

OCT 2 1995

Ms. Nancy E. H. Wright
Sun Company, Inc. (R & M)
1801 Market Street
Philadelphia, Pennsylvania 19103

Subject: Revised Labeling--Additional Crops; Disease
Control; General Changes and Reformatting
Sunspray Ultra-Fine Year-Round Pesticidal Oil
EPA Registration Number 862-28
Your Amendment Application Dated September 20, 1995

Dear Ms. Wright:

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), sec. 3(c)(7)(A), is acceptable provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data.

2. Submit five (5) copies of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

A stamped copy of the labeling is enclosed for your records.

Sincerely yours,

DHE

Dennis H. Edwards, Jr.
Product Manager (19)
Insecticide Rodenticide Branch
Registration Division (7505C)

Enclosure

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SunSpray® Ultra-Fine® YEAR-ROUND PESTICIDAL OIL

A superior horticultural spray oil for insect and mite pest management

Active Ingredient: Paraffinic Oil	98.8 wt%
Inert Ingredient: Emulsifier	1.2 v.l%

The appropriate phrase would be used based on the container size



- Superior winter summer horticultural oil concentrate.
- For dormant and growing season applications.
- Can also be used as a leaf polish.
- Makes up to 25 gallons (for a quart).
- Makes up to a 100 gallons (for a gallon).
- Makes up to 12 gallons (for a pint).
- Effectively kills insects year-round.
- A superior horticultural spray oil.

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 landscape trees, plants, shrubs and flowering plants, houseplants, vegetables, fruit and nut trees, and home greenhouse plants. This product can be applied up to harvest.

Ultra-Fine (horticultural oil) is a concentrate and must be mixed with water according to the mixing directions inside.

EPA Registration No. 862-28
EPA Establishment No. 862-PA-1



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

Follow the recommended dilution rate for the particular plant and pest being sprayed. This gallon makes up to 100 gallons of spray when diluted with water. Additional information contained inside on application, precautionary statements, storage and disposal.

READ DIRECTIONS THOROUGHLY BEFORE USING.
SUN COMPANY WILL NOT ACCEPT LIABILITY FOR DAMAGE OR INJURY RESULTING FROM MISUSE OF THIS PRODUCT.

CAUTION:
KEEP OUT OF REACH OF CHILDREN



Net Contents: 1 Gallon

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PRECAUTIONARY STATEMENTS

Hazards to humans and domestic animals: Avoid contact with eyes, skin and clothing.

Harmful if swallowed: This material contains a light petroleum hydrocarbon distillate and if swallowed, an aspiration hazard may exist. Liquid may enter the lungs and cause injury. Avoid inhalation of spray mists or vapors. Avoid eye contact. Wash hands after use.

FIRST AID

If swallowed: Do not induce vomiting. Call a physician immediately.
If on skin: Wash with soap and water.
If in eyes: Immediately flush with plenty of fresh water.
If inhaled: Move to fresh air.
In case of emergency, call 1-800-964-8861.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water. 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:** Keep oil container tightly closed in storage to prevent entry of water or other contaminants. Store in a cool, dry, locked area out of the reach of children or pets. Do not store this product in direct sunlight for prolonged periods of time. This product should be stored in its original container only.
- 3. Pesticide Disposal:** Securely wrap the original container in several layers of newspaper and discard in the trash.

- 4. Container Disposal:** Do not reuse container (bottle, can, jar). Rinse thoroughly before discarding in the trash.

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. Therefore, do not spray plants under stress (i.e., drought, disease) and do not apply during periods of prolonged high temperature combined with high relative humidity.

Do not tank mix with any fungicides or herbicides. The following guidelines must be followed:

Do not tank mix with any insecticide or miticide whose label indicates that it should not be used with oil. Users should read and follow all directions and restrictions on the labels of the proposed tank mix products. The combination of SunSpray Ultra-Fine (horticultural oil) 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 SunSpray Ultra-Fine (horticultural oil). Always conduct a test spray for plant sensitivity prior to making a full scale application.

