Thorns Dieffenbachia Ferns Ficus Jaslanthus Orchid Palms Petunia Poinsettia Schefflera Sunflower	Aphids Fungus Gnats Bees Leafminers Mealybugs Scales (soft & hard) Spider Mites Thrips Whitefly	1	Due to varietal differences in response to a treatment of Sunspray 6E Plus at the recommended rate, we recommend conducting a small test on 1 or 2 plants of the specific variety to be treated.
Leaf Polish for hardy plants.		1	

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.

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.

TABLE 6 Greenhouse (continued)

Crop or Plant	Pest	Application Rate Gallons Oil per 100 Gallon Water	Specific Comments
Aglaonema Aster Azaleas Begonias Browallia Camellias Carnation Celosia Chrysanthemum Coleus Cosmos Dusty Miller Easter Lilies Gardenias Geranium Gerbers Helichrysum Hibiscus Foliage Hydrangeas Impatiens Jade Plant Marigold New Guinea Impatiens Nicotonia Philodendron Portulaca Reiger Begonias Snapdragon Vinca Zinnias	Aphids Fungus Gnats Bugs— Leafminers Mealybugs Scales (soft & hard) Spider Mites Thrips Whitefly	1 - 2	Due to varietal differences in response to a treatment of Sunspray 6E Plus at the recommended rate, we recommend conducting a small test on 1 or 2 plants of the specific variety to be treated.

TABLE 7 Interiorscapes*

Plant	Pest	Application Rate Gallons Oil per 100 Gallon Water	Comments
Dieffenbachia Dracaena Ferns Palms Schefflera	Aphids Leafminers Mealybugs Scales Spider Mites Whitefly	1	Do not apply to plants in direct sunlight behind glass. Due to varietal differences in response to a treatment of Sunspray 6E Plus at the recommended rate, we recommend the applicator conduct a small test on 1 or 2 plants of the specific variety to be treated.
Chrysanthemum Gardenias Jade Plant Philodendron		1 - 2	

Protect floor, floor coverings and furnishings from overspray

Miscellaneous:

Figs: Dormant or Delayed Dormant: Fig Scale - Use 3 Gals. in 100 Gal. water as a foliar spray; Mites, Mealybug, Scale - Use 2 Gals. per 100 Gals. Water.

Olives: Postbloom through August and Postharvest: Scales - Use 1.5 gals. per 100 Gal. water. Apply at 400 to 800 Gal. per acre.

Banana, Plantains: Use as needed to control Yellow Sigatoka Disease - Use 1 - 1.5 Gal. per 100 Gal. water. This application is also effective in loosening Sooty Mold Fungus and in preventing it's formation by the control of Aphids, Mealybugs, Scales and Whitefly.

Avocado (Hass Only) and Mangos: Use 1 - 1.5 Gals. per 100 Gal. water as needed to control aphids, mealybugs, Scales and Whitefly.