The following list of pesticides represents some of the compounds and their common names that should not be used with SunSpray Ultra-Fine (horticultural oil), however this list is not exhaustive: anilazine (Dyrene), captan (Captan), captotol (Difolatan), cyprex (Dodine), chlorothalnil (Bravo), dimethoate (Cygon), dinocap (Karathene), dithianon (Delan), fenlin hydroxide (Supertin), fenlinacetate (Fenlin), folpet (Folpet), methiocarb (Metmercapturon), oxythioquinox (Morestan), PMA (Agrosun), 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 Ultra-Fine (horticultural oil) or make sure the



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sprayer is thoroughly cleaned so that no residue from these other products remain. Do not use with Sevin 50W formulation (Carbaryl) on deciduous fruit trees.

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.

MIXING DIRECTIONS

Make sure the spray equipment to be used is clean, dry and odor free.

1. Fill the spray tank or bottle 3/4 full with water.
2. SHAKE THE CONTAINER OF SUNSPRAY ULTRA-FINE (HORTICULTURAL OIL) VIGOROUSLY PRIOR TO MEASURING OUT THE DESIRED AMOUNT. Add the appropriate amount of SunSpray Ultra-Fine (horticultural oil) to the water and shake.
3. Fill the remaining 1/4 of the spray tank or bottle with water and shake again. The solution should look milky, if it doesn't, do not use it.
4. During application shake the solution frequently. Do not apply to plants if the solution has been sitting for more than 10 minutes without shaking it before resuming application.
5. Do not premix SunSpray Ultra-Fine (horticultural oil) and water. Mix just enough for the immediate use.
6. 2 tablespoons = 1 fluid ounce.
4 tablespoons = 1/4 cup = 2 fluid ounces.

APPLICATION INSTRUCTIONS

- The best times to spray are early evening and early morning.
- The target pest and plant should be completely covered with the spray solution to be effective.
- Do not exceed the maximum rates or apply more often than recommended.

- Certain plant species may be sensitive to oil. A small number of plants should be test sprayed prior to general spraying.
- Use caution on open blooms - bleaching and spouing have been observed on the open bloom of certain plants.
- May be used up to day of harvest.
- The effectiveness of Ultra-Fine (horticultural oil) may be reduced if prolonged temperatures below 50°F are experienced. This is due to the reduced respiration rate of the insect at these lower temperatures.
- Protect painted surfaces, carpet and furnishings from overspray. May cause discoloration.

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.

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

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TABLE 1 - HOME LANDSCAPE
 (Shade Trees, Shrubs, Ornamentals, Flower and Foliage Plants)

TREE OR PLANT	PEST	APPLICATION RATE Tablespoons of Ultra-Fine (horticultural oil) per 1 Gallon Water	TIME OF APPLICATION
Shade Trees* and Shrubs including Conifers, Deciduous Broadleaf Evergreens & Woody Ornamentals	Aphids Adeigids Eriophyid Mites Gall Mites Lace Bug Leaf Beetle Larvae Leafminer Mealybug Psyllids (immature)	5.0 - 7.5	Winter Dormant Period
	Ornamental Trees*, Shrubs including Coni- fers, Deciduous and Broadleaf Evergreens	2.5 - 5.0	Summer (Foliar or Cover)
Flowering and Foliage plants including Roses and other Flowering Shrubs	Sawfly Larvae Scales (immature) Spider Mites Whitefly	5.0 - 7.5	Winter Dormant Period
	Foliage Ornamentals & Bedding plants	2.5 - 5.0	Summer (Foliar or Cover)

Handwritten notes:
 Honeylocust plant bug
 Leafrollers

* 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 towards 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: Up to 4 applications during the growing season are typically sufficient to control pests. Use a 2 week minimum application interval. For fall dormant applications, reduce rate to 5 table-
 spoons per gallon and limit use only to: American Red Oak, Japanese Black Pine, Dogwood, Weep-
 ing Cherry, Cornelian Cherry, Crabapple, Norway Maple, Purple Leaf Plum.

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Powdery Mildew Control on Ornamentals

Apply a rate of 2.5 - 5.0 tablespoons Ultra-Fine (horticultural oil) per 1 gallon 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. Ultra-Fine (horticultural oil) is not effective if the plant canopy is extremely dense because adequate spray coverage is difficult to attain. Greenhouse applications should be at the 2.5 tablespoon rate and a test spray should be conducted due to increased sensitivity of greenhouse grown plants.

TABLE 2 - HOUSEPLANTS

PLANT	PEST	APPLICATION RATE Tablespoons of Ultra-Fine (horticultural oil) per 1 Gallon Water	COMMENTS
DIEFFENBACHIA DRACAENA FERNS PALMS SCHEFFLERA	Aphids Leafminers Mealybugs Scalps Spider Mites Whitefly	2.5	Do not apply to plants in direct sunlight behind glass. Due to varietal differences in response to a treatment of Ultra-Fine (horticultural oil) at the recommended rate, we recommend conducting a small test on 1 or 2 plants of the specific variety to be treated.
CHRYSANTHEMUM GARDENIAS JADE PLANT PHILODENDRON		2.5 - 5.0	

Protect floor, floor coverings and furnishings from overspray.

CAUTION: Do Not exceed 3 consecutive applications without allowing a two week application interval.



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TABLE 3- VEGETABLES OUTDOOR AND HOME GREENHOUSE

VEGETABLE	PEST	APPLICATION RATE Tablespoons of Ultra-Fine (horticultural oil) per 1 Gallon Water	TIME OF APPLICATION
ASPARAGUS BEANS BEETS CABBAGE CAULIFLOWER (other cole crops) CORN CUCURBITS EGGPLANT [REDACTED] LETTUCE MELONS PEPPERS POTATOES RADISHES [REDACTED] SQUASH SWEET POTATO TOMATOES	Aphids Mites Beetle Larvae Leafminers [REDACTED] Leafhopper Whitefly Thrips	2.5 - 5.0	Do not exceed 4 applications in a growing season. A 2 week application interval is recommended.

Disease Control For Vegetables

Apply a rate of 2.5 - 5.0 tablespoons Ultra-Fine (horticultural oil) per 1 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 2.5 tablespoon rate.

Herbs and Spices
Curly leaf basil
Lemon balm
Mexican oregano
Spearmint

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TABLE 4 - SMALL FRUITS

SMALL FRUIT	PEST	APPLICATION RATE Tablespoons of Ultra-Fine (horticultural oil) per 1 Gallon Water	TIME OF APPLICATION
BLUEBERRIES	Mites	7.5	Dormant
	Sawfly (eggs) Scales	5.0	Summer
STRAWBERRIES	Aphids Mites	2.5	Dormant and Summer
GRAPES	Mealybugs Mites	2.5 - 5.0 5.0	Dormant Bud swell or shoot growth of 5-7 cm in spring.
	Mites	5.0	Postharvest
	Powdery Mildew	2.5 - 5.0	First spray pre-bloom, continue spraying approximately every 14 days depending on disease pressure.

Grape vines should be vigorous and supplied with ample water prior to application. No sensitivity to Ultra-Fine (horticultural oil) treatments have been seen on the following grape varieties; Cabernet, Merlot, Chardonnay and Ribier. Variety sensitivity may be observed per growing condition, test spray first.

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TABLE 5A - FRUIT TREES

FRUIT	PEST	APPLICATION RATE Tablespoons of Ultra-Fine (horticultural oil) per 1 Gallon Water	TIME OF APPLICATION (STAGE OF DEVELOP- MENT)
APPLES	Aphids (eggs) [redacted] Apple Red Bug Mites (eggs) including European Red Mite Scales (hard and soft); Scurfy Scale* Fruit Tree Leaf Roller (eggs)*	5.0 - 7.5	Dormant or Delayed Dormant to 1/2" Green.
	Mites	2.5	Summer (Foliar or Cover) or Postharvest. Do not apply over fruit after waxy bloom forms.
PEARS	European Red Mite (eggs) Pear Leaf Blister Mite (eggs)* Pear Psylla Scales Fruit Tree Leaf Roller (eggs)*	5.0 - 7.5	Dormant or Delayed Dormant (up to and including petal fall).
	Two-Spotted Spider Mite Brown Mite Pear Rust Mite Pear Leaf Blister Mite* Pear Psylla*	2.5 - 5.0	Summer (Foliar or Cover) or Postharvest.

* Use maximum rate specified



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TABLE 5B - FRUIT & NUT TREES

FRUIT AND NUTS	PEST	APPLICATION RATE Tablespoons of Ultra-Fine (horticultural oil) per 1 Gallon Water	TIME OF APPLICATION (STAGE OF DEVELOPMENT)
ALMONDS APRICOTS CHERRIES	Aphids (eggs) [REDACTED] Fruit Tree Leaf Roller (eggs) Tent Caterpillars San Jose Scale	5.0 - 7.5	Dormant or Delayed Dormant.
	Mites and Scales	2.5 - 4.0	Summer (Foliar or Cover) or Postharvest - Application should not be made on oil sensitive varieties. - Do not apply to trees lacking adequate moisture.
PEACHES NECTARINES	Aphids (eggs)* [REDACTED] Fruit Tree Leaf Roller (eggs) Mites (eggs) Colony Peach Scale San Jose Scale	5.0 - 7.5	Dormant or Delayed Dormant.
	Mites Scales (immature)	2.5 - 5.0	Summer (Foliar or Cover) or Postharvest.

* Use maximum rate specified

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TABLE 5B - FRUIT & NUT TREES (continued)

FRUIT AND NUTS	PEST	APPLICATION RATE Tablespoons of Ultra-Fine (horticultural oil) per 1 Gallon Water	TIME OF APPLICATION (STAGE OF DEVELOPMENT)
PLUMS PRUNES	Aphids (eggs) Scales Mites (eggs)	4.0 - 5.0	Dormant or Delayed Dormant to 1/2" Green Tip
	Mites Scales	2.5 - 4.0	Summer (Foliar or Cover) 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)	7.5	Dormant
	Aphids Mites	2.5 - 4.0	Summer (Foliar or Cover) Postharvest



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TABLE 5C - CITRUS TREES

CITRUS	PEST	APPLICATION RATE Tablespoons of Ultra-Fine (horticultural oil) per 1 Gallon Water	COMMENTS
LEMON GRAPEFRUIT	Mites Scales including California Red Scale	2.5 - 4.0	For best results, spray during Fall, early Winter & Spring months when red scale are more easily controlled and trees are generally less reactive to oil. For all citrus oil sprays ensure adequate 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	2.5 - 4.0	Oils applied after Oct. may increase cold damage to trees. Oils applied in Aug. and Sept. may affect solids content and retard coloring.

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TABLE 6 - HOME GREENHOUSE

PLANT	PEST	APPLICATION RATE Tablespoons of Ultra-Fine (horticultural oil) per 1 Gallon Water	SPECIFIC COMMENTS
AGERATUM CROWN OF THORNS DIEFFENBACHIA FERNs FICUS LISIANTHUS ORCHID PALMS PETUNIA POINSETTIAS SCHEFFLERA SUNFLOWER	Aphids Fungus Gnat Leafminers Mealybugs Scales (soft & hard) Spider Mites Whitefly	2.5	Due to varietal differences in response to a treatment of Ultra-Fine (horticultural oil) at the recommended rate, we recommend conducting a small test on 1 or 2 plants of the specific variety to be treated. <i>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.</i>
LEAFY PLANTS FOR HARDY PLANTS.		2.5	Do not use on Poinsettia bracts

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.

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TABLE 6 - HOME GREENHOUSE (continued)

PLANT	PEST	APPLICATION RATE Tablespoons of Ultra-Fine (horticultural oil) per 1 Gallon Water	SPECIFIC COMMENTS
AGLAONEMA ASTER AZALEAS BEGONIAS BROWALLIA CAMELLIAS CARNATION CELOSIA CHRYSANTHEMUM COLEUS COSMOS DUSTY MILLER EASTER LILIES GARDENIAS GERANIUM GERBERA HELLIChRYSUM HIBISCUS FOLIAGE HYDRANGEA IMPATIENS JADE PLANT NEW GUINEA IMPATIENS NICOTONIA PHILODENDRON PORTULACA REIGOR BEGONIAS SNAPDRAGON VINCA MARIGOLD ZINNIAS	Aphids Fungus Gnat Leafminers Mealybugs Scales (soft & hard) Spider Mites Whitetly	2.5 - 5.0	Due to varietal differences in response to a treatment of Ultra-Fine (horticultural oil) at the recommended rate, we recommend conducting a small test on 1 or 2 plants of the specific variety to be treated. <i>Frequency of Application:</i> <i>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.</i>

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SunSpray[®] Ultra-Fine[®] YEAR-ROUND PESTICIDAL OIL

A superior horticultural spray oil for insect and mite pest management

Active Ingredient: Paraffinic Oil 98.8 wt%
Inert Ingredient: Emulsifier 1.2 wt%

CAUTION: KEEP OUT OF REACH OF CHILDREN

PRECAUTIONARY STATEMENTS

Hazards to humans and domestic animals: Avoid contact with eyes, skin and clothing.

Harmful if swallowed: This material contains a light petroleum hydrocarbon distillate and if swallowed, an aspiration hazard may exist. Liquid may enter the lungs and cause injury.

Avoid inhalation of spray mists or vapors.

Avoid eye contact.

Wash hands after use.

FIRST AID

If swallowed: Do not induce vomiting.

Call a physician immediately.

If on skin: Wash with soap and water.

If in eyes: Immediately flush with plenty of fresh water.

If inhaled: Move to fresh air.

In case of emergency, call 1-800-964-8861.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water. 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: Keep oil container tightly closed in storage to prevent entry of water or other contaminants. Store in a cool, dry, locked area out of the reach of children or pets. Do not store this product in direct sunlight for prolonged periods of time. This product should be stored in its original container only.

3. Pesticide Disposal: Securely wrap the original container in several layers of newspaper and discard in the trash.

4. Container Disposal: Do not reuse container (bottle, can, jar). Rinse thoroughly before discarding in the trash.

EPA Registration No. 862-28
EPA Establishment No. 862-PA-1

Net Contents: 1 Gallon



Sun Company, Inc. (R&M)

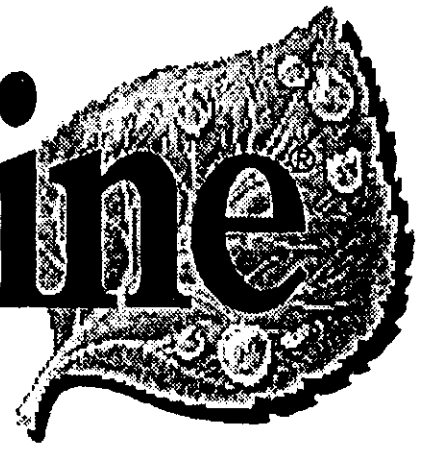
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SunSpray® Ultra-Fine



YEAR-ROUND PESTICIDAL OIL

*Effectively Kills Insects Year-Round on
Landscape Plants • Houseplants • Garden Vegetables • Fruit Trees*



Makes up to
100
Gallons

An innovative formulation for the conscientious home gardener.

- Superior winter summer horticultural oil concentrate.
- Dormant oil-kills overwintering insect eggs.
- Growing season oil-kills insects during the growing season.
- Controls aphids, mites, mealybugs, scales, whiteflies, psyllids and other listed pests.
- For vegetable, fruit and nut trees, shade trees, shrubs, flowers, indoor houseplants and home greenhouse plants.

ACTIVE INGREDIENT:

Paraffinic Oil	98.8%
Inert Ingredient	1.2%

CAUTION:
Keep Out Of Reach Of Children
NET CONTENTS: 1 GALLON